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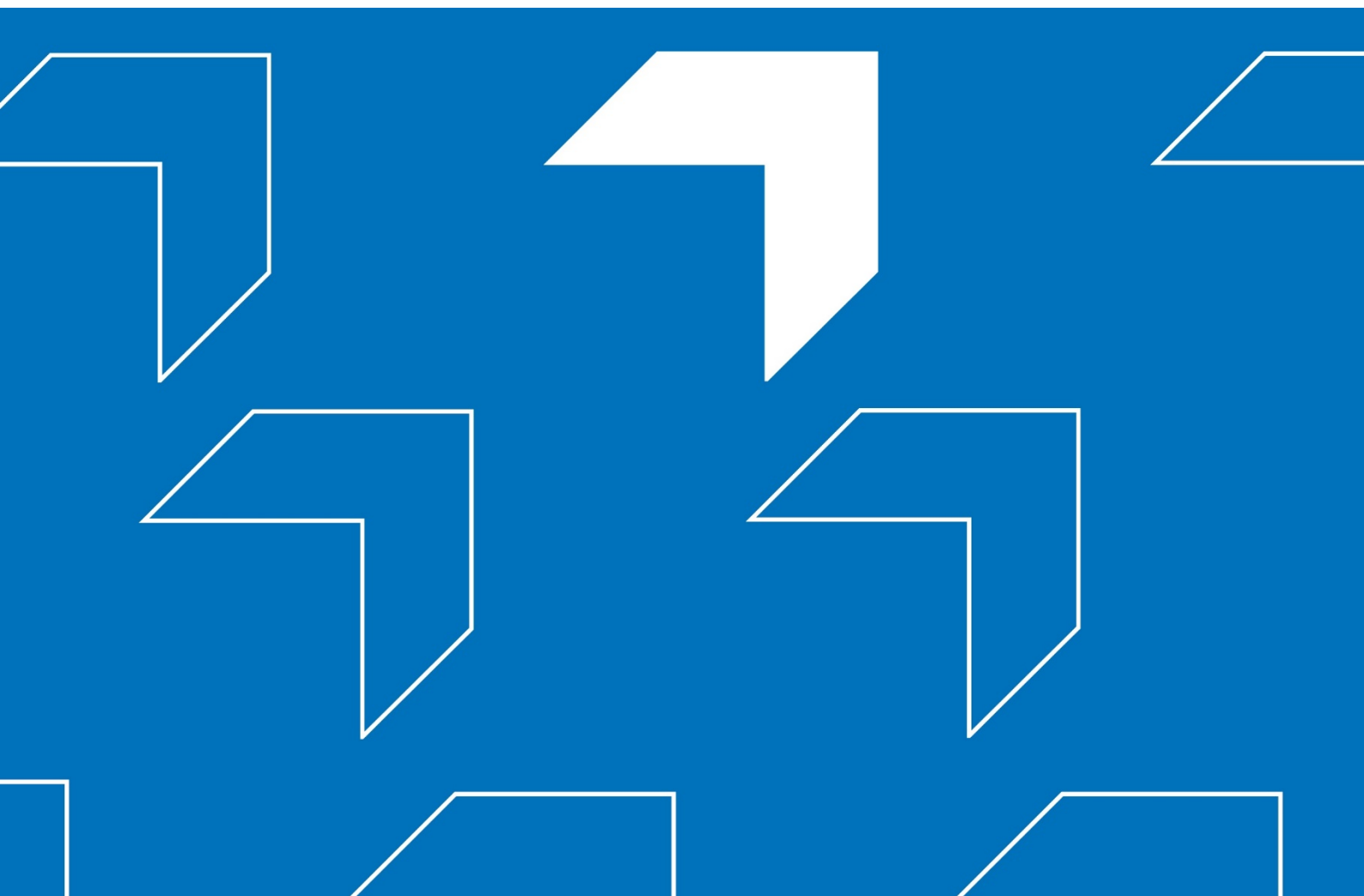


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Republic of North Macedonia Education Sector Analysis

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Foreword

Since being identified as a potential candidate for EU membership during the [Thessaloniki European Council](#) summit in June 2003, North Macedonia has maintained a strong focus on the EU reform agenda. In 2020, the European Council endorsed the decision to open accession negotiations.

Important strides have been made in education and training over the past decade. The 2018–2025 Education Strategy of the Government of the Republic of North Macedonia, which guides the education and training agenda in the country, is fully consistent with the strategic objectives of the *strategic framework for European cooperation in education and training towards the European education area and beyond (2021-2030)*, which promotes collaboration between EU countries in education and training by:

1. improving quality, equity, inclusion and success for all in education and training;
2. making lifelong learning and mobility a reality for all;
3. enhancing competences and motivation in the education profession;
4. reinforcing European higher education;
5. supporting the green and digital transitions in and through education and training.

Indeed, the vision supported by the Education Strategy in North Macedonia consists of a 'comprehensive, inclusive and integrated education focused on the learner, based on modern programmes for equipping future generations with knowledge, skills and competences in accordance with the needs of a democratic multicultural society and the labour market, and the new challenges in the global scientific and technological environment' (Ministry of Education and Science, 2018: 17).

A well-informed and well-argued education sector diagnosis is seen as pivotal by the European Commission's Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR) to adequately support the Government of North Macedonia in reforming its education and training system for increased convergence and alignment with the EU standards, and to provide tailor-made support. In this regard, DG NEAR has commissioned IIEP-UNESCO to conduct an education sector analysis.

The education sector analysis consists of a critical analysis of the whole education sector, providing an overview of progress and achievements, while focusing on efficiency: looking at how the system transforms its education inputs into outcomes in relation to schooling coverage, quality, equity, and relevancy. As such, it helps to identify the education system's strengths and weaknesses, possible pockets of inefficiencies, constraints affecting the education and training system, as well as potential leeway for overcoming or reducing those constraints. By stimulating discussions around the constraints identified, the education sector analysis represents a valuable instrument to assist policy-makers in selecting relevant policy objectives and strategies to address challenges.

This education sector analysis covers critical dimensions, including access and equity, quality, relevance to the labour market, governance, and cost and financing. It also includes an introductory chapter that provides an overview of the environment within which the education sector operates. It mainly covers the period 2010 to 2022 and triangulates quantitative and qualitative information from various sources and existing reports, including administrative data on education, learning assessments, household surveys and human resources, and financial data. In addition, specific and dedicated interviews were conducted.

While progress in many areas has been recorded over the past decade, challenges do remain. A few highlights are provided below, in line with possible policy avenues discussed with education

stakeholders and carefully assessed as pivotal for implementation by the Ministry of Education and Science (MoES) during the workshop held on 30 and 31 October 2023:

- North Macedonia is faced with a shrinking school-age population, which is putting pressure on its ability to operate an efficient system while guaranteeing a quality education for everyone. This is further compounded by internal migration towards urban centres and external migration of families and young graduates. Ongoing efforts need to be pursued to strengthen school mapping and school rationalization processes to keep unit costs under control in the face of a declining school-age population.
- The Roma community (which present various socio-economic and linguistic challenges) continues to exhibit some of the highest drop-out rates and lower learning outcomes, despite efforts to support them. This calls for further strengthening programmes aimed at keeping Roma students in schools while supporting their learning.
- The main factor explaining school non-attendance by children in North Macedonia is poverty. Children from more disadvantaged backgrounds also display weaker results at school. Increasing the number of unconditional scholarships for poor families, and ensuring the poorest families and those from communities where the drop-out rate is highest are targeted and prioritized, are critical measures to be pursued to close the wealth gap.
- North Macedonia's results from international student assessments reveal comparatively weak levels of student achievement throughout the education cycle, starting at early childhood education (ECE) level. Learning deficiencies start early in the early years– with many children entering primary school not ready– and persist through to later grades. The education system fails to provide students with the skills they need to successfully complete each stage and move confidently to the next. Relevant measures include continuing to expand access to quality pre-school education, to ensure that more children arrive ready for school, and establishing an effective model for helping low-achieving students to avoid falling behind. Improving the training and professional development of future and current teachers and providing them with adequate support is also important.
- Ensuring the education system can better respond to current and prospective labour market trends is critical. In this regard, improving the institutional set-up in the education system and strengthening coordination mechanisms and linkages between education and labour market institutions would be beneficial. This would also require further increasing and strengthening the capacities of local governments and institutional leaders in schools and the business community through social dialogue, to conduct skills market analysis needs and the training offer at the local level.
- Improving the labour market position of young people and reducing the rate of NEETs (Not in Education, Employment, or Training), especially among young women, is needed, given the high level of youth NEETs. This will entail developing new and improved targeted programmes and interventions to address the high youth unemployment rate, while implementing comprehensive and effective Active Labour Market Programmes (ALMPs) with a specific focus on young people. It would also call for a strong information system that could inform both job seekers and policy-makers on prospective labour market needs and job opportunities.
- The performance of the educational administration in managing and delivering quality education is weak. This is not unique to education but is characteristic of much of the public sector. Core reasons relate to the politicization of the civil service and the instability in personnel, particularly ministers, their immediate advisers, and other senior staff. This has contributed to demotivation throughout much of the administration. Structural and regulatory reforms may not be of much help in this regard. A balanced combination of stronger accountability and a comprehensive professional development strategy (which goes beyond

training and includes consistent support and supervision from recruitment onwards) offers more promising avenues for sustainable improvement.

- Under the decentralization process, management of the municipality schools network is shared between the MoES (which is mainly responsible for infrastructure) and local governments (which oversee teacher recruitment and the day-to-day operations of the schools). Clear roles and responsibilities, together with consultation and coordination, form the basis for an efficient management system and would need to be strengthened to make decentralization more efficient. Beyond the need to further revise the block grant formulas, examining the potential of gradually transferring capital spending for education to municipalities, while developing a monitoring framework on the performance of municipalities in education in order to better monitor and support the various municipalities, could be relevant strategies to pursue.
- Government expenditure on education is rather low relative to GDP, and low in comparison with other Balkan countries. This results from a combination of the limited overall size of government revenues and a low share of the government budget being devoted to the education sector. Improving resources for education is critical to ensure North Macedonia can properly address the challenges ahead and ensure all citizens do receive quality education and training that meets the current and future demands of the economy.

These results have been shared and discussed with the MoES during a two-day workshop held in Skopje on 30 and 31 October 2023, paving the way for further discussions between the Government of North Macedonia and key donors including EU DG NEAR on possible EU and donor support to further advance the education and training agenda in North Macedonia.

More broadly, this report provides comprehensive resources for anyone interested in education in North Macedonia. It is, however, a snapshot of the system at this time and will require a fresh look in the future. We hope the next such report will reveal tangible evidence of continued progress in learning at all levels of education, and that young people exiting the system will soon be equipped with all the skills and competencies needed to support the country's social and economic development.

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| Acronym | Meaning |
|----------------|--|
| AAGR | Average annual growth rate |
| AEC | Adult Education Centre |
| ALMPs | Active Labour Market Programmes |
| AQHE | Agency for Quality in Higher Education |
| BDE | Bureau for Development of Education |
| BG | Block grant |
| BiH | Bosnia-Herzegovina |
| CCT | Conditional Cash Transfer |
| CSO | Civil society organization |
| DG NEAR | Directorate-General for Neighbourhood and Enlargement Negotiations |
| ECD | Early childhood development |
| ECE | Early childhood education |
| ECEC | Early Childhood Education and Care |
| ECTS | European Credit Transfer and Accumulation System |
| E4E@mk | Education for Employment in North Macedonia |
| EGRA | Early Grade Reading Assessment |
| EGMA | Early Grade Mathematic Assessment |
| EMIS | Education Management Information System |
| ENER | Unique Electronic Registry of Regulations of the Republic of North Macedonia |
| ESA | Employment Service Agency |
| ESCS | Economic, social and cultural status |
| ETF | European Training Foundation |
| EU | European Union |
| EU-SILC | European Union Statistics of Income and Living Conditions |
| GDP | Gross domestic product |
| GDPpc | Gross domestic product per capita |
| GE | General education |

| | |
|----------------|---|
| GER | Gross enrolment ratio |
| GIR | Gross intake rate |
| GNP | Gross national product |
| GPI | Gender Parity Index |
| HDI | Human Development Index |
| HE | Higher education |
| HEIs | Higher education institutions |
| ICF | International Classification of Functioning |
| ICT | Information and communication technology |
| IFMIS | Integrated Financial Management System |
| IIEP | UNESCO International Institute for Educational Planning |
| ILO | International Labour Organization |
| IMF | International Monetary Fund |
| IOM | International Organization for Migration |
| IPA | Instrument for pre-accession assistance |
| ISCED | International Standard Classification of Education |
| ISCO | International Standard Classification of Occupations |
| KPI | Key Performance Indicator |
| LFS | Labour Force Survey |
| LMIS | Labour Market Information System |
| M&E | Monitoring and evaluation |
| MEL | Monitoring, evaluation and Learning |
| MELQO | Measuring Early Learning Quality and Outcomes |
| MICS | Multiple Indicators Cluster Survey |
| MISA | Ministry for Information Society and Administration |
| MKD | Macedonian Denars |
| MoES | Ministry of Education and Science |
| MoF | Ministry of Finance |
| MoLSP | Ministry of Labour and Social Policy |

| | |
|--------------|---|
| MOU | Memorandum of Understanding |
| MRY | Most recent year |
| NAEPM | National Agency for European Education Programmes and Mobility |
| NAP | National Assessment Programme |
| NATO | North Atlantic Treaty Organisation |
| NEC | National Examination Centre |
| NEET | Neither in employment nor in education or training |
| NER | Net Enrolment Rate |
| NQF | National Qualifications Framework |
| NSE | Non-standard forms of employment |
| OECD | Organisation for Economic Co-operation and Development |
| OOSC | Out-of-school children |
| PAR | Public Administration Reform |
| PEIP | Project to Improve Primary Education |
| PIRLS | Progress in International Reading Literacy Study |
| PISA | Programme for International Student Assessment |
| PPP | Purchasing power parity |
| PSE | Public sector efficiency |
| PSP | Public sector performance |
| SB | School Board |
| SDC | Swiss Agency for Development and Cooperation |
| SDSM | Social Democratic Union of Macedonia |
| SIGMA | Support for Improvement in Governance and Management |
| SEI | State Educational Inspectorate |
| SONK | Trade Union for Education, Science and Culture in the Republic of Macedonia |

| | |
|-------------------|---|
| SSO | State Statistical Office |
| STEE7 | Seven Small Transition European Economies |
| STEP | Skills (Toward Employment and Productivity) Measurement Survey |
| STR | Student–teacher ratio |
| SWTS | School-to-Work Transition Survey |
| TALIS | Teaching and Learning International Survey |
| TIMSS | Trends in International Mathematics and Science Study |
| TLM | Teaching and Learning Material |
| TVET | Technical and vocational education and training |
| UC | Unit cost |
| UIS | UNESCO Institute for Statistics |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNICEF | United Nations International Children’s Emergency Fund |
| USAID | United States Agency for International Development |
| VET | Vocational education and training |
| VETC | Vocational Education and Training Centre |
| VMRO-DPMNE | Internal Macedonian Revolutionary Organization – Democratic Party for Macedonian National Unity |
| WBs | Western Balkans |
| WBL | Work-based learning |
| WDIs | World Development Indicators |
| WEO | World Economic Outlook |
| YG | Youth Guarantee |
| ZELS | Association of Local Self-Government Units |

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Executive summary

Sociodemographic and macroeconomic context of North Macedonia

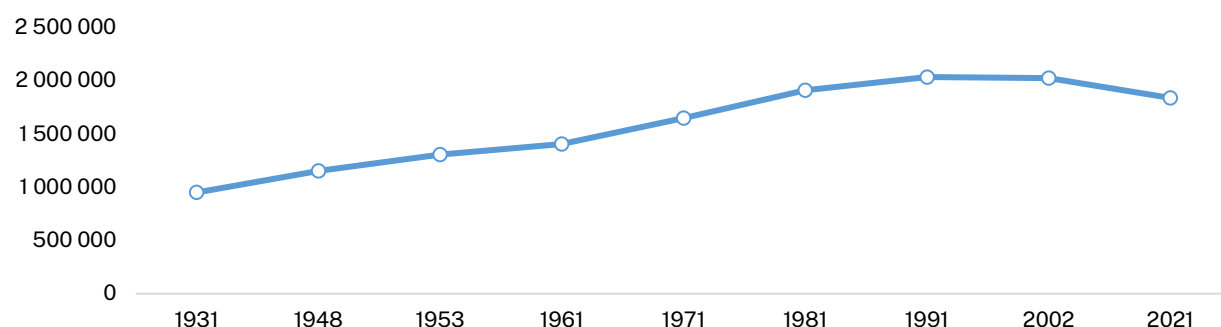
North Macedonia is an ethnically and linguistically diverse country with relative socio-political stability, but the challenging sociodemographic context, and the recent shocks to the economy are some of the key factors affecting the country's development.

Sociodemographic context

The resident population has significantly decreased over the past 20 years, putting less pressure on the education system but requiring major adjustments in school capacities.

According to the 2021 census, the population of North Macedonia has significantly decreased, from 2.02 to 1.83 million (a fall of 9.1%, or 185,834 fewer inhabitants) in comparison to the 2002 census. Of the total resident population, 50.4% of the population is female and 49.6% is male. It is the first time since the 1948 census that females have outnumbered males in the population.

Figure 0.1. Population evolution (number), 1931–2021



Source: State Statistical Office, 2021a.

Brain drain is a significant challenge for the country. While there is limited official data, it is estimated that there are almost 700,000 Macedonian citizens living abroad; the majority are in Germany, Italy, Switzerland, Austria and Slovenia. The current drivers of outward migration are mostly socio-economic. They are related to high unemployment within the country, limited career development opportunities for certain professions, particularly for highly educated professionals, and the appeal of higher salaries and living standards in the migration destinations. Diaspora networks abroad and improved migration policies are also major contributing pull factors. North Macedonia has one of the highest rankings on the 'Human Flight and Brain Drain' index in Europe, with only Ukraine, Albania, Moldova and Bosnia and Herzegovina performing worse. Young people aged 20–24 make up a large proportion of first-time permit receivers arriving in the EU from North Macedonia. Increasing brain drain is depleting North Macedonia's elite: the number of doctors that left the country increased by 60% between 2010 and 2019, leading to a shortage of medical professionals.

North Macedonia is ethnically and linguistically diverse, with many small linguistic groups, making the linguistic policy complex to implement. In 2021, 58.4% of the resident population was ethnically Macedonian and 24.3% was ethnically Albanian. The next largest ethnic groups are Turk (3.86% of the resident population); Roma (2.53%); Serb (1.3%); Bosnian (0.87%); and Vlach (0.47%). Most minorities speak their ethnic group's language as their mother tongue. This range of very small language groups makes it very complex to implement mother tongue instruction in schools, causing practical issues as well as concerns about school segregation by ethnicity.

Overall key social and health indicators in North Macedonia have steadily improved over the past two decades. The under 5 mortality rate has more than halved, from 13.6% in 2000 to 4.9% in 2021, as has stunting among children aged under 5, from 9% in 2005 to 4.3% in 2018. Life expectancy has increased by nearly two years from 2000 to 2020, and maternal mortality rates remain at a constant low of 2 in every 100,000 live births. The at-risk-of-poverty rate has also dropped from a 2010 rate of 27% to 21.8% in 2020. Almost all children are registered at birth, an important child protection measure, and nearly 100% of the adult population is literate. North Macedonia has a very low Gender Inequality Index value of 0.134 in 2021, ranking 37 out of all countries, indicating that there is low inequality between men and women in terms of reproductive health, empowerment and labour market issues. Access to ICT equipment is high overall: the entire population has access to television and mobile phones (100%), but computer (69.5% of households) and internet access (81.5% of households) are more limited, particularly among the poorest and the Roma community.

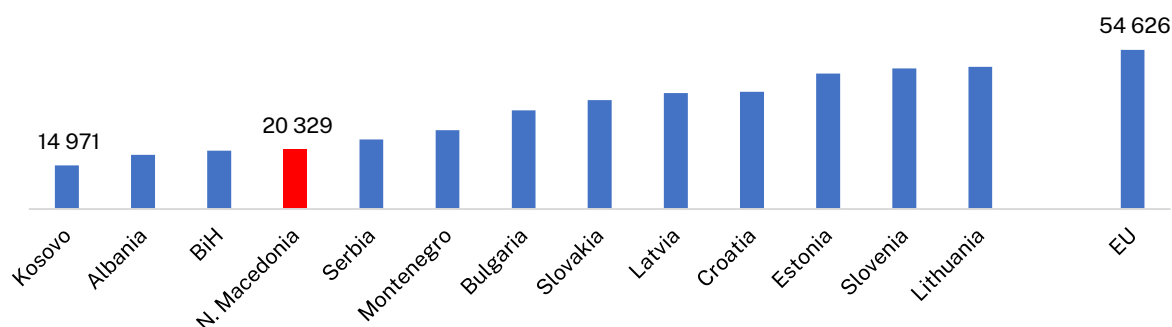
However, ethnic, geographic and socio-economic disparities remain. The Roma ethnic minority has considerably worse social indicators than the national average. Roma girls and women are particularly at risk, with high levels of child marriage (22.6% among 15–19-year-olds) and early childbirth (29.2% had given birth before 18 years old). This poses a distinct threat to schooling demand and completion for Roma girls.

Subnational human development index calculations show that the northeast and southeast regions are more disadvantaged, since they have the highest percentages of their population in the poorest quintiles – 43.2% and 30.6% respectively – while the Pelagonija, Vardar and Skopje regions have the highest proportion of their population in the fourth and richest quintiles. Skopje, in particular, has the largest proportion of the population in the richest quartile, at 35.2%.

A UNICEF analysis of multidimensional child poverty in North Macedonia shows that child poverty is more prevalent in urban areas, among the Roma, with the poorest households and households headed by less educated adults. According to the data, 11.96% of children aged 5–17 and 8.67% of children under 5 are multidimensionally poor (poor in at least 25% of the dimensions). Lack of education and skills, economic hardship, lack of love and care at home, violence, and a lack of leisure activities were the driving contributors to child poverty in the country. Multidimensional child poverty in urban areas mostly involved a lack of education and material deprivation, while in rural areas a variety of dimensions were at play. Examining poverty levels by ethnicity, it was found that one in three Roma children are multidimensionally poor in a third of the poverty dimensions on average, regardless of their age. Multidimensional poverty rates of Albanian children are close to that of the average population, while Macedonian children are the least deprived of all of the groups.

Macroeconomic and public finance context

Overall, North Macedonia has experienced stable growth over the last decade. The country has evolved into an upper-middle economy, with an average annual GDP growth rate of 2% between 2011 and 2022. The standard of living has likewise improved, with a GDP per capita of MKD 433,910 in 2022 (7,044 euros), a significant 31% increase from MKD 330,834 in 2011 (equivalent to 5,377 euros in 2022 prices). GDP per capita is higher than most of the other Western Balkan countries, including Kosovo, Albania, and Bosnia-Herzegovina, but still behind other small transitional economies in Europe.

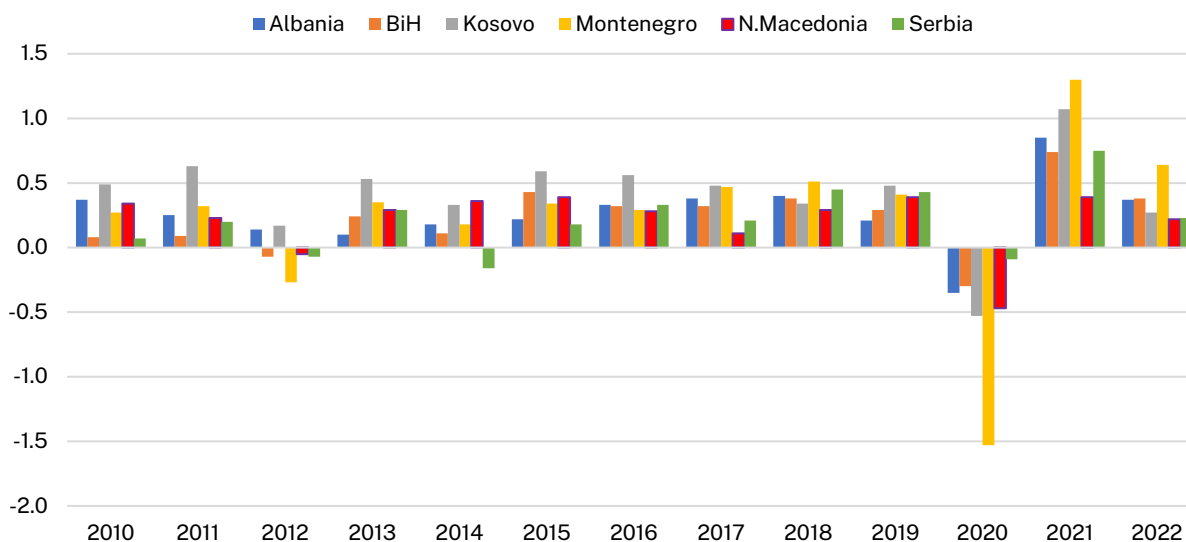
Figure 0.2. GDP per capita (in PPP, current international \$), 2021

Source: World Bank, 2023c.

The COVID-19 pandemic and the war in Ukraine have brought significant shocks to the economy.

Like many other countries in the region and around the world, North Macedonia's economy suffered a significant shock from the COVID-19 pandemic, with a 4.7% drop in real GDP between 2019 and 2020. The economy has been slowly recovering, largely aided by the government's strong policy response, and 2021 saw an increase in GDP from MKD 665,931 million to MKD 720,414 million. However, the war in Ukraine and the resulting energy crisis have threatened the country's recovery, disrupted supply chains, and driven up inflation with higher energy and food prices. High levels of uncertainty and tight financial conditions have likewise decreased domestic and external demand. There has therefore been a recent slow-down in GDP growth, a sharp increase in inflation, estimated at 13.5% in 2022 by the Ministry of Finance, and a widening trade deficit.

The performance of the North Macedonia economy has been relatively similar as other Balkan countries, although recovery has been slower. The country notably had one of the lowest levels of real GDP growth in the region between 2020 and 2021.

Figure 0.3. Real GDP growth (annual percentage change), Western Balkans, 2010–2022

Source: State Statistical Office (North Macedonia), 2022a and IMF, 2023 (other countries).

While recovery has been disrupted, the medium-term economic outlook is promising. Fiscal support measures and tightened monetary policy have helped to address the crises and rising inflation. The International Monetary Fund (IMF) projects 2.9% growth in 2023, below the initial forecast prior to the war in Ukraine, although in the medium-term, GDP growth is expected to recover. With European Union (EU) accession negotiations underway, the prospect of joining the EU is also expected to boost the country's growth. The IMF projects inflation peaking in 2022 at 13% but remaining high in 2023 at an average of 7.1%, then slowly declining to 2% by 2025. Due to high energy prices, the trade deficit is predicted to continue to inflate in the short term.

The government is making efforts to boost revenues, as the tax-to-GDP ratio remains comparatively low. Revenue excluding grants accounted for 29.4% of GDP in North Macedonia in 2021, one of the lowest in the region. With also one of the lowest tax rates in the region, at just 10% for corporate and personal income, compared to the EU average of 22%, the country has prioritized increasing tax revenues, adopting a Tax System Reform Strategy in December 2020 that was amended in 2022.

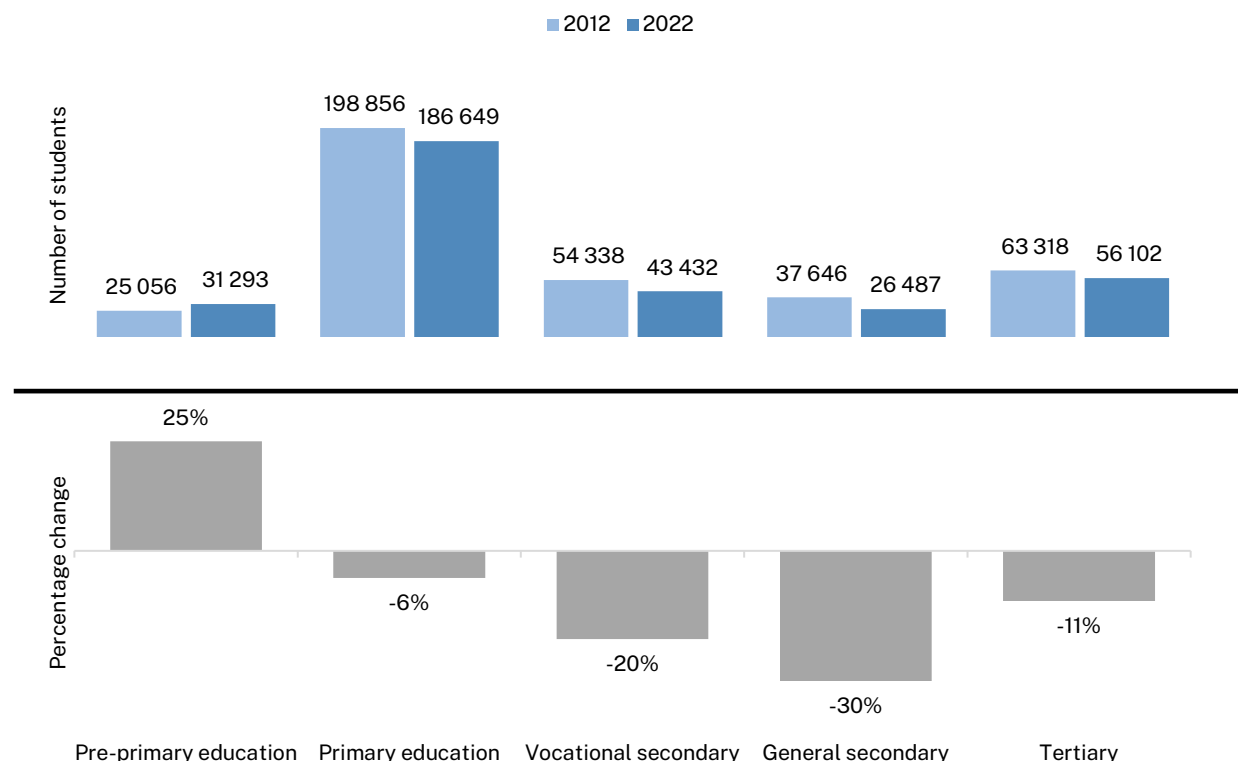
Evolution of enrolment and equity issues

North Macedonia has seen a decrease in the number of children in the education system, directly tied to population decrease. Despite this, North Macedonia has seen a positive increase in enrolment ratios over the last 15 years, with levels almost reaching 100% for primary education in 2022. Nonetheless, the country still has relatively low levels of gross enrolment ratios compared to its neighbours and faces several challenges in reaching greater equity in access.

The North Macedonia education system is divided into four main levels: pre-primary education, basic education¹, secondary education (which includes vocational education and training [VET]), and tertiary education. In addition to primary education, secondary education has been compulsory since 2008. The vast majority of primary and secondary education schools in North Macedonia are public, at 99.6% and 99.2% respectively.

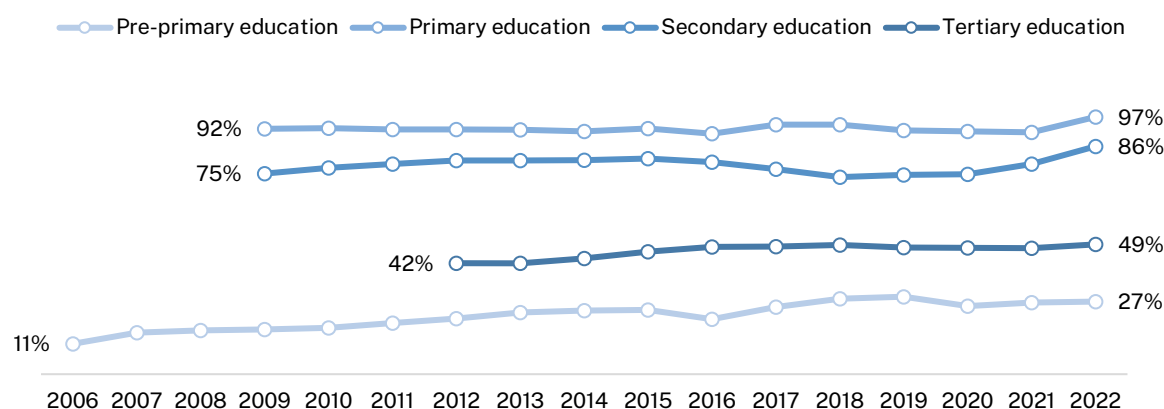
The number of students is declining, driven by a shrinking school age population, resulting in less pressure on the education system. Most levels of education have seen a decline in the number of students over the last 10 years, driven by a shrinking school age population. Overall, the system has 9% fewer students in 2022 than it had in 2012. Only pre-primary has seen an expansion, given that it started from a low level. For pre-university education, since 2012, the greatest decreases have been in secondary schools (-24%) (general secondary with -30% and vocational secondary with -20%). At tertiary education level, enrolment has fallen by 11%.

¹ Throughout the report the words 'primary' and 'basic' are used interchangeably.

Figure 0.4. Number of students by level and year and percentage change, 2012–2022

Source: Authors' calculations based on State Statistical Office, 2022k, 2022l, 2022o, 2022p.

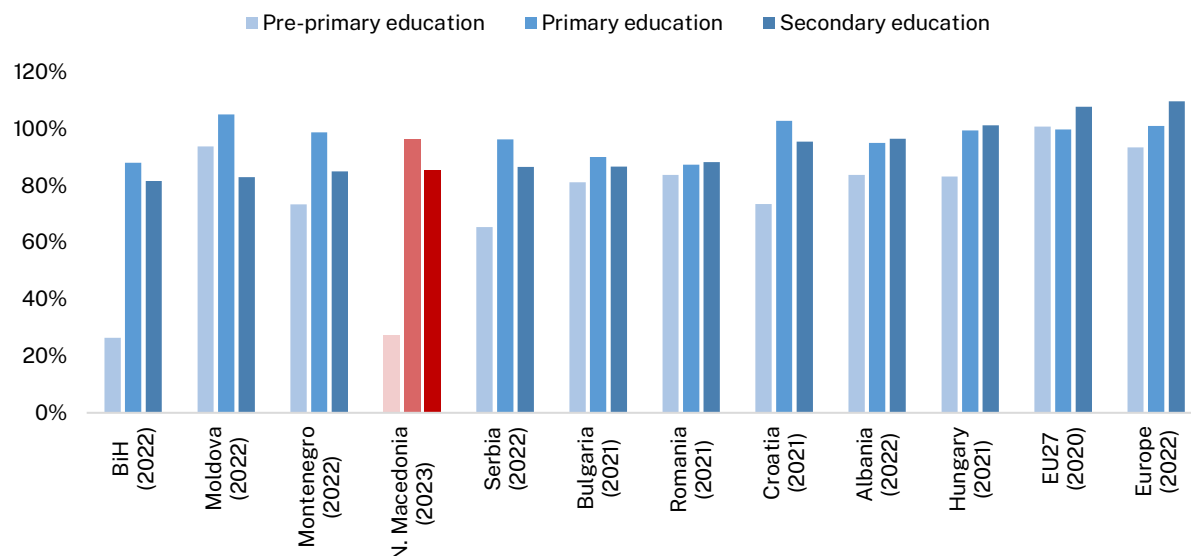
Enrolment coverage is increasing for all levels but remains among the lowest in the region. Over the last decade, there has been an increase in enrolment coverage for all educational levels. Primary education is near universal. However, levels for pre-primary remain low (with a coverage of 27% in 2022) despite huge improvements, given its low starting level (11% in 2006). While there was a small dip in enrolment for pre-primary education in 2020, there is no visible effect of COVID-19 on enrolment levels from primary education to tertiary education.

Figure 0.5. Gross enrolment ratio by educational level, 2006–2022

Source: Authors' calculations based on State Statistical Office, 2021b, 2022i, 2022j, 2022o, 2022p.

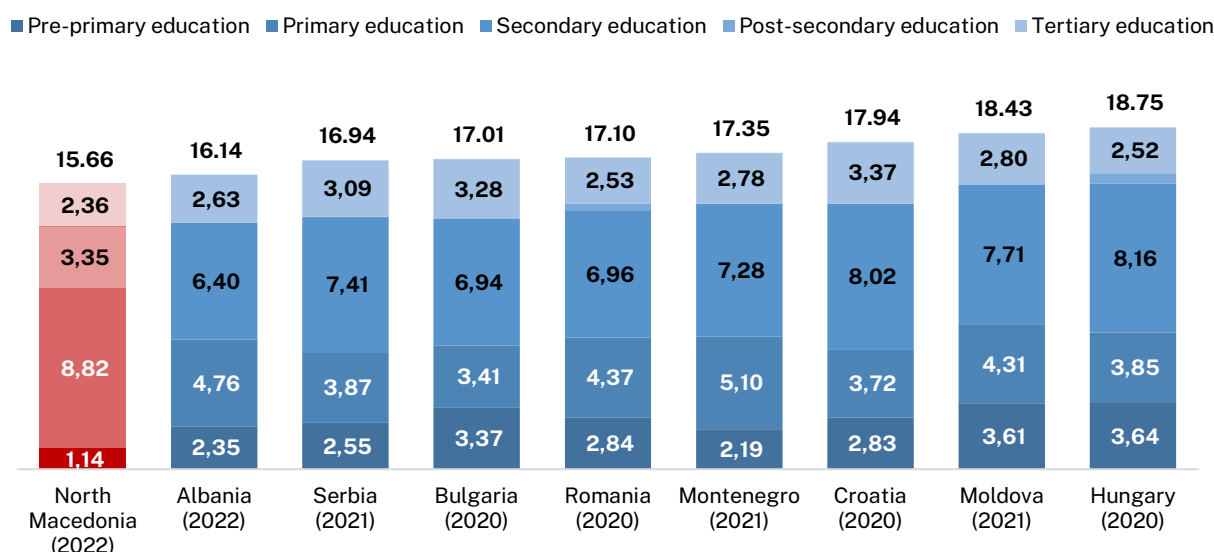
While there has been a definite improvement in the levels of enrolment for all compulsory education stages in North Macedonia, the country is still among the lower half of the countries in the region in this metric. As seen in *Figure 0.6*, North Macedonia has the third lowest gross enrolment ratio (GER) in primary education, and the second lowest in secondary, only above that of Moldova and Bosnia-Herzegovina. In pre-primary, North Macedonia is also lagging behind, being the second lowest after Bosnia-Herzegovina, and well behind the next country, Serbia, at 65%.

Figure 0.6. Gross enrolment ratio by educational level, selected countries, 2023 or more recent year (MRY)



Source: Authors' calculations based on 2021b, 2022i, 2022j, 2022o (North Macedonia) and UIS, 2022a (other countries).

School life expectancy has increased, but remains low, particularly in pre-primary and tertiary education. School life expectancy – the average number of school years completed – in North Macedonia is the lowest in the region, particularly impacted by the low levels of pre-primary and tertiary education, both of which are the lowest rates in the sample of comparison countries. On average, based on the levels of schooling for the school year 2021/22, the school life expectancy is 15.7 years, with 13.3 years of pre-university schooling and 2.4 years of higher education studies. Schooling takes place mostly at the age corresponding to the compulsory cycle (primary and secondary education). At pre-university level, the average duration is distributed between 1.1 years in pre-school, 8.8 years in primary education levels and 3.35 years at secondary. While the total number sits well below the European average of 19.4 years, the country has progressed significantly, having increased from 13.6 years in 2017.

Figure 0.7. School life expectancy (average number of years of schooling) by educational level, selected countries, 2022 or MRY

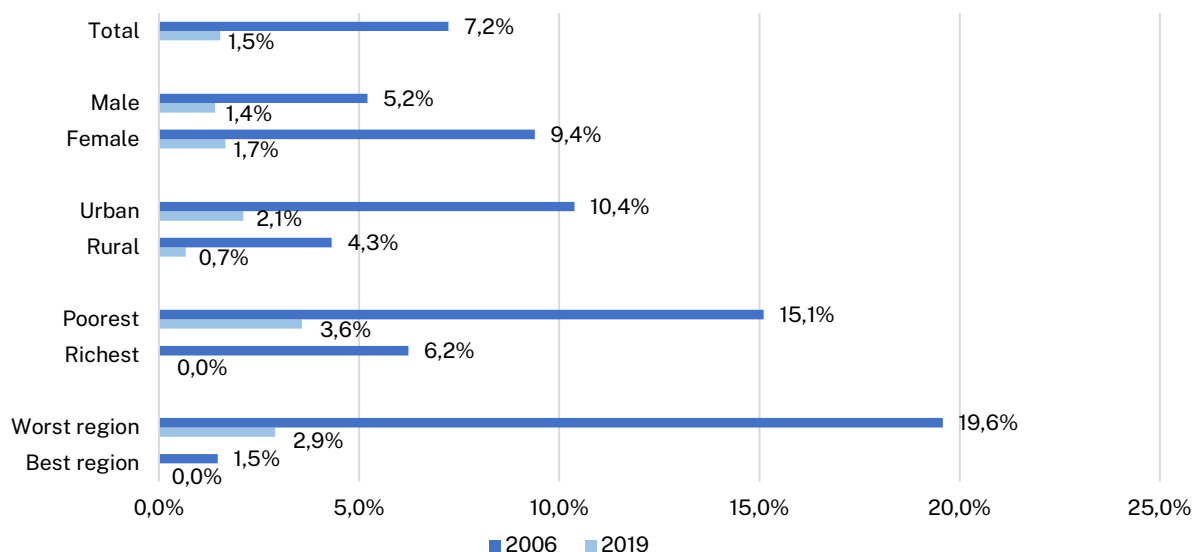
Source: Authors' calculations based on State Statistical Office 2022k, 2022l, 2022o, 2022p (North Macedonia), IIEP-UNESCO, 2024 (Albania) and UIS, 2022f (other countries).

The education system has high levels of internal efficiency, with low repetition rates, but faces some issues with the transition from one education level to another. The school system in North Macedonia only allows repetition starting from grade VII of primary education, ensuring automatic promotion from the start of primary education school. Less than 1% of students repeat a grade at the end of primary education and throughout their entire secondary schooling.

The primary education completion rate is 94% and the intake rate for the first grade of secondary is 90%, indicating an issue with the transition between primary and secondary education. Only 78% of children aged 18 are new entrants to the final grade of secondary, which indicates a major retention issue, with relatively high drop-out rates at this level.

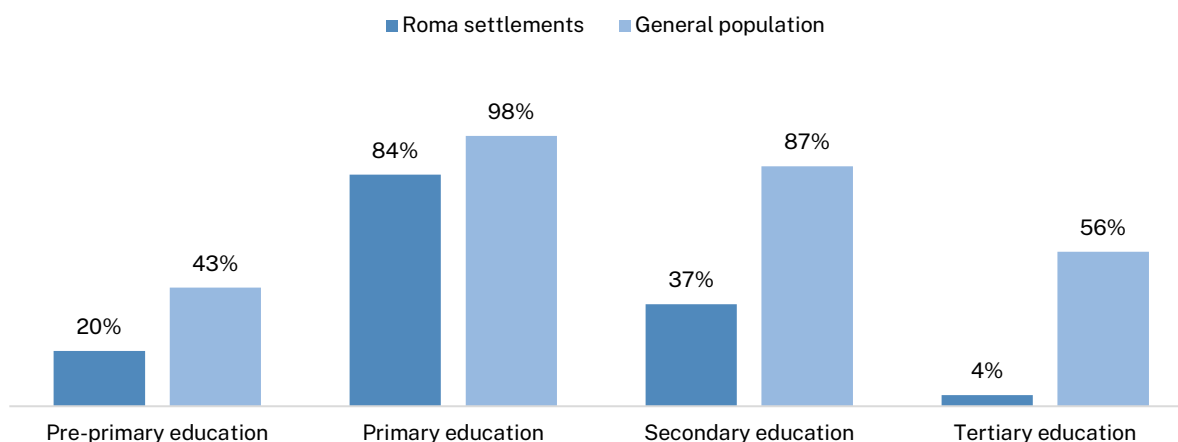
While there are no gender disparities observed in primary education, differences tend to appear in secondary, with girls less likely to transition from primary to secondary education than boys. However, once there, girls are more likely to stay enrolled than boys.

The share of out-of-school children has fallen significantly over the years, although is still prevalent in some groups, particularly among Roma children. In 2019, out of the general population, only 1.5% of children aged 6 to 14 (the age corresponding to primary education) were out of school, a number that has fallen significantly from 7.2% in 2006. However, this number is not distributed evenly across location and socio-economic status. Wealth is the biggest factor in predicting the likelihood of being outside of school during the primary, secondary, and tertiary education cycles.

Figure 0.8. Share of children aged 6 to 14 that report being out of school by gender, location, and socio-economic status, 2006 and 2019

Source: Authors' calculations based on UNICEF, 2006, 2019a.

While the rate of out-of-school children in the general population is low, it is 13 times higher for children in Roma settlements, at 19.2%. In addition, poor Roma children are almost 9 times more likely to be out-of-school than rich Roma children, and than poor non-Roma children. Highly aware of those challenges, the Ministry of Education, together with other partners, has developed several different strategies. These include the 2022–2030 National Roma Strategy and programmes such as targeted scholarships, specific criteria for secondary and tertiary admission for Roma children, and the Roma educational mediators programme.

Figure 0.9. Share of children aged 6–14 that report being out of school, Roma settlements and general population, 2019

Source: Authors' calculations based on UNICEF, 2019a, 2019b.

While some improvements have been made in inclusive education, children with disabilities still face serious challenges. Since 2019, with the adoption of the new Law on Primary Education, the Ministry of Education and Sciences began the transition towards inclusive schools, with all children with disabilities being accepted and supported in mainstream schools since 2020, transforming special education schools gradually into resource centres for these other schools, and from the 2022/23 school year stopping the registration of new students into these resource centres. Unlike the Law on Primary Education, the Law on Secondary Education does not yet contain a provision guaranteeing and structuring inclusive education. A draft law is currently being prepared to include these guarantees.

While improvements have been made, a lot of effort is still needed to ensure that inclusive education becomes a reality. In 2018, 80% of surveyed schools reported not having pedagogical or didactic resources made accessible to children with disabilities, and 63% reported not having any type of special educator on their staff (Ombudsman, Republic of North Macedonia, 2018). The MoES has since increased investment in inclusive education. The budget allocated for inclusive education has been increased from MKD 50,000,000 in 2020 to MKD 390,848,000 in 2023 (a 680% increase). In 2023 the MoES has invested in making 51 schools disability-friendly through ramps, adapted sanitary facilities, and elevators.

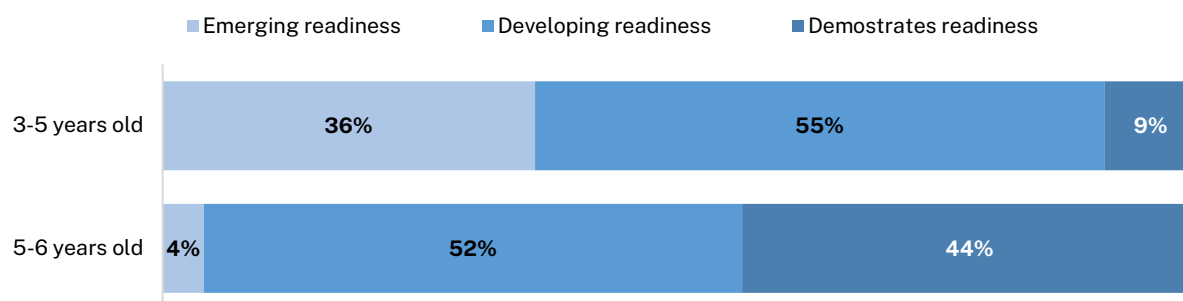
Quality of education and management of resources

The education system of North Macedonia faces a myriad of quality-related education challenges, including low and inequitable learning outcomes, poor teacher management and professional support for teachers, and lack of sufficient investment in infrastructure, including teaching and learning resources.

Domestic and international student assessments highlight weak foundational competencies. Learning deficiencies start early in the early years, with many children entering primary school not ready, and persist through to later grades. The education system fails to provide all students with the skills they need to successfully complete each stage and move confidently to the next.

North Macedonia participates in a number of different assessments that provide data on the quality of the education system.

In pre-primary education, the Measuring Early Learning Quality and Outcomes (MELQO) instrument for pre-school children aged 3–6 years, implemented in 2022, shows that, as children grow older, their progression in learning increases, with more and more children moving away from ‘emerging readiness’ and towards ‘demonstrates readiness’. However, many children at the end of pre-primary are not fully school-ready. Four per cent of children aged 5–6 are still falling below ‘emerging readiness’ and 52% are ‘developing readiness’, which could highlight some quality issues.

Figure 0.10. Average level of readiness by cohort, MELQO direct assessment, 2022

Source: MoLSP and World Bank, 2023.

By the end of primary education, not all children master full early literacy and numeracy skills. In primary education, the Multiple-Indicator Country Survey (MICS) 2019 data shows that only 28.5% and 60.4% of children in second and third grades respectively had foundational reading skills. Even more worrying facts relate to children's numeracy skills, with only 11.1% and 38.4% of children in second and third grades respectively having foundational numeracy skills. This means that pupils tend to retain their weaknesses as they move to the next grades.

At secondary level, the PISA that assesses students aged 15 (90% of them in the first grade of secondary) and the state Matura exam, which assesses students at the end of secondary, provide insights into students' achievements at that level. Although improvements have been recorded over the years, in the PISA testing students in North Macedonia scored lower than the OECD average in reading, mathematics, and science. While the share of students performing below basic proficiency (level 2) in all three PISA subjects has dropped, approximately half of all students still find themselves at that level: in 2018, 55%, 61%, and 49% of students found themselves below the basic proficiency level in reading, mathematics and science respectively.

Table 0.1. PISA scores by region, 2015, 2018 and 2022

| Year | Science | Reading | Mathematics |
|-------------------------------------|---------|---------|-------------|
| OECD average (2018) | 493 | 493 | 490 |
| EU (2018) | 484 | 482 | 489 |
| WB (2018) | 408 | 402 | 414 |
| North Macedonia (2022) ² | 380 | 359 | 389 |
| North Macedonia (2018) | 413 | 393 | 394 |
| North Macedonia (2015) | 384 | 352 | 371 |
| Differences | | | |
| 2018-2015 | 29 | 41 | 23 |
| 2018-OECD average | -76 | -94 | -95 |

Source: National Examinations Centre, 2018, and OECD 2023b (for 2022).

For the state Matura exam, in the first subject in the compulsory part, the average grade for the language varies from 3.64 for Albanian language to 4.14 for Macedonian language. In the second,

² Results from 2022 are not further analysed throughout the report as the results were announced after completing this report. Note that it corresponds to post-COVID-19, and in many countries, a drop in results has been recorded.

elective subject, the average grade for mathematics is 4.19, while for English language it is 3.49. The average achievements of high school graduates from gymnasium are higher than those of VET in all subjects. This is to be expected because high school students from gymnasium have different curricula than in vocational schools, in which the subjects from the state Matura exam are represented with more classes per week.

Marked gender, socio-economic, urban-rural, ethnic, and linguistic disparities form very early on, and tend to remain throughout children's schooling. Disparities in the level of skills development and achievements exist among students due to several factors that are external to the school system but have major effects on the skills and learning outcomes of children. These include students' gender, the socio-economic status of their families, the education level of parents, the place where they live, and the ethnic and the linguistic background of their family. These factors tend to shape children's outcomes, which may necessitate active policy interventions to narrow and eliminate existing gaps.³

Girls outperform boys in most assessments, yet differences are small or marginal in many cases. As often seen in the literature, girls systematically outperform boys in reading and literature. In mathematics, the pattern is less clear.

Socio-economic status is one of the strongest predictors of performance, with socio-economically advantaged students outperforming disadvantaged students. In the PISA 2018 testing, the learning gap between the top and bottom socio-economic status groups was 80 points, equivalent to almost two years of schooling.

The higher the level of parents' education, the higher the child's level of achievement. This observation is seen already in pre-school, as shown by the MELQO results, which observe that children from homes with parents who have completed secondary education and above achieved progressively higher skills and development outcomes than their peers from families where their parents' highest level of education was secondary schooling. This effect remains throughout their school journey up until the end of the secondary cycle.

The urban-rural location is an important factor affecting children's achievement, although it may be compounded with other factors such as the socio-economic status (SES) and education level of parents, and the quality of the school supply. All assessments reviewed indicate that children living in urban settings tend to outperform their peers living in rural settings. This pattern prevails from pre-primary to secondary. Results from the Matura exam also pinpoint differences in results depending on the place where pupils live. There are statistically significant differences between students who come from an urban environment versus those who come from a rural environment in the Matura results from June 2022 onwards.

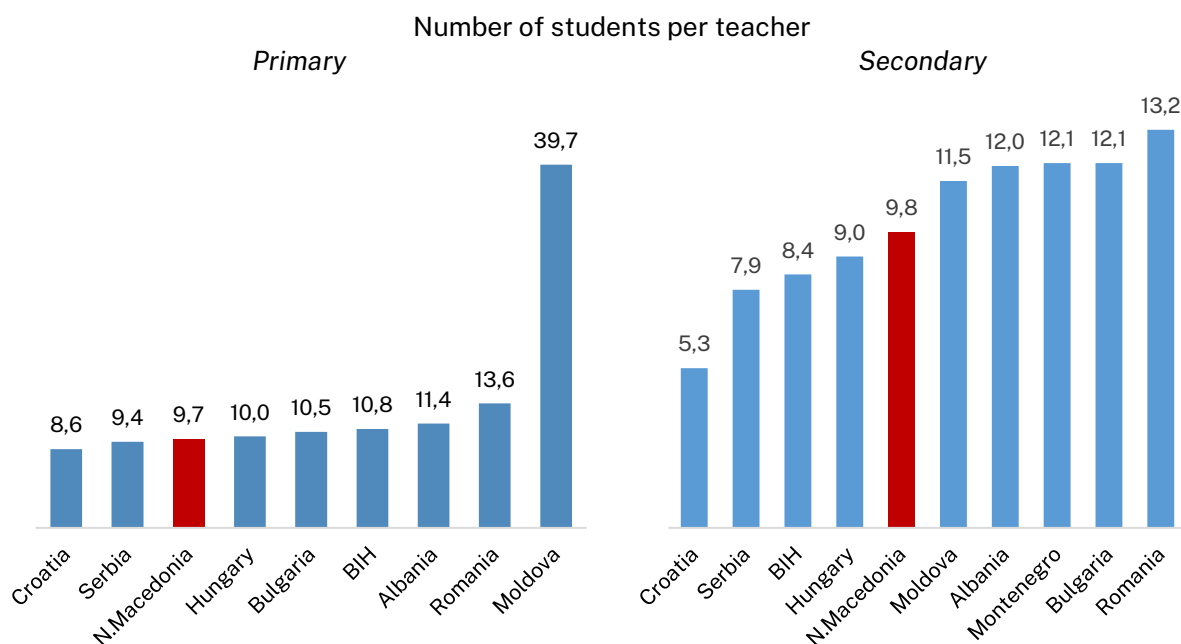
Results from the various assessments also show that there are disparities in children's learning and development outcomes across ethnic and linguistic groups, but with some inconsistencies across the domains tested. However, Roma children consistently lag behind their peers, with significant gaps. These outcomes interact with socio-economic circumstances and geographic location.

Student teaching conditions are quite favourable, with falling and relatively low student-teacher ratios (STR). However, this does not translate to the improved learning outcomes of students. Over the past two decades, the student-to-teacher ratio has decreased from 18.3 students per teacher in 2001/02 to 9.7 students per teacher in 2022/23 in primary, and from 16.6 to 9.8 in secondary (State Statistical Office). Over the same period, the population aged 6–17 has dropped by 32.5%, directly affecting enrolment. While the number of students in primary education has decreased by 24%, the

³ In this regard, quality ECE programs can play a pivotal role. Children having attended ECE do perform much better than those who did not. This is a very encouraging result, highlighting the ability of ECE programs to adequately prepare children for primary, by imparting them with relevant skills and abilities to ensure proper academic journey.

number of teachers has increased by 43% between 2002 and 2022. Similar trends are observed in secondary education, with figures of 23% fewer students and 28% more teachers respectively. This situation results from the fact that teachers have continued to be recruited and classes opened despite the significant drop in students. Yet, due to the demographic shift and internal migration pattern, some municipalities face a major deficit of teachers, while in others human resources are underutilized.

Figure 0.11. STR in primary (left) and secondary (right), regional comparison, 2023 or MRY



Source: State Statistical Office, 2022d, 2022l, 2022s (North Macedonia) and UIS 2023a, 2023b (other countries).

Half of primary schools operate with fewer than 10 students per teacher, while 13% have fewer than five students per teacher, which makes the running of schools very costly while not assuring higher learning outcomes. Some schools in some localities may have a higher number of teachers because of different languages of instruction (since there are five languages of instruction in primary education), especially in schools that have satellite schools under their jurisdiction. However, this wide diversity is mostly due to the current funding formulas for primary and secondary education, which are input based and incorporate no motivation for municipalities to optimize the delivery of education services.

Class size has witnessed a similar downward trend, albeit less marked. Over the decade, average class sizes have dropped to 16.7 (2022) in primary and 19.6 (2023) in secondary, below the norm set by the Law on Primary Education which prescribes that each class should have at least 20 students. Only 17% of municipalities meet this requirement, with 42% of municipalities having an average class size of between 11 and 15 students. In some schools, particularly those in remote areas, having a smaller class size may be justified, to ensure all children enjoy the right to education within their community.

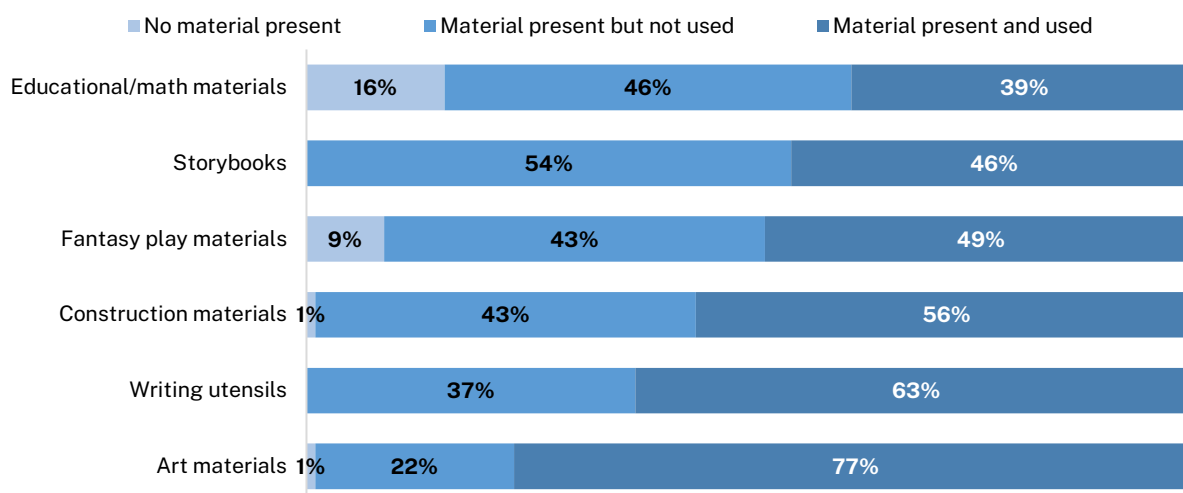
Teacher management and teacher professional development present additional challenges. The level of qualification of teachers has increased over the past decade, with most teachers in primary and secondary education holding the required qualifications – a university degree – but interest in studying to become a teacher is declining each year. Additionally, pre-service teacher programmes have difficulties in keeping up with education curriculum reforms. When teachers start working, the in-service teacher training system is unable to properly support teachers' professional development,

and faces many constraints including a lack of funding. Professional development, when available, may not always focus on the areas that are most important for raising achievement in North Macedonia. Regular teacher appraisals are failing to effectively support teachers' development.

The MoES is putting greater emphasis on improvements in the area of school buildings, with many requiring repairs and reconstruction. Currently, there are gaps and challenges in school conditions. Large differences are noted in infrastructural and other working conditions in small rural primary schools and those located in larger cities. Major reasons are linked to low capital investments, but also the way capital spending is funded. The central government is responsible for capital spending for schools; however, local government has a significant role to play in the maintenance and repair of buildings as per the division of delegated functions, which they are often hesitant to fund because their financial situation is far from optimal. Nevertheless, in the last four years, there has been increased investment in the construction of new school buildings (10) and in reconstruction and rehabilitation (153).

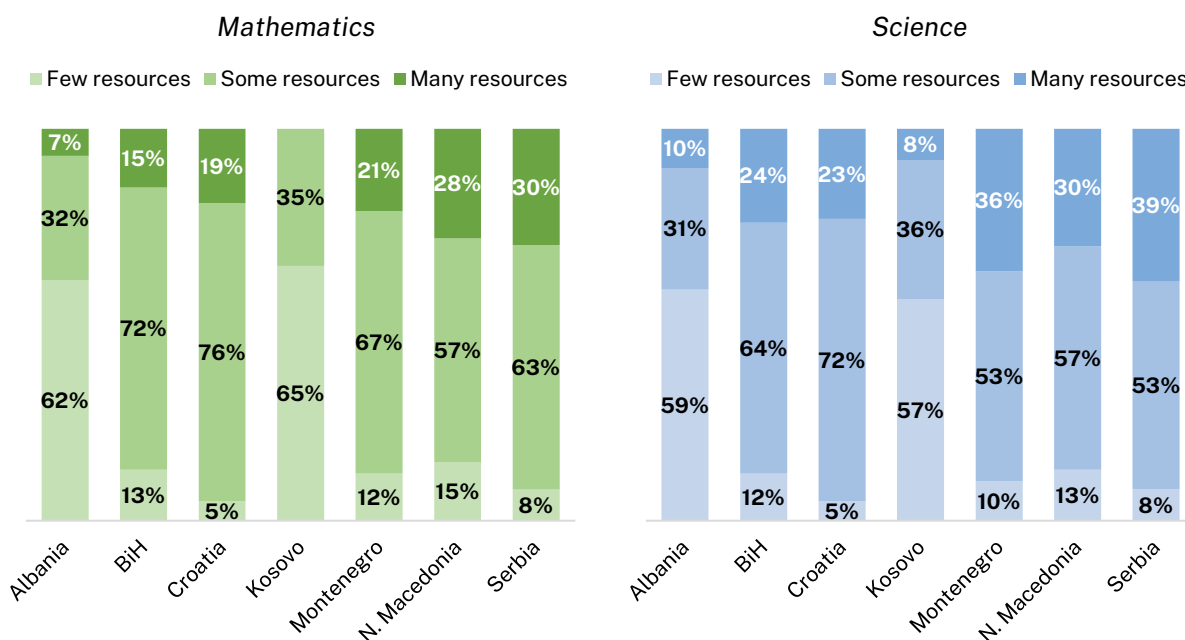
While many schools have some teaching and learning resources to support students' learning, more efforts are needed to provide them with adequate instructional resources. While most pre-schools do have materials, they are not systemically used, as the MELQO findings show. This could reflect weaknesses in the training of pre-school teachers.

Figure 0.12. Availability and percentage of use of learning support materials in observed kindergartens, 2022



Source: MoLSP and World Bank, 2023.

The 2019 TIMSS results show that 57% of Grade 4 students were in schools where principals indicated that their school was equipped with 'some maths resources' and 28% with 'many maths resources', while 15% of them belonged to schools where 'few maths resources' were reported. In science, the respective figures were 57%, 30% and 13%. As a positive step, most recently in 2023, the MoES has equipped more than 200 schools with didactic materials and resources for teaching and laboratories.

Figure 0.13. Index of school material resources for mathematics (left) and science (right), 2019

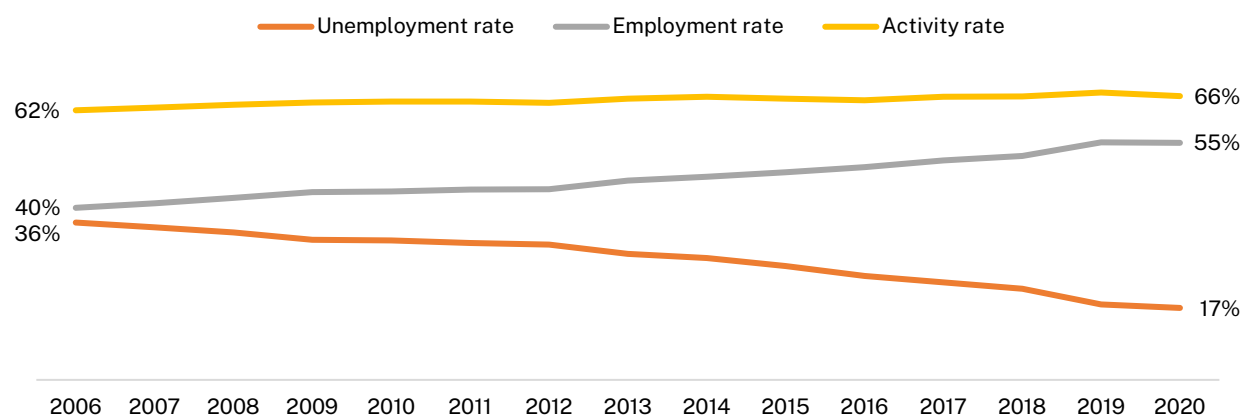
Source: Mullis et. al, 2020.

Challenges in the availability of textbooks for all students in primary education are also observed, following problems in meeting deadlines for translation or delays in the distribution of certain textbooks to schools. A lack of textbooks and teaching materials is most notable in secondary level education, particularly in vocational education. One of the major challenges is finding professors and teachers willing to write textbooks for secondary vocational education. Unfavourable copyright contracts, short deadlines, cumbersome administrative procedures and low fees are among the many reasons preventing authors from engaging in textbook development.

Relevance of education for the labour market

The absence of a well-functioning labour market, quality issues within education, as well as the weak links between education and the labour market in North Macedonia give rise to high youth unemployment, low-quality youth employment, a high rate of NEETs (Not in Education, Employment or Training), the difficult transition of young people from education to the labour market, as well as large skills mismatches.

The Macedonian labour market has undergone significant changes in the last 15 years. The labour market has been changing gradually from a position of a slack labour market with excess labour supply to a tighter labour market, where employers report a lack of workers. *Figure 0.14* shows that labour market activity rate has been quite stable, standing at 65.5% in 2020. On the other hand, the employment rate increased from about 40% in 2006 to approximately 55% in 2020, whereas unemployment halved from 35% in 2006 to 16.6% in 2020 (and further decreased to 11.7% in Q1, 2023).

Figure 0.14. Main labour market indicators of adults aged 15-64 years, 2006-2020

Source: Eurostat 2022a, 2022b, 2022c.

All age groups in the labour market have recorded an improvement in their position in the last decade in terms of declining unemployment and an increased employment rate (Table 0.2). Across genders, the labour market position of women has shown improvements relative to men, resulting in a decrease in the gender gap.

Table 0.2. Main labour market indicators of adults aged 15-64 by gender and education level, 2010, 2015 and 2020

| | 2010 | 2015 | 2020 | 2010 | 2015 | 2020 | 2010 | 2015 | 2020 |
|-----------------|---------------|------------|------------|-----------------|------------|------------|-------------------|------------|------------|
| | Activity rate | | | Employment rate | | | Unemployment rate | | |
| Total | 64% | 65% | 66% | 44% | 48% | 55% | 32% | 26% | 17% |
| Male | 78% | 78% | 77% | 53% | 57% | 64% | 32% | 27% | 17% |
| Female | 50% | 52% | 54% | 34% | 39% | 45% | 33% | 25% | 16% |
| Primary or less | 44% | 42% | 38% | 27% | 29% | 29% | 40% | 31% | 22% |
| Secondary | 74% | 73% | 72% | 50% | 54% | 60% | 32% | 27% | 16% |
| Tertiary | 90% | 91% | 91% | 71% | 72% | 78% | 22% | 21% | 14% |

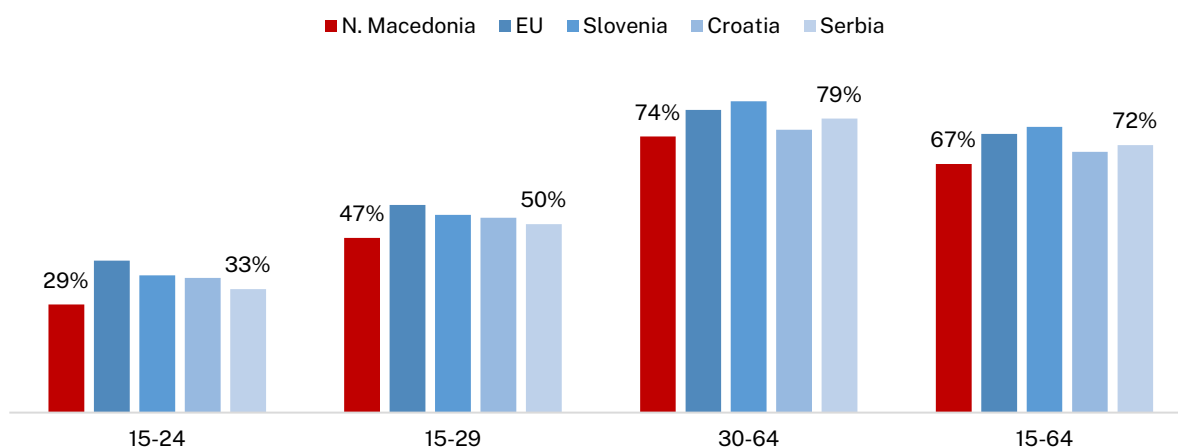
Source: Eurostat 2022d, 2022e, 2022f.

Despite improvements, youth unemployment remains high. The activity of young people in the labour market is low compared to adults as well as to their peers from EU countries. While North Macedonia is registering a continuous decline in its youth (15–29) unemployment rate, levels are still high compared to the adult population and to other countries in the region and the EU. More specifically, youth unemployment rates reached 25.5% in the first three quarters of 2022⁴, down from 45.9% in 2010. However, it remains much higher than that of young people in the EU-27 (16.9%). Despite declining youth unemployment, their position relative to adults has not improved. While young workers benefited from the improved labour market conditions, the youth-to-adult unemployment ratio was 2:1 in 2021, compared to 1:7 in 2010.

⁴ The unemployment rate for the 15–24 age group was 32.8%, while for the 25–29 age group it was 20.7% in the first three quarters of 2022, compared to the EU-27 average of 14.7% and 8.3% respectively.

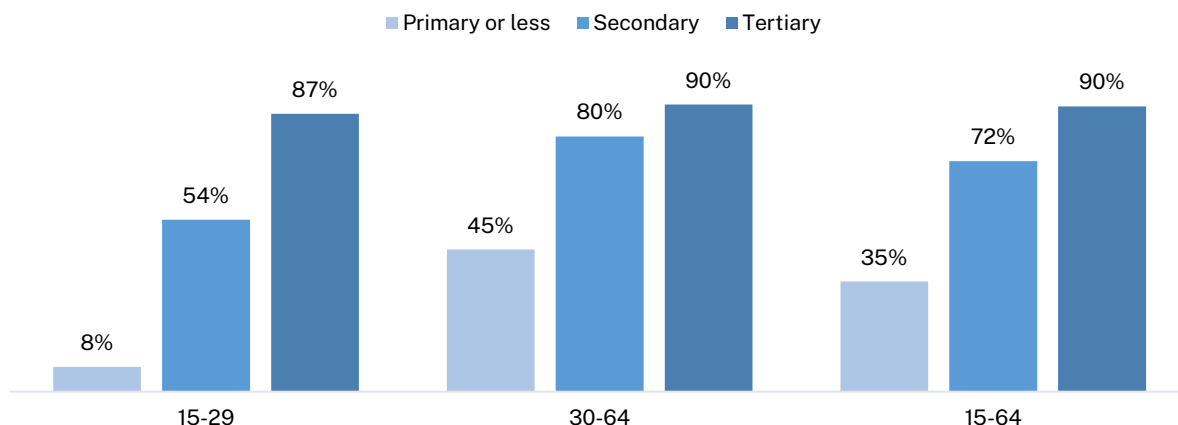
Young people's activity (15–29) in the labour market is relatively low (46.7% in Q1–Q3 2022). Young workers have much lower activity and employment rates compared to their peers from the EU and some of the neighbouring countries, which can be partially explained by younger people staying in education for longer (especially young women). Low youth activity illustrates generally low employment outcomes in the country, and the difficulty of the school-to-work transition. Education is a key predictor of labour market activity for young people, as it is in general. The participation rate of those with tertiary education is 2.6 times higher than of those with primary education (this ratio is 11.2 for young people).

Figure 0.15. Participation rate by age group, regional comparison, Q1–Q3 2022



Source: Authors' calculations based on State Statistical Office 2022t (North Macedonia) and Eurostat, 2022d (other countries).

Figure 0.16. Participation rate by age group and education level, 2021

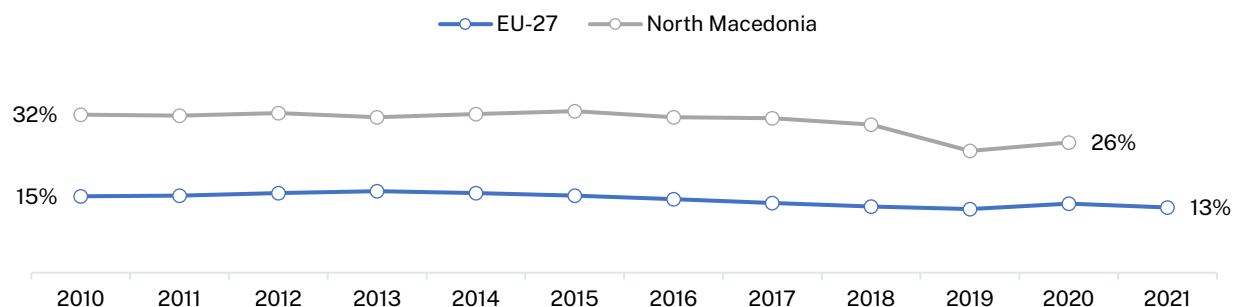


Source: Authors' calculations based on State Statistical Office, 2021b, 2022u.

A relatively high proportion of young people is inactive in the labour market and not present in the education and training system. The share of young people who are classed in the NEETs category (neither in employment nor in education and training) is declining but is still at a comparatively high level. In 2020, the share of youth NEETs (15–29) was 26.2%, almost double the EU-27 average of

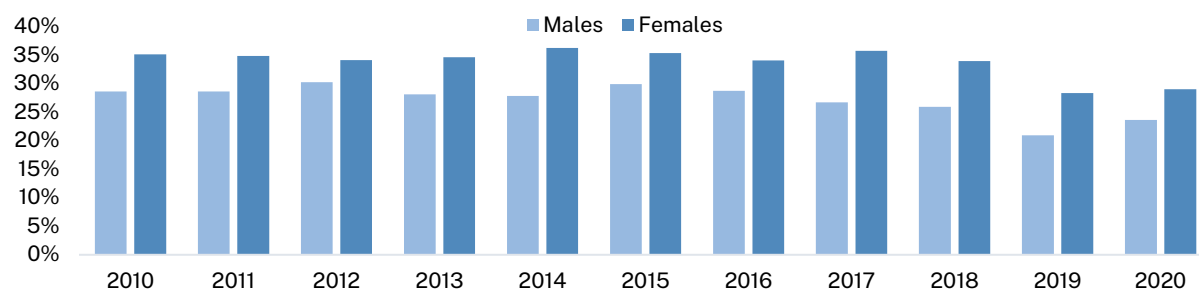
13.9%. The majority of NEETs are unemployed non-students (i.e. inactive young individuals). While the NEET rates are similar among young men and women, there are large differences in the categories of NEET. Women NEETs are much more likely to be inactive rather than unemployed (as men are).

Figure 0.17. Youth (15-29) NEET rate in North Macedonia and EU-27, 2010-2021



Source: Eurostat, 2022g (data for 2021 is not available for North Macedonia).

Figure 0.18. NEET rate by gender in North Macedonia, 2010-2020



Source: Eurostat 2022g (data for 2021 is not available).

There has been a gradual improvement in the quality of jobs occupied by young workers, but challenges persist. There is a general trend of improvement in the quality of jobs for young people in terms of the structure of employment by sector, occupation, etc. Still, young people are more likely to fall into vulnerable employment, working informally, on temporary contracts, for example. Informal employment is steadily decreasing but remains high among the young (15–24), at 15.2% of total youth employment in 2021.

Education is a good predictor of the quality of jobs and men on average work in lower-quality jobs relative to women. The labour market in North Macedonia rewards education, such that workers in tertiary education are more likely to find a job which is of good quality and higher-paying. Individuals who have completed tertiary education (generally, and young ones) are much more likely to be active in the labour market, to be in employment and to transition faster from education to their first stable employment. While the available data do not allow for making a strong statement about the relative value of vocational versus general secondary education, there is some evidence that VET education pays off.

Still, young people face lengthy and difficult transitions from education to the labour market, which leads to a high share of long-term unemployment (90%). More specifically, 54.5% of graduates from North Macedonia managed to transition to a job (employment) 1–3 years after graduation, compared

to 78.5% of graduates in the EU-27. The average transition time from graduation (or school exit) to their first stable or satisfactory job is 31.2 months, or 2.5 years.

Reforms to improve the education relevance of VET graduates need to move faster, while the private sector needs to be more proactive. The systematic organization and modalities of the work-based learning (WBL) of students from secondary vocational education have been part of continuous reform processes in the education system of North Macedonia. The main aim of these reforms is to ensure that vocational education produces the right skill set that meets the labour market needs. While the reforms have yielded positive results, with the introduction of a higher practical learning (WBL) component and summer practice, the quality of the practical training depends substantially on the available resources. Only a small number of schools allocate some financial resources for attending or organizing practical training with an employer. The revised draft Law on VET promises enhanced and more comprehensive regulation of WBL, building upon insights from recent experiences and addressing identified challenges.

Although there are several established coordination mechanisms in VET, challenges remain in achieving comprehensive coordination among all the institutions involved. Employers complain about a general lack of workers, but also a skills deficit among VET graduates. While employers generally express willingness and openness to cooperate with educational institutions for improvements in the curricula and practical learning, few of them are doing so. Nevertheless, the engagement of employers has increased, mainly for the realization of the WBL. There is a slight reverse trend in the mechanisms for engaging employers in curricula design and implementation at tertiary level, though there are established forms and mechanisms for cooperation.

Governance of education and the effectiveness of the educational administration

The functioning of the education administration is impacted by the broader management of public administration, most notably by challenges related to the politicization of public service and the framework of the decentralization policy. Within the education administration itself, there are several challenges pertaining to the process of policy planning and management, the level of coordination between the different bodies in the education administration, the availability of human resources to properly execute functions, and the level of accountability present. There is also a lot of unrealized potential for collaboration between the education administration and various stakeholder groups.

Institutional architecture and arrangements

The public administration in North Macedonia fails to contribute significantly to national development. There is a broad consensus that the public sector, including the education administration, in North Macedonia has been performing poorly for many years. However, this conviction does not translate into a shared sense of crisis, a fact which weakens the potential for successful transformation. While there is a declared willingness to reform – in part to satisfy external pressure – the fragility, if not absence, of genuine political will, combined with a lack of administrative capacity, explain the status quo. Moreover, the absence of a comprehensive professional development strategy within public administration is harmful at any time, but even more so when senior staff changes regularly.

The core cause of this underperformance is the politicization of public administration, particularly the civil service. Politicization is not unique to North Macedonia but is particularly damaging because it is combined with other factors: ineffective use of existing competencies; lack of attractiveness of

the civil service; rapid changes in ministers; and the weakness of professional development. This has a detrimental impact on the internal functioning and performance of the educational administration.

Usually, when confronted with undue political influence on the civil service, reformists propose stronger regulatory frameworks, e.g. in terms of recruitment procedures and criteria, and numbers of staff. However, such well-designed frameworks exist already. The problem is that informal processes, which are near impossible to regulate, intervene. There are several examples of fairly minor and apparently neutral interventions that have limited the damaging impact of politicization, but they are few and far between and difficult to sustain.

The design of policies and strategies in education comes from several sources. The recognition that the education system is in crisis has led to some reform initiatives from three sources: the minister and cabinet; the 2018-2025 Education Strategy; and international agencies. The Strategy can be considered most representative of the education community, as it was prepared through an open, consultative process, contributing to its ownership by the administration. Moreover, it is aligned with the national development plan, and offers a comprehensive picture of sector-wide reform.

However, its implementation has suffered from two broad challenges. First, it was not accompanied by relevant laws, due in part to its disconnection from ministers' initiatives and to the lengthy process of law creation. Second, it was not translated into operational terms, mainly because of the lack of a strong M&E framework, and the absence of a 'champion' within the administration.

The ineffective implementation of the strategy, and of other reforms, reflects a lack of consensus on the direction of the education system. While externally promoted reforms could build such a consensus, they may lack political buy-in.

The promises and disappointments of decentralization

Decentralization in education was introduced some 20 years ago, with municipalities being given an important role in the management of pre-primary, primary and secondary schools and teachers. It was hoped that this would lead to more effective management, but that has not been the case, as is most evident in the problematic area of teacher management.

The ineffectiveness of municipalities has three immediate causes: very few municipalities have enough competent staff; most have insufficient financial resources to take proper care of their duties; and mechanisms for collaboration between municipalities are weak, notwithstanding the praiseworthy efforts by ZELS (Association of Local Self-Governing Units).

However, there are many differences between municipalities, with some being more competent and effective than others. The fact that these municipalities are also constrained is an indication of the existence of more 'structural' factors than the above-mentioned immediate causes.

The first of these is the absence of genuine financial decentralization. This results in various misalignments between responsibility and source of funding, between accountability and funding, and between accountability and autonomy. Second, the regulatory and support framework is weak: municipalities receive little guidance from central authorities; and there is insufficient monitoring of how municipalities use their funds. Third, there is a lack of appreciation of the potential of municipalities among actors at central level.

Any reforms in this area must take into consideration that decentralization was originally introduced for political reasons, and that political considerations remain paramount in many decisions. The over-recruitment of teachers by municipalities is the result of a range of incentives, and fits with the use of the decentralization policy as a tool to temper political and ethnic tensions.

Effectiveness of the education administration

The education system has a complex structure with a mostly clear mandate, with a solid understanding of this structure across the entire education administration. Over time, the structure of the education administration in North Macedonia has increased in size and complexity, with a somewhat clear rationale for the existence of each body and without much overlap in functions. There is also a solid understanding of this structure across the entire education administration. One organizational challenge, however, relates to the level of autonomy of several bodies and their ability to exercise their mandate, particularly in handling their finances, but also in terms of setting policy goals.

Lack of systematic coordination and communication is one of the weakest parts of the system. One of the greatest challenges lies in the deficiency in coordination and communication between the various bodies. This is reflected in the lack of set processes that support continuous consultations and structured debate around issues of policy formulation, planning, management, and implementation. Currently, the quality of the coordination depends more on the eagerness of individuals than on a clear system-wide strategy. The ongoing discussion of potential mergers is not seen as the most effective solution to this problem. Introducing effective mechanisms and protocols for improved communication and coordination is perceived to be possible without restructuring or merging institutions.

The capacities to plan strategically within the MoES and the agencies are weak and planning processes are not well embedded in the day-to-day functioning of the education administration. The recently formed Department for Strategic Planning has neither the number of staff required, nor the requisite capacities for ensuring sector-wide planning. In this context, the Strategic Planning Department has not yet assumed the key planning role which motivated its creation.

Human resources are another challenge for the education administration, both in terms of numbers and competencies. The shortage of staff and of the expertise needed leads to a lack of capacity to exercise the mandate and may have significant implications for the design and outcomes of education reforms. What further reduces the capacity of the education administration is the scarcity of professional development opportunities. The legal provision mandating such opportunities for employees, in the early stages or later on in their careers, is not implemented at all, which at the same time also calls into question the effectiveness of the appraisal for which professional development is a precondition.

While there are enthusiastic individuals in the administration who are eager to make a positive change, overall motivation is fading. Several issues have led to this, including a lack of career and promotion prospects and low salaries.

The administration does not recognise, and is not held accountable for, the state of the education system. The internal demand by the ministry's leadership to evaluate the performance of the institution in achieving its policy objectives is weak. The demand for accountability, in particular through monitoring and evaluation (M&E), mainly comes from reporting requests from development partners. Moreover, the education management information system (EMIS) is not effectively used as a tool for accountability and evidence-based policy-making. EMIS today remains fragmented and is producing information that is not fully reliable.

The lack of a culture of accountability makes it difficult to highlight the main system-level challenges, to evaluate performance and to communicate policy priorities. At the same time, there are a few positive initiatives that hold great potential for strengthening understanding of the system's performance, particularly in terms of measuring student outcomes obtained from national and international testing exercises.

Partnerships

Domestic partners have limited influence on education policy-making. Currently, the education administration does not have systemic coordination mechanisms that enable periodic meetings and consultations with domestic partners. Additionally, due to their limited scope and scant resources, formal representative organizations like teacher and student unions and civil society organizations (CSOs) frequently find it difficult to have an impact on public policy. Some stakeholder groups, such as parents, are not formally represented, which limits their influence on policy debates at national level.

Although there is a lot of unrealized potential for collaboration between the education administration and domestic partners, communication problems and a lack of participation in policy-making drive the use of alternative tactics like protests and social media pressure. The proximity of local communities to municipal authorities offers promise, with multiple stakeholder groups voicing their concerns to the municipal administrations.

The role of CSOs is primarily as a watchdog, through research and analysis of the policies and of stakeholders' opinions. There is also the untapped potential of collaboration with the business community, which is a relatively new occurrence in North Macedonia.

International partners' advice is found to be useful, neutral, and is cherished. Priorities for joint work between the MoES and international partners are established through systematic collaboration between the donor community and the education administration.

Although significant, the ability of international partners to hold the education administration accountable is limited by the time constraints of the projects and the administration's lack of full control over the donor-proposed policies. At times the political discourse pays lip service to policy recommendations by international partners, but implementation is superficial or even a façade. The strong involvement of the donors may at times create a limited sense of ownership inside the administration when the donor community proposes and/or leads the policy formulation. The execution and long-term viability of the policies are at risk due to these attitudes.

The lack of systematic donor coordination by the MoES leads to the creation of parallel communication and coordination structures led by the international partners themselves. The important discussions regarding policy-making, however, typically take place at a bilateral level or through informal channels.

Education expenditure and efficiency of spending

Expenditure on education is declining, following the fall in the school age population. But while investment per school age population has increased, investments remain comparatively low, calling to question the feasibility of achieving the Education 2030 Agenda if the trend is sustained in the future. The recurring costs of education are high, while little funding is left for capital investments. Teacher salaries are high at the beginning of their career, but they change little over the course of a career. Both the primary and secondary education networks are far from optimal and have remained fairly unchanged despite the declining student population.

Spending on education is below internationally recommended levels. Despite the favourable economic outlook, the national effort to finance education in North Macedonia has fallen over the last 10 years. While expenditure on education and training has increased by 48% and by 8% in real terms over 2012–2022, allowing for an investment per school-aged child to increase over the decade, the share of education as a percentage of GDP has fallen from 4.6% to 4.0% over the same period, and the share of education as a percentage of expenditure of the national budget has fallen from 18.7% in

2012 to 9.8% in 2021, to slightly recover to 11.0% in 2022, its pre-COVID levels. These numbers fall short of international recommendations of 20% of the national budget and 4% to 6% of GDP.

Table 0.3. Trend in the priority for education financing, 2012–2022

| | 2012 | 2014 | 2016 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Total education and training budget, Million MKD constant (2022 prices) | 29,536 | 28,207 | 28,870 | 28,179 | 29,525 | 31,249 | 31,811 | 32,036 |
| Unit cost per school-age pop (3-21 years old) MKD constant (2022 prices) | 65,923 | 64,706 | 68,361 | 68,565 | 72,204 | 77,211 | 78,461 | 80,302 |
| Consolidated budget/RNM budget | 18.7% | 16.5% | 11.5% | 10.8% | 11.2% | 9.8% | 9.8% | 11.0% |
| Consolidated education budget/GDP | 4.6% | 4.1% | 4.0% | 3.7% | 3.8% | 4.2% | 4.1% | 4.0% |

Source: Authors' calculations based on Ministry of Finance, 2012-2019, 2020a, 2021a, 2023a. and State Statistical Office, 2021e.

Education expenditure is mainly directed towards primary education, with pre-primary education being relatively underfunded. In 2022, primary education, which enrolls the largest share of students, accounted for nearly half of North Macedonia's education expenditure (46%), followed by higher education (excluding science) (23%), and secondary education (21%). At 8.5%, pre-primary education is still low but has constantly increased over the period (from an estimated 5.9% in 2017) yet are still below the level of comparative countries. Compared to other countries, North Macedonia invests much less in pre-primary education, and slightly more in other education levels.

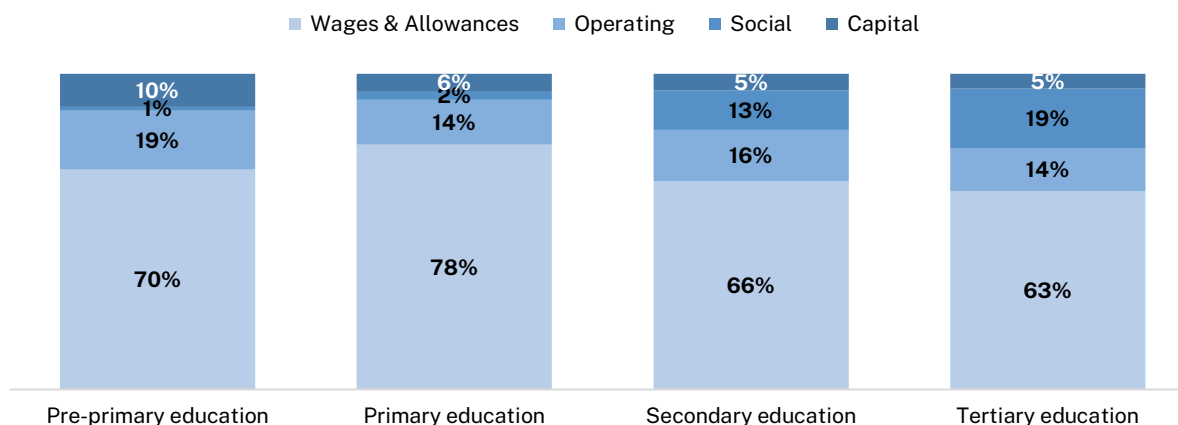
Table 0.4. Regional comparison of the distribution of the education and training expenditure, by main education level, 2022 or MRY

| | Pre-primary | Primary | Secondary | Higher |
|-------------------------|-------------|------------|------------|------------|
| Western Balkans | | | | |
| Albania | 8% | 49% | 19% | 21% |
| North Macedonia | 8% | 46% | 21% | 23% |
| STEE7 | | | | |
| Bulgaria | 22% | 40% | 20% | 18% |
| Croatia | | 43% | 21% | 22% |
| Estonia | | 46% | 10% | 21% |
| Latvia | 19% | 40% | 18% | 18% |
| Lithuania | 18% | 44% | 10% | 21% |
| Slovenia | 11% | 44% | 18% | 21% |
| Other Europe | | | | |
| Hungary | 16% | 36% | 20% | 18% |
| Poland | 16% | 43% | 17% | 24% |
| Romania | 11% | 33% | 20% | 22% |
| Average (sample) | 15% | 42% | 17% | 21% |

Source: Authors' calculations based on Ministry of Finance, 2023a (North Macedonia) and UIS, 2022g (other countries).

The majority of expenditure is allocated to recurrent spending, the largest share of which goes to salaries, leaving limited resources for non-salary items, particularly capital spending. Salary costs are the most significant budget items in all education levels, ranging from 63% in higher education (excluding science) to 78% in primary education. Social spending is particularly high in higher education (19% of total spending) and to a lesser extent in secondary (13%), while being relatively marginal in pre-primary and primary education. Operating costs that include administrative costs as well as utilities and pedagogical expenditure range from 14% in primary and higher education to 19% in pre-primary. Capital spending is generally low, but remains high in pre-primary (at 10%), illustrating the willingness to expand the sector.

Figure 0.19. Expenditure by category and by education level, 2022

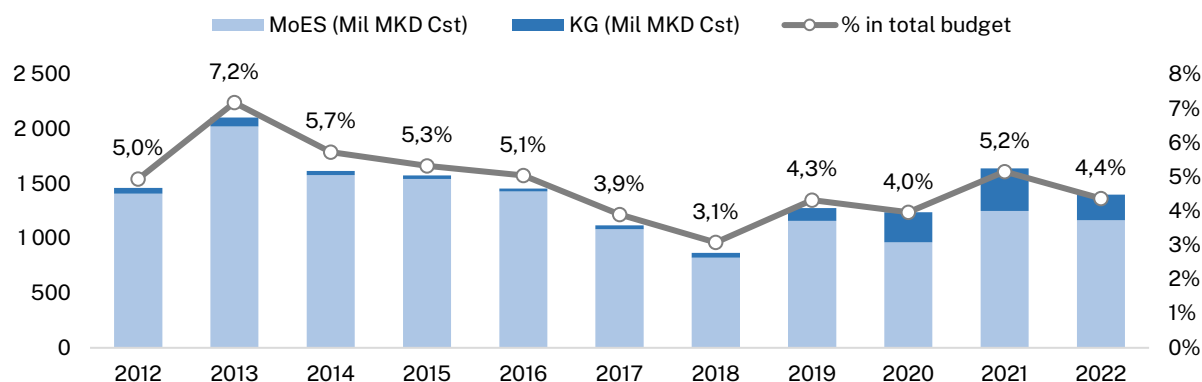


Source: Authors' calculations based on Ministry of Finance 2023a.

Overall, capital expenditure is both modest in level and has declined over the period, from 5.0% of total expenditure in 2012 to 4.4% of total expenditure in 2022 (*Figure 0.20*),⁵ despite the fact that many schools require extensions or renovations, which are currently managed by using double shifts. While investment efforts have been made by the MoES with the construction of new school buildings (10), school reconstruction and rehabilitation (153) since 2018, and equipping schools with didactic materials and resources for teaching and laboratories, capital investments are still below the average of 7% for regional peers at a higher level of development and likely to have fewer immediate needs for reconstruction, yet still invest more. A significant part of infrastructure projects is funded by donations or programmes supported by international institutions, as well as donations from companies or individuals, which are not coordinated nor centralized.

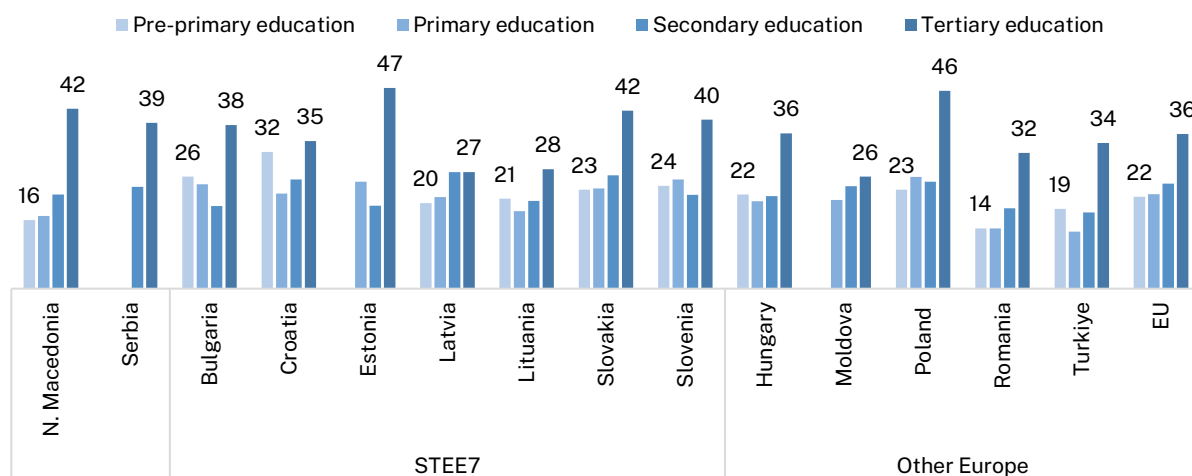
The average recurrent expenditure per pupil increases with the level of education. Expenditure ranges from an average of MKD 67,583 in pre-primary education to MKD 180,606 in higher education. Differences in costs per pupil for pre-university levels appear relatively modest – the ratio of the different unit costs to that estimated for primary education varies from 0.9 for pre-primary to 1.3 for secondary education. However, state schools tend to single themselves out, displaying unit costs that are 2.4 (secondary) to five times higher (primary) than municipality schools. In higher education, the ratio of unit costs to that estimated for primary education stands at 2.4 (with 1.9–2.8 ranges, indicating many disparities across universities).

⁵ These figures do not include capital spending from block grants. If we include block grant's capital spending, the overall capital share rises to 5.7% in 2022.

Figure 0.20. Evolution of capital spending (million constant MKD, 2022 price) and its share in the total consolidated education and training budget, 2012–2022

Source: Authors' calculations based on Ministry of Finance 2023a.

Spending per pupil on pre-primary and primary education in North Macedonia is relatively modest compared with most of the reference countries, while recurrent expenditure per pupil in secondary education in North Macedonia is more in line with the high average values in the list of reference countries. In higher education, spending per student in North Macedonia clearly places the country among the highest spenders at this level of education.

Figure 0.21. Unit cost as a percentage of GDP per capita by level of education, selected countries, 2022 or MRY

Source: Eurostat, 2023b.

Primary and secondary school staff salaries are quite similar. The average cost of teachers is higher than in comparison countries. Salary is a major cost driver. Relatively similar pay structures are observed at both primary and secondary education levels. On average, secondary school teachers receive a gross monthly salary of MKD 46,980, which is 2.8% higher than that of primary school teachers (MKD 45,711) (and statistically significant); the difference for administrative staff is 5.6%, again in favour of secondary school teachers, and that for headteachers is 4.9%, not including deputy

heads. Average salaries for teachers (and other support staff) serving in public schools are relatively close to the national average gross monthly salary in North Macedonia for 2022, around MKD 49,585.

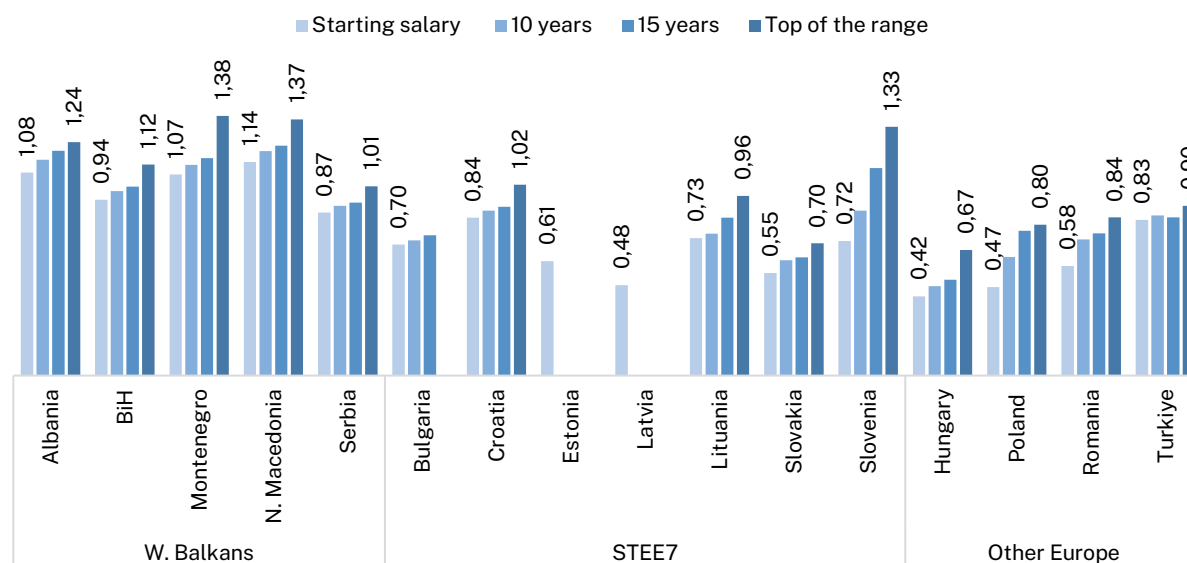
Table 0.5. Monthly gross salary in MKD, October 2022

| | Primary | Secondary |
|----------------|---------|-----------|
| Head | 61,523 | 64,537 |
| Deputy | 55,157 | 54,860 |
| Teachers | 45,711 | 46,980 |
| Other staff | 44,467 | 46,008 |
| Administrative | 31,295 | 33,054 |
| Total | 43,344 | 44,910 |

Source: Authors' calculations based on MoES October 2023 monthly payroll data for primary and secondary education.

Compared to comparator countries, the average cost of primary (ISCED 1) teachers in 2021/2022 – i.e. the average annual primary school teacher salary expressed in GDP per capita – is relatively higher in North Macedonia, entailing a relatively higher cost of teachers in North Macedonia. The ratio of 'entry-level teacher salary/GDPpc' is among the highest of all the countries considered (1.14 compared with an unweighted average of around 0.66 for the STEE7 and 0.58 for the other European countries).

Figure 0.22. Regional comparison of primary (ISCED 1) teacher salary at different career stages, expressed in GDP per capita, 2022 or MRY



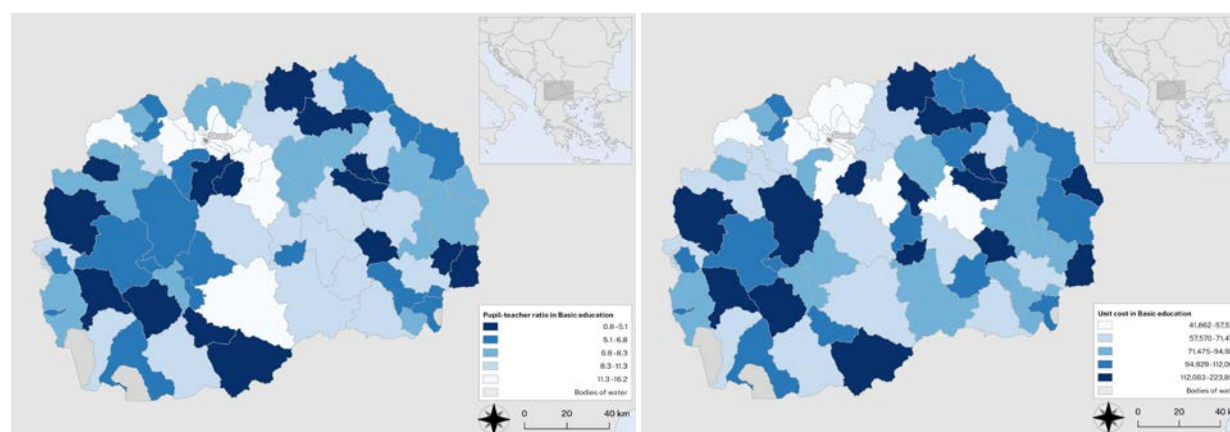
Source: Authors' calculation based on Eurostat, 2023c, and European Commission, 2023a.

The level of teaching salaries in North Macedonia, while relatively generous at the start of a career in relation to national wealth, changes little over the course of a career (and there is little differentiation between levels of education). Figure 0.22 shows how a teacher's career develops in terms of pay. It compares, for the different reference countries, the starting salary, the salary at 15 years and the maximum salary at the end of the scale. In this respect, the Balkan countries, and North Macedonia in particular, lag well behind the other countries, with end-of-career salaries only 20% higher than entry

salaries. For STEE7s, the end-of-career to end-of-career ratio is around 40%, reaching 85% in Slovenia, and around 46% in the other countries.

Important variations in unit costs are observed across schools and municipalities, while the primary and secondary school network remains costly to maintain and is not optimized in light of the decreasing number of students it serves, raising both equity and efficiency questions. In primary education, the relationship between the budget and the size of the school in primary education shows a high degree of randomness, which reflects the fact that for the same number of pupils, the school budget differs significantly (correlatively, the same budget means that a very different number of pupils can be accommodated). Important disparities in school unit cost are observed across municipalities, with the municipality average unit cost ranging from MKD 41,862 to MKD 223,853 (a dispersion ratio of 1 to 5, strongly correlated with STR), raising major equity and efficiency issues.

Map 0.1. Pupil-teacher ratio (STR) (left) and unit cost (recurrent expenditure by pupil) (right) by municipality, 2022



Source: Authors' calculations, based on State Statistical Office, 2022d, 2022k, 2022l, 2022s and Ministry of Finance, 2023a (municipal budget). Administrative boundaries from Agency for Real Estate Registries, 2023. International boundaries from UN Geospatial, 2023.

Based on a low number of students and a relatively high number of teachers, central schools and their satellites tend to be more expensive to run than independent schools (with respective average unit costs of MKD 72,437 and MKD 55,405 in 2022). Unit cost decreases as the size of the school increases and stabilizes at around 350 pupils, which could be an optimal size under the current conditions of primary school organization. There are nearly 120 schools below this level, where it would be useful to implement real strategies to reduce costs, particularly staffing costs, by significantly increasing the number of consolidated classes, and/or increasing the multi-skilling of teachers. Overall, there are too many teachers, leading to a pupil-to-teacher ratio that is too low, especially in rural areas, and too many satellite schools (pushing unit costs up), following the continued recruitment of teachers despite a decline in enrolments.

A similar pattern is observed in secondary schools, with a high degree of randomness in the budget allocated to schools, and wide unit cost variation across the type of schools and municipalities. The analysis further shows that mixed schools (offering both gymnasium and VET streams) record the highest annual average unit cost (MKD 88,915). While the most numerous, they are also those with the fewest pupils on average and the lowest pupil-to-teacher ratio (9.7). While in many countries, mixed schools are a relatively 'economical' organizational solution, allowing teachers (especially general subject teachers) to be used more fully, in North Macedonia there seems to be more of a juxtaposition of the two types of education with no economies of scale, similar to what can be seen in primary

education with the proliferation of satellite schools. However, all things being equal, secondary VET schools are more expensive to run, while displaying worse results in Matura and PISA.

The allocation of funding is fairly disconnected from any performance indicators that would motivate municipalities and/or schools towards a more efficient and accountable management of funds. Over the years, the government has stopped adhering strictly to the rules of the funding formulas it had defined. The result is that funding formulas are not consistently followed, and the funding is not allocated on the basis of objective and transparent criteria. The amount of public money that each municipality receives today reflects, to a large extent, historical trends (in most cases, last year's budget volume). The consequence of this is that there are no incentives in place that would push for a more optimal and efficient use of resources.

The way municipalities transfer funding to schools is also non-transparent. The MoES transfers its budgetary funding by means of block grants to the municipalities. These funds transit through the municipalities, which then allocate them to schools. The block grant calculation is not specified in the legislation, so the actual calculation is not clearly defined.

The process of decentralization has not resulted in a significant shift in how municipalities take ownership of education funding. While municipalities are allowed by law to supplement education funding with their own resources, they seldom do so in practice, except for school employee salaries. This reluctance stems from two main reasons, related to the fiscal capacity of municipalities and their perceived role in financing education.

The allocation of funding is more or less disconnected from any performance indicators that would motivate municipalities and/or schools towards a more efficient and accountable management of funds. It also does not allow schools to acquire adequate resources to cover their basic running costs, and to invest in improvements in the instructional environment; many schools and dorms have debts. The MoES has embarked on a series of initiatives to revise block grant formulas at pre-university levels. The Ministry of Education has recently submitted the draft formula for primary for consideration by the government. All documents for official approval by the government have been developed, but due to lack of funds the adoption and its implementation is postponed until September 2024. The block grant formulas for ECE and secondary are under revision.

Policy orientations

Table 0.6 provides a recap of the various policy orientations that were formulated based on the results and challenges identified in the analysis conducted. They were discussed and validated among education stakeholders including ministry staff, development partners, civil society and academia, during a full day following the presentation of the education sector analysis results during a workshop held in Skopje on 30 and 31 October 2023. A detailed description of the policy orientations (POs) by chapter can be found in *Chapter 7*, distinguishing between short-term and medium-term POs to allow for proper sequencing of interventions. The policy orientations are intended to help support evidence-based policy dialogue around education reforms and strategies and help North Macedonia reform its education and training system for increased convergence and alignment with the EU standards.

Table 0.6. Recap of core policy orientations

| Domain | Policy orientation |
|---|--|
| Schooling pattern | |
| School rationalisation and school mapping activities | Foster school rationalisation and strengthen school mapping to tackle the shrinking of the school-age population. |
| Internal efficiency at secondary | Address low transition rates into secondary and high drop-out rates before completing the cycle to improve internal efficiency. |
| Roma population | Strengthen strategies to keep Roma children in the education system. |
| Children from poor families | Use education to break the cycle of poverty in the poorest families in the country. |
| Early childhood education and pre-primary | Continue expanding access to quality ECE and pre-primary to ensure more children arrive ready for school. |
| Children with disabilities | Boost the current inclusive education concept at all education levels. |
| Quality | |
| Assessing the level of learning outcomes | Promote strong and independent institutions that rely on comprehensive analysis of data, to contribute to effective and efficient assessment and evaluation. |
| Looking at learning outcomes through an equity lens | Decrease gaps and specify measures to address identified factors that influence student achievement. |
| Factors affecting learning & skills development | Deepen the analysis of factors influencing learning and development needs and strengthen coordination across all levels of education. |
| School conditions | Optimize the school network and secure equal learning conditions everywhere. |
| Focus on teacher management | Improve teacher pre-service and in-service education and training, provide support and ensure merit-based systems in the hiring and promotion of teachers. |
| Ensuring children enter primary ready | Continue expanding access to quality ECE and pre-primary to ensure more children arrive ready for school. Promote good nurturing and stimulation activities at home. |
| Relevance | |
| Linkages between education and labour market institutions | Improve institutional set-up in the education system and strengthen linkages between education and labour market institutions. |
| New skills requirements | Improve the quality of education to meet the new skills requirements locally and globally. |
| Employers' engagement in education | Encourage active employer engagement in education. |
| Labour market position of young and NEETs | Improve the labour market position of young people and reduce the number of NEETs, especially among young women. |
| Data collection and analysis | Strengthen data collection, management and evidence-based policy-making. |
| Governance | |
| <i>Institutional architecture and arrangements</i> | |
| Public management | Ensure that the management of the public sector is more supportive for the effective functioning of the educational administration. |
| Education strategy: design and implementation | Strengthen stability in terms of policy and strategy. Improve linkages between planning and implementation. |
| Decentralization of education | Strengthen the capacity of municipalities. Improve the monitoring of municipalities. |
| <i>Effectiveness of the administration</i> | |
| Mandate and function | Secure the financial and policy-making independence of several bodies, in particular the NEC, AEC and VETC; eliminate mandate overlaps. |
| Strategic planning and management | Improve the frequency and quality of communication and coordination processes within the MoES and between the MoES and associated bodies. Strengthen capacities to plan strategically within the MoES's Department for Strategic Planning and the agencies. Strengthen institutional memory. |
| Human resources | Address staff motivation and engage in robust and continuous capacity development for staff in the education administration. Strengthen human resource management. |

Education Sector Analysis: North Macedonia

| Domain | Policy orientation |
|---|--|
| Accountability | Set clearer objectives and expectations around the departments' and agencies' performance and initiate better oversight mechanisms to monitor and evaluate the education system. Develop clear internal policies to govern staff accountability. Improve the functionality and reliability of the EMIS, including the capacity for collecting, verifying and analysing the data. |
| <i>Partnerships</i> | |
| Coordination & collaboration | Strengthen collaboration with all partners. |
| Partners' role in policy formulation, planning and management | Capitalise on assets of partners to improve policy formulation. |
| Policy implementation | Deepen collaboration with partners to strengthen policy implementation. |
| Cost and financing | |
| Equity, access, and quality | Improve access to school in rural areas. Foster gender parity among school leaders. Ensure equity and quality in school endowments across municipalities and schools. Ensure social support to higher education students is well targeted. |
| Efficiency & effectiveness – school and teacher rationalization | Optimise the schools' networks for improved efficiency in the use of financial and human resources. Review the school linguistic policy for more efficient and effective use of teachers and class resources. Optimise the use of teachers. |
| Financial accountability | Improve reporting and evaluation on the allocation of school expenditure. |
| External effectiveness | Reinforce external efficiency by adapting VET specialization to regional/municipal labour pool... ... and ensuring public universities are adapted to national challenges. |
| Adequacy | Ensure the education and training system is adequately financed to provide quality education and training for all. |

Source: Authors.

Chapter 1. Context analysis

This chapter consists of a brief overview of North Macedonia's historical, political, demographic, social and macroeconomic context, to provide an understanding of the environment and factors that shape education service supply and demand in the country.

The chapter is divided into four areas of analysis:

1. General background information
2. Demographic context
3. Social context
4. Macroeconomic and public financing outlook

1.1. General background information

1.1.1. Historical overview

The Republic of North Macedonia is a small landlocked country of 25,436 square kilometres in southeast Europe on the Balkans Peninsula. It is bordered by Kosovo and Serbia in the north, Bulgaria in the east, Albania in the west and Greece in the south. North Macedonia covers about two fifths of the broader Macedonia geographical region, which also comprises large parts of Greece and Bulgaria and smaller areas of the other three border countries. The capital city Skopje is the largest city in the country, home to about a quarter of the country's 1.83-million-person population (as of 2021).

North Macedonia's location positions it as a transportation and communications hub, linking western and central Europe to the Aegean Sea, and southern Europe to western Europe. After five centuries of Ottoman rule, the 1912 and 1913 Balkan Wars resulted in the division of the Macedonian region between Greece, Bulgaria and Serbia, with the current day North Macedonia partitioned to Serbia. During World War I, Serbia was occupied by Bulgaria and then, following the war, the territory was incorporated into what would later become the Socialist Federal Republic of Yugoslavia, a federation of six republics: Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia. The collapse of Yugoslavia led to the independence of the Republic of Macedonia on 8 September 1991. In 2019, under the Prespa agreement, its constitutional name became the Republic of North Macedonia. North Macedonia (formerly the Former Yugoslav Republic) subsequently joined NATO in 2020 and began EU membership discussions (United Nations, 2020).

Internal armed conflict between ethnic Macedonians and ethnic Albanians erupted in February 2001 when a small militant group of ethnic Albanians, the National Liberation Army, clashed with state security forces. A ban on the use of the Albanian flag and restrictions on the use of Albanian language were considered to be the main causes for the uprising, stoking ethnic tensions. The conflict was officially resolved with the signing of the Ohrid Framework Agreement in August 2001, which devolved government powers and established some measures for expanded minority rights. This included a provision that any language spoken by more than 20% of the population would be an official country language, allowing the Albanian language to become a co-official language with Macedonian. Tensions still exist between the two ethnic groups and there have since been small-scale episodes of violence with multiple incidents in 2012, and the storming of parliament by Macedonian nationalists in 2017 in response to the election of Talat Xhaferi, a former National Liberation Army Commander as Speaker of the House.

1.1.2. Political overview

North Macedonia is a parliamentary democracy, with the Prime Minister leading a multiparty government. There are three branches of government – legislative, executive and judicial. The majority party in power has oscillated between the centre-right VMRO-DPMNE and centre-left Social Democrats (SDSM). The Democratic Union for Integration, the largest ethnic Albanian political party formed after the 2001 conflict, has been a key player in the government since 2002. In 2015 a wiretapping scandal implicating high-level government officials, including Prime Minister Gruevski in corruption, election interference and abuse of power, led to a two-year political crisis, with major national protests and violence. The 2015 Prizino Agreement brokered by the United States and the EU brought in reforms in and snap parliamentary elections held in 2016.

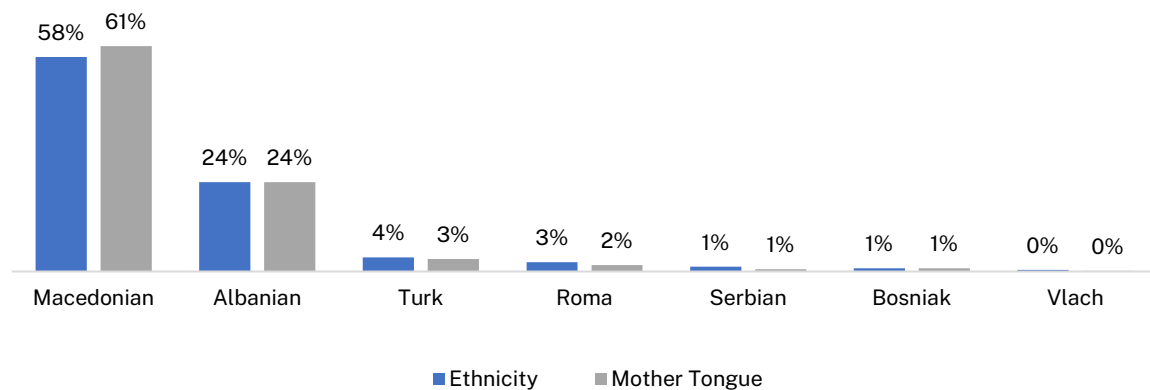
1.1.3. Geography and natural hazards

The country is mainly mountainous with a continental climate. Geographically, North Macedonia is mainly mountainous – approximately 80% of the country is covered by mountains and hills and average elevation is 850 metres. The Vardar River forms a deep central valley, an important area for agricultural production and a transportation route between the Aegean Sea and central Europe. While landlocked, there are three major lakes in the south and over 1,100 large water sources, making up a total water coverage of approximately 857 km². The country's climate is primarily continental, with long dry summers and moderately cold winters, although temperatures and climatic conditions vary depending on the region. Notably, southern and eastern regions have a more Mediterranean climate and areas with high altitudes have a mountainous climate.

Flooding and, to a lesser degree, earthquakes pose major risks. Large active fault lines lead to frequent earthquakes, the most severe of which occurred in 1963 – a 6.1-magnitude earthquake that destroyed much of Skopje and resulted in over 1,000 deaths. However massive destructive earthquakes are rare. In 2020 ThinkHazard classified the country's earthquake hazard level as medium, meaning that there is a 10% chance of a potentially damaging earthquake within the next 50 years. Flooding, on the other hand, is currently one of the major natural hazards in the country, particularly in central and northern regions, classified as a high hazard level with potentially damaging and life-threatening floods expected to occur at least once over the next 10 years (ThinkHazard, 2020). Flooding accounted for nearly 50% of natural disasters in the country between 1980 and 2020 (World Bank, 2021). Flash flooding has resulted in selected school closures and damages, although it has not yet been widespread (Institute of Public Health, 2016; UNICEF, 2013). Landslides and wildfires are additionally considered high risks. As with flooding, they have the potential to become more frequent and severe with the increasingly warming planet.

1.1.4. Ethnicity, language and religion

North Macedonia is ethnically and linguistically diverse. In terms of ethnicity, 58.4% of the population are Macedonian. Albanians make up the next largest ethnic group at 24.3%, while the rest of the ethnic populations are considerably smaller – 3.86% of the resident population is Turk, 2.53% Roma, 1.3% Serbs and 0.87% Bosnian and 0.47% Vlach. In total, 61.38% of the population speaks Macedonian as their first language and most minorities speak their ethnic group's language as their mother tongue: 24.3% of the population speaks Albanian as a first language, 3.4% speak Turkish, 1.73% Romani, 0.85% Bosnian, 0.61% Serbian and 0.17% Vlach. This ethnic and lingual distribution has remained quite stable over the last 20 years.

Figure 1.1. Distribution of ethnicity and mother tongue within the resident population, 2021

Source: State Statistical Office, 2021e.

Table 1.1. Language spoken as mother tongue within resident population, 2021

| Language spoken as mother tongue | Number within resident population | % of population |
|----------------------------------|-----------------------------------|-----------------|
| Macedonian | 1,127,394 | 61.38% |
| Albanian | 447,001 | 24.34% |
| Turk | 62,723 | 3.41% |
| Roma | 31,721 | 1.73% |
| Bosnian | 15,615 | 0.85% |
| Serb | 11,252 | 0.61% |
| Vlach | 3,151 | 0.17% |

Source: State Statistical Office, 2021f.

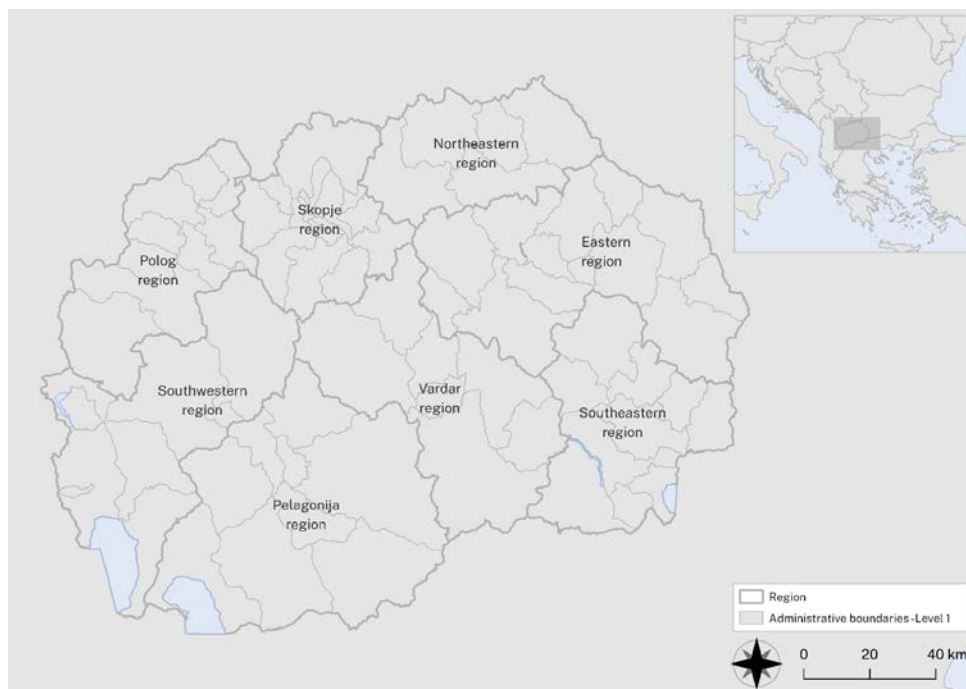
Children have the right to learn in their native language at primary and secondary school. The Constitution and Laws on Primary and Secondary Education recognize the right to school instruction in children's mother tongue at primary and secondary level. At primary level there is currently the possibility for instruction in Macedonian, Albanian, Turkish and Serbian and at a few schools in Bosnian (European Commission, 2019) and instruction in Macedonian, Albanian and Turkish at secondary level. Approximately one third of schools teach in two or three languages. The Higher Education Act also requires the government to provide education in a particular language when it is spoken by at least 20% of the country's population, thus this applies only to Albanian. While allowing children the opportunity to learn in their native language is a positive measure for children's learning development and the rights of minority communities, in some cases it has contributed to segregated classes and schools for children from different ethnicities. Segregation not only impacts social cohesion but can also negatively affect minority students learning the Macedonian language.

Orthodox Christianity and Islam are the main practised religions, closely correlated with ethnicity. Religious affiliation is also closely linked with ethnic group – 46% of the population is Orthodox Christian, practised mainly by ethnic Macedonians, Serbs, and Vlachs; and 32% is Muslim, practised by Albanian, Turkish and Bosnian and most Roma ethnic minorities, as well as Macedonian Muslims. While freedom of religion is guaranteed by the constitution, religious tensions do exist. Freedom House notably reports the presence of Islamophobia in political and public discourse, mainly towards ethnic Albanians and the Roma (Freedom House, 2021).

1.1.5 Administrative features

The country is administratively divided into 80 municipalities and eight regions. As of February 2013, North Macedonia has been organized into 80 municipalities, a reduction from the previous 123 established in 1996. Ten municipalities make up the city of Skopje, which is a distinct locally self-governed unit and is the country's capital. The country is also divided into eight statistical regions, established in 2004: eastern; northeastern; Pelagonia; Polog; Skopje; southeastern; southwestern; Vardar.

Map 1.1. Statistical regions and municipalities in North Macedonia, 2022



Source: Authors' recreation based on State Statistical Office, 2022f. Administrative boundaries from Agency for Real Estate Cadastre, 2023. International boundaries from UN Geospatial, 2023.

1.2. Demographic context

This section describes the demographic evolution of the country, focusing on the impact for education. The evolution and distribution of the population will determine the size of the school-age population, a key starting point in planning education service provision and policy. Trends in urbanization and migration will also affect school mapping and provision.

Much of the population data in this section is derived from national population censuses. The country has conducted a series of censuses since 1931 that are generally undertaken out every 10 years. The most recent population census was carried out in September 2021, a 19-year gap since the previous 2002 census. It can be noted that the 2021 population census records much faster population decline than projections⁶ had predicted.

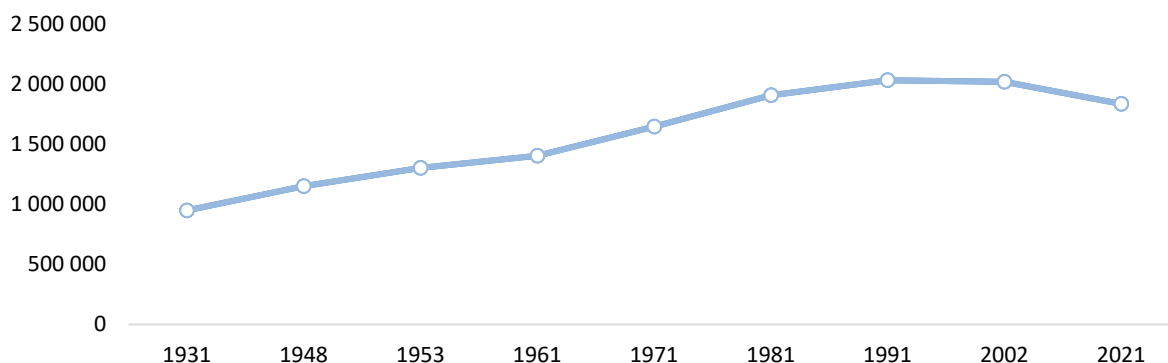
1.2.1. Population evolution and growth

The resident population has significantly decreased over the past 20 years, due to widespread emigration and declining fertility rates. In 2021 the total resident population of North Macedonia was 1,836,713 people – 50.4% of the population is female and 49.6% male. It is the first time since

⁶ Projections were based on 2002 census data and official birth death and emigration records. Underestimated national emigration figures are likely the cause of the discrepancies between projected and actual population figures.

the 1948 census that females outnumber males in the population. In comparison to the 2002 census, the total population has decreased by 184,631 inhabitants, a significant 9.1% decrease, due in part to large-scale emigration to other European countries. In 2021, the fertility rate was 1.6 live births per woman, which while an increase from the 1.3 rate recorded in 2019 and 2020 is still way below the replacement level (at 2.1 live births per woman).

Figure 1.2. Population evolution (number), 1931-2021

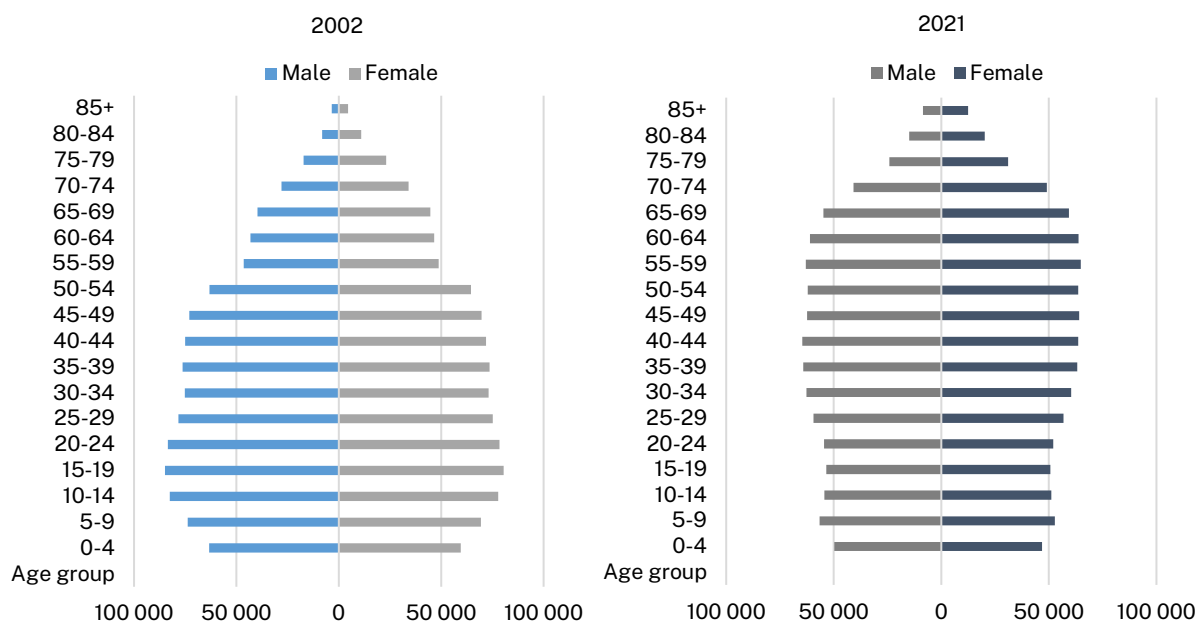


Source: State Statistical Office, 2021a.

The share of young people in the population is decreasing as the share of senior citizens increases.

Declining birth rates, coupled with declining death rates at all ages, means that the proportion of young people in the total population is decreasing while the proportion of senior citizens increases. In the 2021 census, the 0-14 age group accounted for 16.9% of the population compared to 21% in 2002, while the 15-64 age group accounted for 65.9% of the population, and individuals aged 65 and older 17.2%, compared to 68.3% and 10.6% in 2002 respectively. The working age population, while making up the largest share of the population, at 65.9% in 2021, has therefore seen its share decreasing. This is affecting the age structure of the population, as illustrated in *Figure 1.3* below.

Figure 1.3. Male and female population age pyramid, 2002 (left) and 2021 (right)



Source: State Statistical Office, 2021b, 2021c.

The ageing population is creating increased pressure on the working age population. With the median age of the population at 40 years old in 2021, compared to 32 in 2002, North Macedonia is seeing a slowly increasing dependency ratio, at 52% in 2021, compared to 46% in 2002. In the coming years, the senior population will continue to increase, putting further pressure on the working age population. The situation is made worse with emigration flows (as described below), primarily affecting the working age population. Providing access to quality lifelong learning will become all the more important in the coming years, to ensure that the older working age population can remain active for longer and possess the skills required in today's workplace.

Table 1.2. Dependency ratio, 2002 and 2021

| | 2002 | 2021 |
|-----------------------------|------------------|------------------|
| Total population | 2,021,344 | 1,836,713 |
| Dependency ratio (1) | 46% | 52% |
| % of 0-14 in total pop | 21.1% | 16.9% |
| % of 15-64 | 68.3% | 65.9% |
| % of 65 and + in total pop | 10.6% | 17.2% |

Source: Authors' calculations based on State Statistical Office, 2021b, 2021c.

Note: 1): Non-working age population (0-14 and 65+)/Working age population (15-64). Consists of the number of dependents per 100 working age population.

The school-age population is decreasing, entailing less pressure on the education system. Between 2002 and 2021, the school-age population decreased by 31%, from 585,980 students (ages 3–21) to 403,627, at an average annual decrease of 1.94%. This will require an adaptation of the schooling system capacities to cope with the increasingly smaller number of students needing schooling.

Table 1.3. School-age population evolution, 2002 and 2021

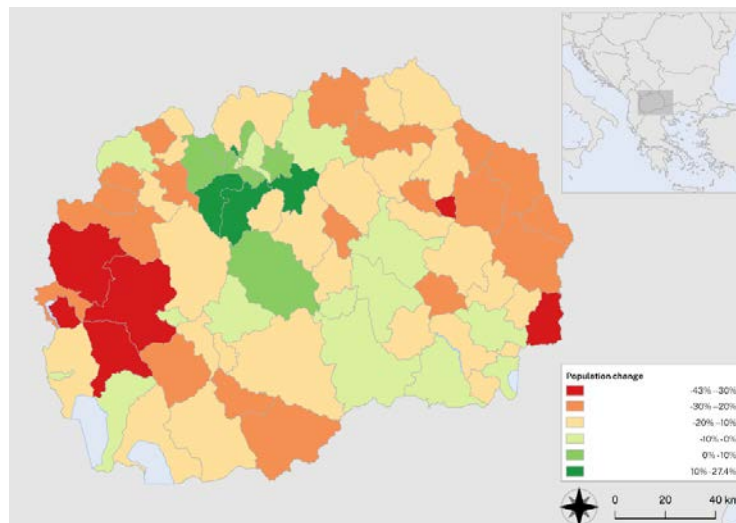
| | 2002 | | 2021 | | 2002-2021 Average annual growth rate |
|------------------------------------|----------------|--------------------------|----------------|--------------------------|--|
| | Number | % of total population | Number | % of total population | |
| Total school age population | 585,980 | 29.0% | 403,627 | 22% | -1.94% |
| 3-5 years old | 78,422 | 3.9% | 63,355 | 3.4% | -1.12% |
| 6-10 years old | 147,178 | 7.3% | 109,035 | 5.9% | -1.57% |
| 11-14 years old | 129,364 | 6.4% | 84,120 | 4.6% | -2.24% |
| 15-17 years old | 99,270 | 4.9% | 61,211 | 3.3% | -2.51% |
| 18-21 years old | 131,745 | 6.5% | 83,195 | 4.5% | -2.23% |

Source: Authors' calculations based on State Statistical Office, 2021b, 2021c

1.2.2. Population density and urbanization

Population increases have mainly occurred in the city of Skopje, with the greatest degree of population decrease in the west of the country. Most of the population increases recorded over 2002-2021 occurred in municipalities that are part of the capital city of Skopje. Out of the 13 municipalities where there was an increase in the population, seven are part of the city of Skopje, including the two with the largest absolute increase – Aerodrom (+ 5,726) and Kisela Voda (+4,729) (State Statistical Office, 2021b). In total, the city of Skopje increased by 19,576 people. The largest increase by percentage of population was in Studenichani (+27.4%) and Sopishte (+18.7%) in the Skopje region. The largest absolute population decrease was in the Gostivar municipality within the western Polog region (-21,272 people). In terms of percentages, the largest declines were in Centar Zhupa (-42.9%) in the southwestern region and Mavurovo and Rostushe (-41.5%) in the Polog region. (See Annex Table A1.1 for detailed population change for every municipality.)

Map 1.2. Population change expressed in percentage, 2002–2021

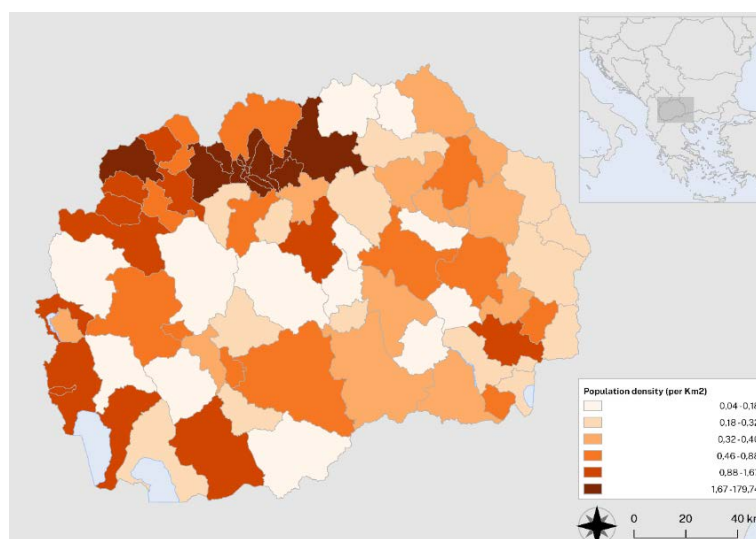


Source: Authors' recreation based on State Statistical Office, 2021b. Administrative boundaries taken from Agency for Real Estate Cadastre, 2023. International boundaries taken from UN Geospatial, 2023.

Overall, 61.6% of the population resides in urban areas and in 38 of the 80 municipalities the majority of the municipality population lives in urban areas (State Statistical Office, 2021). Centar and Chair, within the city of Skopje, are the only municipalities that do not have any rural population, while 37 municipalities have no urban population. The largest share of urban population outside of the territory of the city of Skopje is in the Shtip municipality, where the urban population makes up 93.6%. There are 205 rural settlements that have been depopulated (State Statistical Office, 2021).

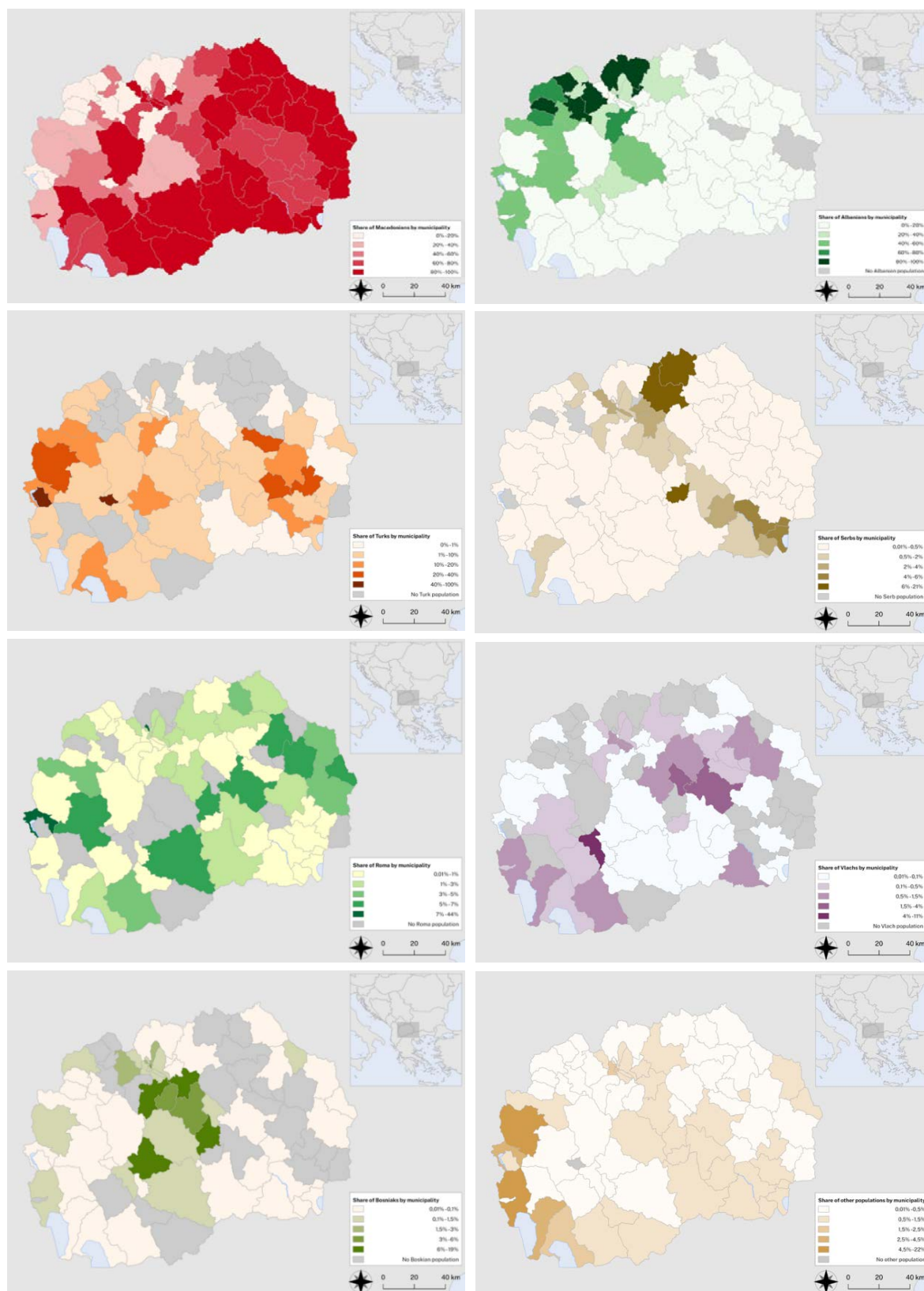
Average population density is low, but significantly higher in the urban Skopje region. Overall population density in the country is relatively low, at 72 people per square kilometre, compared to an average of approximately 112 in the EU. The highest population density is in the Skopje region (334.8 people per km²), and more specifically in the Chair municipality, which covers 3 km² with a density of 20,862 inhabitants per km². The Vardar region has the lowest population density, with just 34.3 people per square kilometre.

Map 1.3. Population density, number of inhabitants per km², 2021



Source: Authors' recreation based on State Statistical Office, 2021b. Administrative boundaries taken from Agency for Real Estate Cadastre, 2023. International boundaries taken from UN Geospatial, 2023

Map 1.4. Share of ethnicities within each municipality's population, 2021



Source: Authors' recreation based on State Statistical Office, 2021e. Maps from left to right: 1st row: Share of ethnic Macedonians in the total municipality population; share of ethnic Albanians; 2nd row: Share of ethnic Turks; share of ethnic Serbs; 3rd row: share of ethnic Roma; share of ethnic Vlachs; 4th row: share of ethnic Bosniaks; share of other ethnic groups.

Ethnic populations are concentrated in the city of Skopje and are clustered by ethnic group throughout the country. As the most densely populated area of the country and accounting for nearly a third of the country's total population, the largest cluster of most ethnic groups can be found in the city of Skopje, where in total 40% of all ethnic Serbs, 32% of ethnic Vlachs, 46% of ethnic Bosnians, 40% of ethnic Roma, 23% of ethnic Albanians and 29% of ethnic Macedonians reside. *Map 1.4* displays the share of the major ethnicities within each municipality's population. It can be observed that ethnic Albanians are clustered in the north and east of the country, by the Albanian border, making up high proportions of the population in municipalities in the northeast and Skopje regions, while ethnically Turkish Macedonians are more densely grouped in southwest municipalities. There is a particularly large cluster of Roma in the Shuto Orizari municipality in the Skopje region, where the estimated 11,267 ethnic Roma citizens account for 44% of the municipality population, comprising nearly a quarter of the total Roma population in the country. Notably, Shuto Orizari was the first municipality in Europe where Romani was adopted as an official language (Benazzo & Napolitano, 2018).

1.2.3. Migration

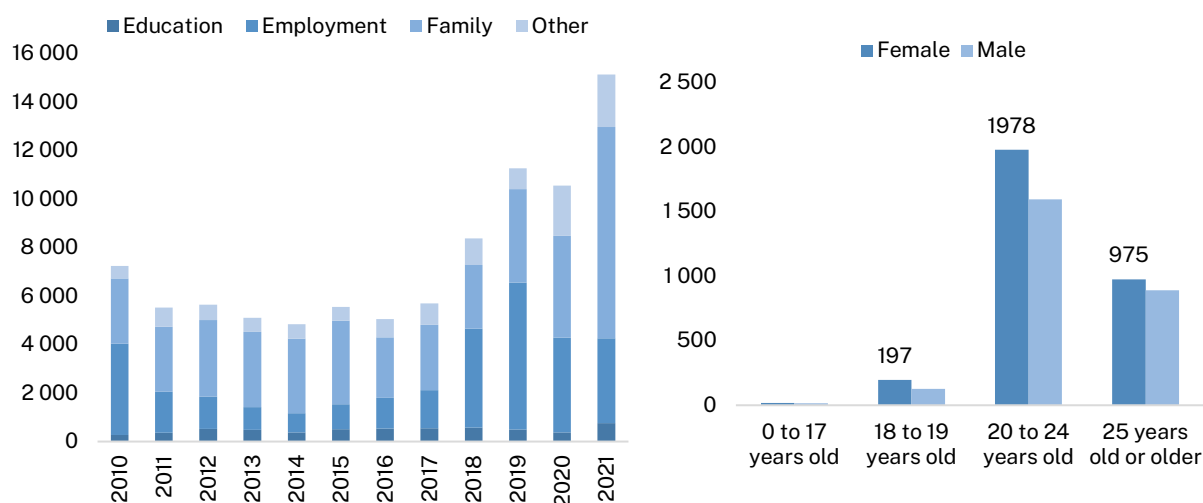
There has been a high level of outward migration over the last 50 years. There has been an exodus of Macedonians abroad, starting after World War II in the 1950s and 60s, when poverty levels in the territory were particularly high compared to the other Yugoslavian states, leading to a first diaspora to western Europe, North America and Australia. Following independence in the 1990s, there was another wave of emigration within Europe and then again in 2009 with EU visa liberalization and subsequent changes to Germany's migration regulations and the ability for Macedonian citizens to obtain Bulgarian citizenship. While there is limited official data, it is estimated that there are almost 700,000 Macedonian citizens living abroad, the majority in Germany, Italy, Switzerland, Austria and Slovenia (IOM, 2022).

While official emigration figures are low, they are likely to be vastly underestimated. Current emigration rates as declared by the State Statistical Office are low, estimated to be just 612 individuals having moved abroad in 2019, down from 1,330 in 2012. However, national statistics only include citizens who have officially declared their residence abroad, so these figures are likely to be grossly underestimated. According to data from the Atlas of Migration, in 2021, 14,181 Macedonian citizens received first-time EU resident permits, on a decreasing trend from 26,717⁷ in 2019 (European Commission, 2023a).

Current drivers of outward migration are mostly socio-economic. As will be further discussed in *Chapter 4* on Relevance, drivers of outward migration are related to high unemployment within the country, limited career development opportunities for certain professions, particularly for highly educated professionals, and the appeal of higher salaries and living standards in migration destinations (IOM, 2022). Diaspora networks abroad and improved migration policies are also major contributing pull factors. North Macedonia has one of the highest scores on the 'Human Flight and Brain Drain' index in Europe, ranked fourth in Europe in 2022 out of 41 countries (The Fund for Peace, 2022). As can be seen in *Figure 1.4*, young people aged 20-24 make up a large proportion of first-time permit receivers arriving in the EU from North Macedonia.

⁷ Note that these figures do not include Macedonians using Bulgarian passports (European Commission, 2023b).

Figure 1.4. Number of first residence permits in the European Union, by reason (left) and age and sex distribution of first permit receivers arriving to the EU from North Macedonia for education (right), 2010-2021



Source: Eurostat, 2023a.

North Macedonia serves as a transit country for migrants and refugees travelling to western Europe. In terms of immigration into the country, North Macedonia serves mainly as a transit country, rather than a final destination, for migrants making their way through Serbia to western Europe. The total population of migrants in the country was estimated to be 131,000 in 2019, principally from the neighbouring countries of Turkey, Albania, Serbia, Greece and Kosovo (IOM, 2022).

During the Syrian refugee crises from 2015 to 2016, there was a particularly high influx of hundreds of thousands of migrants, refugees and asylum seekers from the Middle East and Asia, passing through the country on their way to the EU. This caused a large increase in asylum seekers, with 912 first-time asylum applications in 2015, according to the State Statistical Office, although rates have since decreased, with just 50 first-time applications in 2021. In response to the refugee crisis, the country adopted the National Strategy for the Integration of Refugees and Migrants in 2017,⁸ which includes provisions giving migrants the right to compulsory education.

Internal migration is limited, replaced by emigration. Internal migration rates have remained low and consistent during the past decade, ranging from 2,976 in 2010 to a high of 3,462 in 2016. The Skopje region is the only region with positive net migration from 2000 to 2019. It is generally considered that external migration has replaced internal migration, as those seeking better employment and living conditions seek opportunities abroad (IOM, 2021).

1.3 Social context

An overview of key social indicators related to poverty, living conditions, health and quality of life provides a more comprehensive understanding of children's environment and the elements that may affect their school attendance, performance and completion. Disparities between different groups, including ethnicity and region, are highlighted.

⁸ The Law on International and Temporary Protection grants asylum seekers to right to primary and secondary education until the final decision on their status, while children without refugee status or protection are provided informal education in Transit Reception Centres (IOM, 2021).

Table 1.4. Evolution of social indicators, 2002-2022 or closest year

| Source | Indicator | 2000 | 2005 | 2010 | 2015 | 2022* |
|--------|---|-----------|------------|-------------------|-----------|-----------------------------|
| 3 | Poverty gap at \$2.15 a day (2017 PPP), % | | | 10.4 | 5.5 | 3.4 (2019) |
| 1 | At-risk-of-poverty rate, % | | | 27 | 21.5 | 21.8 |
| 1 | Literacy rate (15+), % | 96 (2002) | | | | 99 (2021) |
| 3 | Urban population, % | 58.5 | 57.5 | 57.09 | 57.4 | 59.1 |
| 1 | Fertility rate, number of children per woman | 1.7 | 1.5 | 1.55 | 1.5 | 1.6 (2021) |
| 2 | Early marriage (women aged 20-49) ⁹ , % | | 12 | 10.7 (2011) | | 10 (2018/19) |
| 2 | Adolescent birth rate (women aged 15-19) ¹⁰ | | | 12 (2011) | | 21 (2018/19) |
| 1 | Under-5 mortality rate, (per 1,000 live births) | 13.6 | 13.7 | 8.7 | 9.6 | 3.8 |
| 3 | Maternal mortality ratio (per 100,000 live births) | 12 | 9 | 6 | 5 | 3 (2020) |
| 2 | Children with at least one biological parent dead (0-17 years old), % | | 2 | 1.9 (2011) | | 2.2 (2018/19) |
| 2 | Children involved in child labour (5-14/5-17), % | | 5.7 (5-14) | 16.6 (2011, 5-14) | | 2.9 (2018/19, 5-17) |
| 2 | Children (under 5) whose births are registered, % | | 94 | 99.7 (2011) | | 99.8 (2018/19) |
| 1 | Life expectancy at birth, years | 73 | 73.7 | 75 | 75 | 74.6 |
| 5 | Obesity rate, men/women, % | 15.7/18.4 | 17.6/19.3 | 19.7/20.4 | 22.1/21.8 | 25.1/23.9 (2019 projection) |
| 2 | Access to internet, % | | | | | 81.5 (2018/2019) |
| 2 | Access to a computer, % | | | | | 69.5% (2018/2019) |
| 4 | Human development index (HDI), rank | 85 | 91 | 81 | 82 | 78 (2021) |
| 4 | Human development index (HDI), score | 0.675 | 0.699 | 0.738 | 0.762 | 0.770 (2021) |
| 4 | Gender inequality index, score | 0.33 | 0.209 | 0.171 | 0.155 | 0.134 |

Source: (1) State Statistical Office 2022c, 2022h, 2022z, 2022aa, 2023b (2) State Statistical Office and UNICEF, 2020 (3) World Bank, 2023g; (4) UNDP, 2022 (5) Global Nutrition Report, 2022.

* Or most recent year.

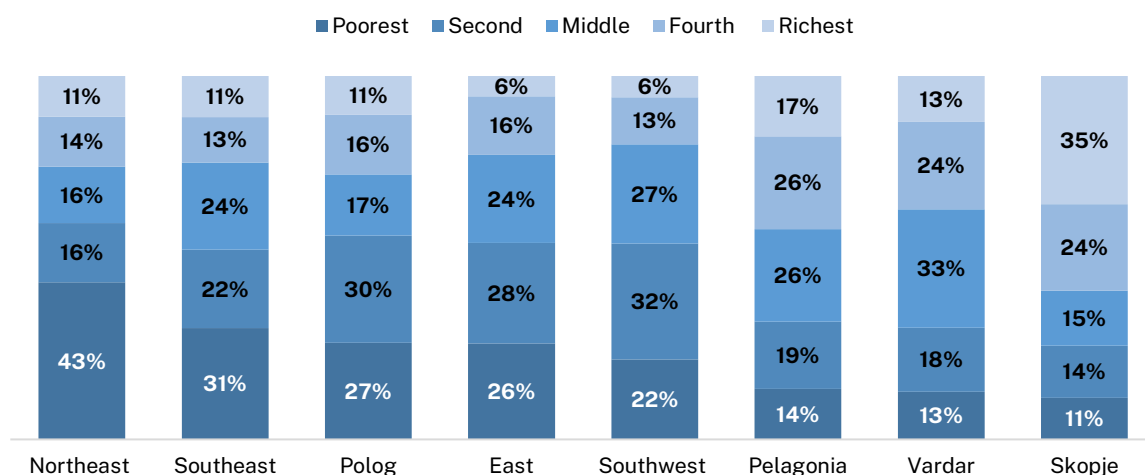
1.3.1. Socio-economic issues

Poverty levels, while decreasing, show persistent geographic and ethnic disparities. The poverty gap at \$2.15 per day has substantially decreased from 10.4% in 2010 to 3.4% in 2019). The at-risk-of-poverty rate has also dropped from a 2010 rate of 27.0% to 21.8% in 2022. However, national figures hide regional and ethnic disparities, as some groups remain consistently marginalized compared to the general population.

Figure 1.5 shows the percentage of each region's population in each wealth quintile in 2018-2019, based on the MICS 2018-2019. The northeast and southeast regions have the highest percentages of their population in the poorest quintiles – 43.2% and 30.6% respectively, while Pelagonia, Vardar and Skopje have the highest proportions of their population in the fourth and richest quartiles. Skopje in particular has the largest proportion of its population in the richest quartile (35.2%).

⁹ Early marriage refers to the percentage of women aged 20-49 married before the age of 18.

¹⁰ Adolescent birth rate refers to live births among women 15-19 years old per 1,000 women in that age group.

Figure 1.5. Percentage of population by wealth index quintile by region, 2018–2019

Source: State Statistical Office and UNICEF, 2020.

Multidimensional child poverty is more prevalent in urban and Roma communities, as well as in the poorest households and households headed by less educated adults. A UNICEF analysis of multidimensional child poverty in North Macedonia used 2018/2019 MICs data to examine 11 dimensions of child poverty: nutrition; water and sanitation; health, housing; education; information; basic and social services; love and care; safety; freedom from exploitation; leisure; and material situation. The study found that 12.0% of children aged 5-17 and 8.7% of children under five are multidimensionally poor (poor in at least 25% of the dimensions) (Srbinoski et al., 2021). Lack of education and skills, economic hardship, lack of love and care at home, violence and lack of leisure activities were the driving contributors to child poverty in the country. Urban households, the Roma community, the poorest and households headed by less educated adults were found to have the highest proportions of multidimensional child poverty. Multidimensional child poverty in urban areas mostly involved lack of education and material deprivation, while in rural areas a variety of dimensions were at play. Examining levels by ethnicity, it was found that one in three Roma children are multidimensionally poor in a third of the poverty dimensions on average, regardless of their age. Multidimensional poverty rates of ethnic Albanian children are close to that of the average population, while ethnic Macedonian children are the least deprived of all of the groups. Four regions were found to have a higher prevalence of multidimensional child poverty – the southeast, east, Skopje and Polog regions. No significant differences between genders were found.

The majority of the population has access to television and mobile phones, but computer and internet access are more limited, particularly among the poorest and the Roma. Access to ICT equipment is high overall, since nearly 100% of households have access to a television and mobile phones. Computer and internet access are more limited, particularly among the poorest and the Roma. According to the 2018/2019 MICS, 69.5% of households had a computer and 81.5% had access to internet at home. Among the poorest quintile, only 27% of households had a computer and 50.8% had internet access, while in Roma settlements, 37.7% of households had computers and 69.8% had internet access.

Box 1.1. The Roma ethnic minority

The Roma population in North Macedonia is the most vulnerable minority, facing high levels of poverty, lower levels of education and employment, discrimination and exclusion. Roma are officially recognized in the constitution and in various legal and institutional protections, but a distinct social stigma remains. The European Agency for Fundamental rights conducted a survey on Roma discrimination in 2021, finding that the at-risk-of-poverty rate for Roma in North Macedonia was 75%, compared to the 22% national average. 62% live in material deprivation (30% nationally), while 60% of Roma young people aged 16-24 are neither employed, in education nor in training (compared with 20% nationally) and 20% of Roma feel discriminated against in core areas of life because of being Roma. As previously mentioned, school segregation by ethnicity remains an issue in the country – the survey also indicated that 46% of Roma children aged 6-15 attended schools where all or most pupils were Roma.

Roma girls and women are particularly vulnerable. While child marriage and early pregnancy rates are low among the general population, according to the 2018/2019 MICS, 22.6% of Roma women aged 15-19 are married or in a partnership, 18.9% had given birth or were pregnant with their first child. Among Roma women of all ages, 29.2% had given birth before they were 18 years old. Early marriage and pregnancy often lead to school drop-out and thus pose a distinct threat to schooling demand and completion for Roma girls. Reflecting their lower rates of schooling, literacy rates among Roma women, and especially the poorest Roma women, are significantly lower than the nearly 100% national average. In 2018/2019 71.8% of Roma women surveyed in the MICS were literate, while among the poorest quartile Roma only 46.1% were literate, compared to 90.4% of the richest Roma women.

1.3.2. Children at risk

Child labour rates are low overall but are higher in rural areas and among boys and the poorest children. The prevalence of child labour is low: only 2.9% of children aged 5-17 were engaged in child labour according to the 2018/2019 MICS. Children in rural areas were more likely to partake in child labour than their urban counterparts (4.7% in rural areas versus 1.7% in urban) as were the poorest, when compared to the richest (5.5% and 0.6% respectively), and boys when compared to girls (3.7% vs 2.1%). Among children engaged in child labour, 3.1% took part in hazardous work. Child labour may prevent children from attending school or make them more prone to dropping out to school.

Health issues

Key health indicators have steadily improved over the last two decades. Life expectancy at birth has increased by nearly two years between 2002 and 2022, at 75 years old in 2020. The under-5 mortality rate has more than halved, from 13.6 deaths per 1,000 live births in 2000 to 3.8 in 2022, as has stunting among children under five, from 9% in 2005 to 4.3% in 2018. Maternal mortality rates, an indicator of the state of the health system, remains low at three per 100,000 live births in 2020, down from 12 in 2000.

High blood pressure, smoking, poor diet, obesity and pollution are the main health risk factors in the country. The prevalence of noncommunicable diseases in the country is increasing, linked to the ageing population. High blood pressure, smoking and poor diet are considered to be major mortality risk factors in the North Macedonia. The country has one of the highest rates of smoking in the world: nearly 50% of the adult population uses tobacco products. Air pollution is also a major

concern in urban areas and particularly in Skopje, and the prevalence of respiratory conditions is especially high among children aged 0-14 (Winkelmann et al., 2021). Apart from COVID, the leading causes of death in 2021 were cerebrovascular disease, inflammatory heart disease and diabetes (WHO, 2021). Obesity, including childhood obesity, has also been increasing and is considered one of the main risk factors for developing type 2 diabetes and cardiovascular diseases. In 2000, obesity rates were 15.7% for men and 18.4% for women, which increased to 22.1% and 21.8% respectively in 2015, and is projected to be 25.1% for men and 23.9% for women in 2019 (Global Nutrition Report, 2022). It is generally estimated that over 30% of children in the country are overweight or obese (Nikoloski et al., 2021).

Childhood obesity is found to be more prevalent among urban children, males and adolescents from lower socio-economic groups. A 2021 UNICEF-sponsored research study on childhood obesity, using secondary national surveys and administrative data, found that urban children were 1.7 times more likely to be overweight or obese compared to rural children; adolescents from lower socio-economic groups were more likely to be overweight or obese than those from higher socio-economic groups and males were 1.5 times more likely to be obese than females (Nikoloski et al., 2021). The proportion of overweight or obese children was found to be lower in schools where children had access to school gym equipment during and after school hours and physical activity was in general associated with a lower likelihood of being overweight or obese.

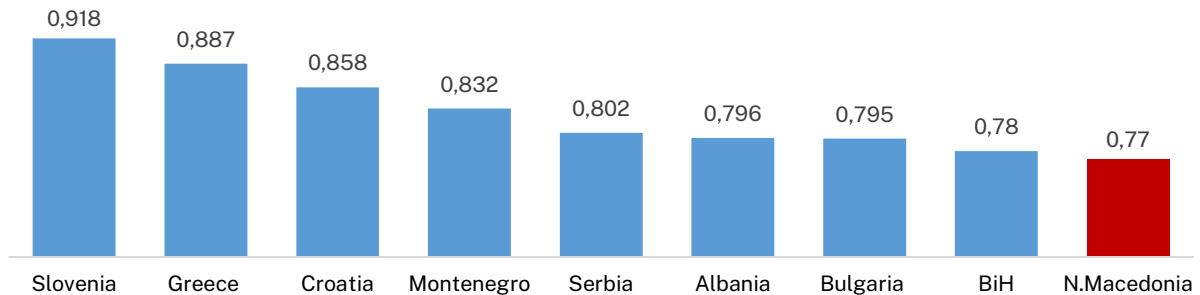
Disability and inclusivity

The official number of children with disabilities is likely to be underestimated. The 2021 census reports that 5% of the total Macedonian population has a disability, although the majority of individuals identifying as having a disability are among the 65+ age group (16% of the population age group). Only 0.5% of 0-14-year-olds are classified as having a disability – 1,674 children in total. In the overall population, there is a higher percentage of females with disabilities than males (6% versus 4%), but in the 0-14 age group there is a slightly higher percentage of boys with disabilities than girls (0.6% versus 0.4%). However these statistics, which are self-reported, are likely to vastly underestimate the actual numbers of adults and children with disabilities, which is thought to be closer to 10% based on global averages (Institute of Public Health, 2016b).

Human development and gender indexes

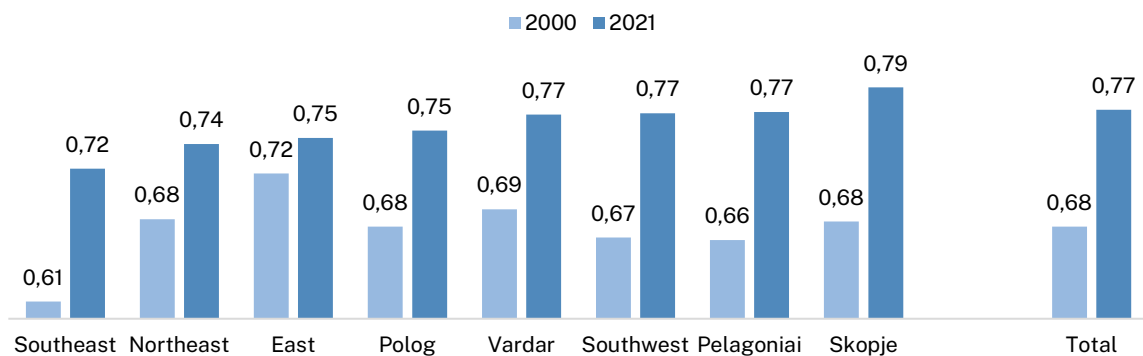
North Macedonia's HDI ranking demonstrates an improvement over the last 20 years, but it remains behind all other Western Balkan countries. In 2021, North Macedonia's HDI¹¹ ranking, was 78 out of 191 countries and territories worldwide, with an HDI score of 0.770, placing it in the second-highest cohort of 'high human development.' Compared to other countries in Southeast Europe, North Macedonia has the lowest ranking, behind all of the Western Balkan countries (see Figure 1.6). However, the country's ranking has increased considerably since 2000, when it was 85th in the world, with a score of 0.675. HDI growth occurred mainly between 2000 and 2010, with an average annual HDI increase of 0.99 points, while from 2010 to 2021 growth slowed to 0.36 points per year on average, lower than neighbouring countries' progress during this decade. As was the case for many countries, North Macedonia's HDI decreased in 2020 and 2021 (from 0.784 in 2019 to 0.770 in 2021) due to the impacts of the COVID-19 pandemic.

¹¹ HDI takes into account life expectancy, mean and expected years of schooling and GNI per capita.

Figure 1.6. Human Development Index in neighbour countries, 2021

Source: UNDP, 2022.

In terms of HDI rankings, the southeast and northeast regions are more disadvantaged, while Skopje, Pelagonia and Vardar are the most advantaged. The southeast, northeast and east regions have the lowest HDIs – 0.722, 0.742 and 0.747 respectively in 2021, although the southeast region has greatly increased its HDI score since 2000, from just 0.614. The Skopje region had the highest HDI score in 2021 at 0.788, the only regional score above the national scores. As the human development index takes into account not only income, but also life expectancy and schooling indicators, it can be noted that there are some discrepancies in the HDI ranking of regions compared to the wealth index quintile shown in Figure 1.7.

Figure 1.7. Subnational HDI by region, 2000 and 2021

Source: Global Data Lab, 2023.

The Gender Inequality Index indicates low inequality between men and women in North Macedonia. North Macedonia had a very low Gender Inequality Index value of 0.134 in 2021, ranking 37 out of all countries, indicating that there is low inequality between men and women in terms of reproductive health, empowerment and labour market issues (UNDP, 2021).

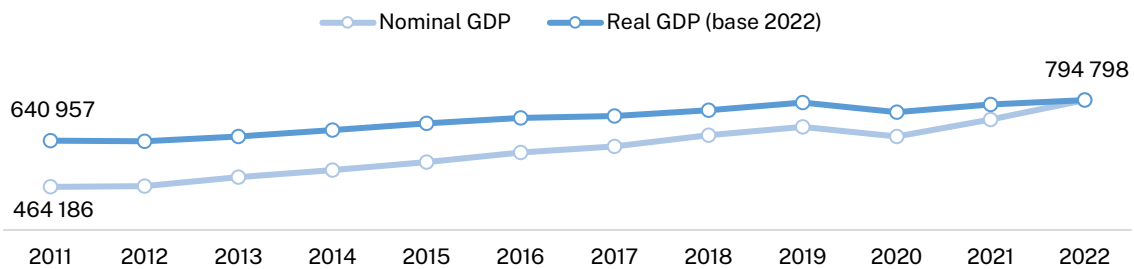
1.4. Macroeconomic and public finance outlook

This section provides an overview of the country's macroeconomic and public financing outlook, to understand the level of resources that could be available for the education system in the future and the type of constraints that exist. Education spending will be influenced not only by the country's level of growth and revenues, but also by the priorities set by the government.

1.4.1. Macroeconomic context

North Macedonia has overall experienced stable growth over the last decade. North Macedonia has experienced relatively stable growth over the last decade, with the exception of a sharp drop in GDP in 2020 due to the COVID-19 pandemic. The country has had an average annual GDP real growth rate of 2% between 2011 and 2022 (5% in nominal terms), increasing from MKD 640,957 million in 2011 (in 2022 prices), to 794,798 million in 2022.

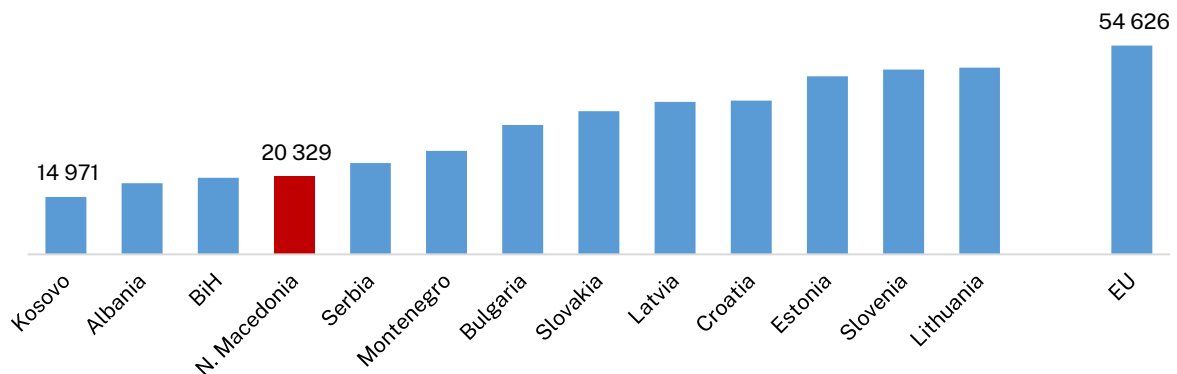
Figure 1.8. GDP Evolution, million MKD, 2011–2021



Source: State Statistical Office, 2022a.

North Macedonia has evolved into an upper-middle income economy, with a GDP per capita of MKD 433,910 in 2022 (7,044 euros), a significant 31% increase from MKD 330,834 in 2011 (in 2022 GDP base; equivalent to 5,377 euros). GDP per capita is higher than some of the other Western Balkan countries and territories, including Kosovo, Albania and Bosnia-Herzegovina, but is still behind Serbia and Montenegro, other small transitional economies in Europe.

Figure 1.9. GDP per capita, PPP (current international \$), 2022



Source: World Bank WDI, 2023c.

The COVID-19 pandemic and Ukraine war have brought significant shocks to the economy. Like many other countries in the region and around the world, North Macedonia's economy suffered a significant shock from the COVID-19 pandemic, with a 3.4% drop in nominal GDP between 2019 and 2020 – 4.7% in real terms. The economy has been slowly rebounding, largely aided by the government's strong policy response and 2021 saw an increase in the nominal GDP from MKD 669.28 billion to 720.4 billion. However, the war in Ukraine and the resulting energy crisis have threatened the country's recovery, disrupted supply chains and driven up inflation with higher energy and food prices in 2022. High levels of uncertainty and tight financial conditions have likewise decreased domestic and external demand, resulting in a slowdown of GDP growth to 2.2% in real terms, a sharp increase in inflation, estimated at 14.2%, and a widening trade deficit.

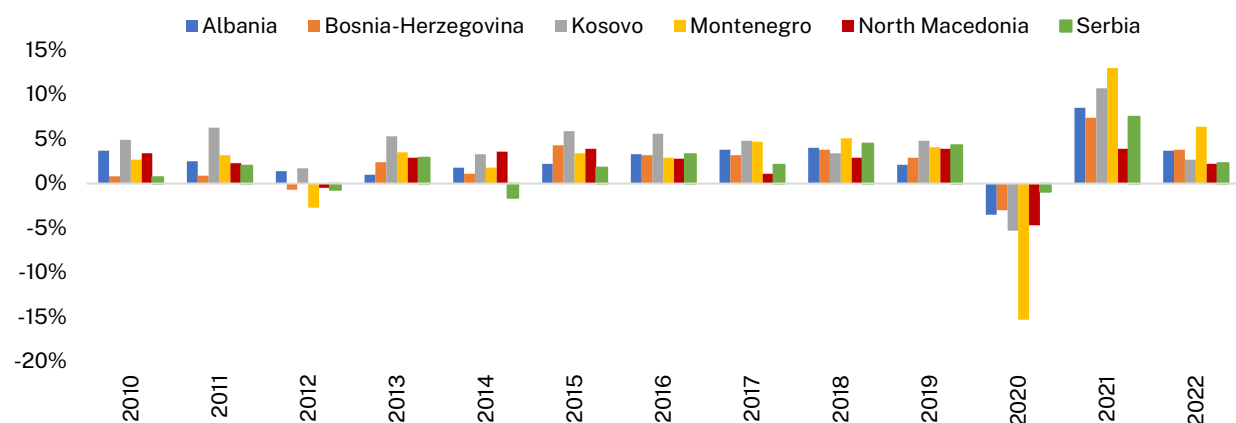
Table 1.5. Evolution of key economic indicators, 2011–2022

| | 2011 | 2013 | 2015 | 2017 | 2019 | 2020 | 2021 | *2022 | 2011–2022 AAGR |
|--|---------|---------|---------|---------|---------|---------|---------|---------|----------------|
| GDP (current, million MKD) | 464,186 | 501,891 | 558,954 | 618,106 | 692,683 | 669,280 | 720,414 | 794,798 | 5.0% |
| Nominal GDP growth (annual growth rate %) | | 7.5% | 5.9% | 3.9% | 4.8% | -3.4% | 7.6% | 10.3% | 2.0% |
| GDP (constant, million MKD, base 2022) | 640,957 | 656,695 | 706,769 | 734,763 | 785,488 | 748,663 | 778,094 | 794,798 | |
| Real GDP growth (annual growth rate %) | 2.3 | 2.9 | 3.9 | 1.1 | 3.9 | -4.7 | 3.9 | 2.2 | |
| GDP deflator (base 2022) | 72 | 76 | 79 | 84 | 88 | 89 | 93 | 100 | |
| Inflation rate, average % | 3.9 | 2.8 | -0.3 | 1.4 | 0.8 | 1.2 | 3.2 | 14.2 | |
| GDP per capita (current price, MKD) | 239,592 | 261,032 | 292,274 | 325,549 | 369,182 | 360,579 | 392,144 | 433,910 | 5.5% |
| GDP per capita (constant price, MKD, base 2022) | 330,834 | 341,546 | 369,566 | 386,991 | 418,645 | 403,347 | 423,542 | 433,910 | 2.5% |
| GDP per capita (constant price, Euro, base 2022) | 5,377 | 5,546 | 5,998 | 6,285 | 6,807 | 6,540 | 6,873 | 7,044 | 2.5% |

Source: State Statistical Office, 2023c; Ministry of Finance, 2022; IMF, 2023.

*Ministry of Finance projections.

In comparison to other Western Balkan countries, the performance of the North Macedonia's economy has had relatively similar trends, although recovery has been at a slower pace. The country notably had one of the lowest levels of real GDP growth between 2020 and 2021 in the region (see Figure 1.10 below).

Figure 1.10. Real GDP growth (annual percentage change), Western Balkans, 2010–2022

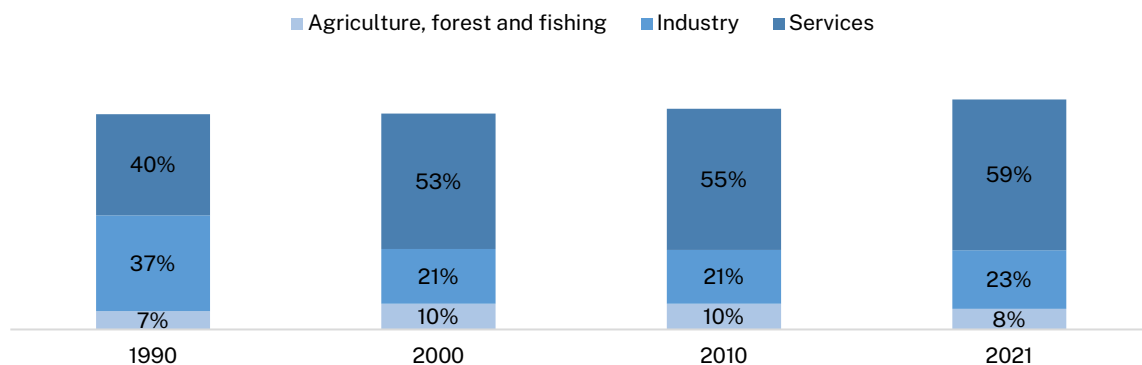
Source: State Statistical Office, 2022a (North Macedonia) and IMF, 2023 (other countries).

While recovery has been disrupted, the medium-term outlook is promising. Fiscal support measures and a tightened monetary policy have helped to address the crises and rising inflation. The IMF World Economic Outlook projects 1.4% real growth in 2023, below the initial forecast prior to the Ukraine war, although in the medium-term GDP growth is expected to recover. With EU accession negotiations underway, the prospect of joining the EU is also expected to boost the

country's growth. Inflation is projected to peak in 2022 at 14%, but remain high in 2023 at an average of 9.2%, then slowly declining to 2.3% by 2025 (IMF, 2023). Due to high energy prices, the trade deficit is predicted to continue to inflate in the short term.

The country has transitioned to a service-driven economy. North Macedonia's economy is dominated by services, which accounted for an estimated 58.8% of value added to GDP in 2022, up from 39.5% in 1990 (see Figure 1.11) indicating a transition to a tertiary sector-driven economy. In 2020, the main tertiary sector contributors to GDP were wholesale and retail trade, motor vehicle repair (17.4%) and real estate activities (12%) (State Statistical Office, 2022a). The industrial sector in particular has shrunk over time, constituting 22.9% of GDP in 2022 against 37.4% in 1990, driven by manufacturing and construction. The size of the agricultural sector has remained relatively stable, accounting for approximately 8.1% of GDP in 2021 and 7.2% in 1990. Wine, tobacco and fresh and preserved fruit and vegetables make up some of the principal agriculture and food subsectors. Employment in the service sector is likewise increasing, constituting 60% of total employment in 2021, while the secondary sector employed 30% of the active population and the primary sector 10% (ILO, 2023b).

Figure 1.11. Percentage of value added to GDP by economic sector, 1990–2021



Source: State Statistical Office, 2022a and World Bank, 2023g (for 1990).

Unemployment has been greatly reduced over the last decade but remains relatively high for the region. Unemployment remains high, at 15.8% for ages 15-64 in 2021, one of the higher rates in the region. However, there has been considerable steady improvement, with the unemployment rate halving over the last 10 years, from 31.6 % in 2011. In comparison, in 2021 the unemployment rate was 11.5% in Albania, 11.1% in Serbia, 17.4% in Bosnia and Herzegovina and 20.7% in Kosovo (Ministry of Finance, 2022a).

1.4.2 Public finance

Government revenue decreased due to the pandemic but has since rebounded. Total government revenue was 30.9% of GDP in 2022, a 4.7% increase from 2011. Losses from the pandemic impacted total government revenue, which dipped from 29.4% of GDP in 2019 to 28.3% of GDP in 2020. Revenue has, however, since rebounded, up to 30.3% of GDP in 2021.

Government expenditure has been exceeding revenue every year, with a ballooning budget deficit in 2020 that remains inflated. Government expenditure has been exceeding revenue every year over the past decade, equivalent to 36.3% of GDP in 2022 (of which 4.0% was interest), up from 32% of GDP in 2011. In light of increased spending and decreased revenue in 2020 due to the COVID-19 pandemic, the budget deficit including grants ballooned from -2.0% of GDP in 2019 to -8.0% (-8.5% excluding grants). While the fiscal deficit including grants has started to fall, to -5.4% of GDP in 2021, it remains inflated, impacted by the previously mentioned shocks of the war in Ukraine and energy crises.

There was a significant increase in donor funding during the pandemic. Official development aid disbursements to North Macedonia more than doubled between 2019 and 2021, from 154.14 million USD (2021 constant prices) to 336.84 million USD in 2021 (OECD, 2023a).

Table 1.6. Evolution in total government revenue, expenditure and deficit, 2011, 2018–2022

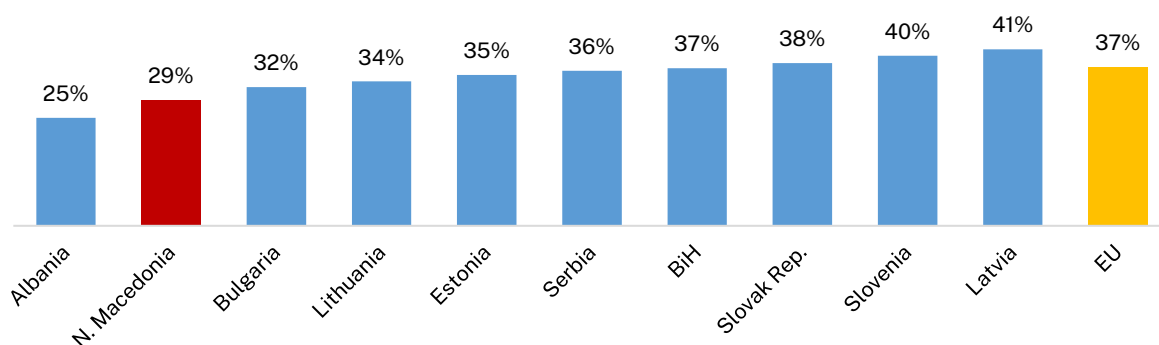
| | 2011 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|-------|-------|-------|-------|-------|-------|
| Total government revenue as % of GDP | 29.5% | 28.5% | 29.4% | 28.3% | 30.3% | 30.9% |
| Revenues | 29.3% | 28.1% | 28.9% | 27.9% | 29.4% | 30.3% |
| Grants | 0.2% | 0.5% | 0.6% | 0.5% | 0.8% | 0.6% |
| Total government expenditures as % of GDP | 32.0% | 30.3% | 31.4% | 36.4% | 35.7% | 36.3% |
| Recurrent expenditures as % of GDP | 28.2% | 28.4% | 28.8% | 34.0% | 32.4% | 32.3% |
| of which interest | 2.7% | 4.1% | 4.1% | 3.5% | 3.9% | 4.0% |
| Development expenditures as % of GDP | 3.8% | 1.8% | 2.6% | 2.4% | 3.2% | 4.0% |
| Budget deficit including grants as % of GDP | -2.5% | -1.8% | -2.0% | -8.0% | -5.4% | -5.4% |
| Budget deficit excluding grants | -2.7% | -2.2% | -2.5% | -8.5% | -6.2% | -6.0% |

Source: State Statistical Office, 2022w and Ministry of Finance, 2023a.

Fiscal pressure remains low compared to the surrounding region. Fiscal pressure appears to be relatively low in North Macedonia compared to other countries in the region. In 2021, among the Western Balkan countries, revenue excluding grants was the lowest in North Macedonia, with the exception of Albania (see Figure 1.12). While revenue excluding grants accounted for 29.4% of GDP in North Macedonia in 2021 (and 30.3% in 2022) in Slovenia and Latvia in 2021, it was as high as 39.7% and 41.2% of GDP respectively. It should be noted, however, that the revenues reported do not account for revenues generated at municipality levels, ultimately underestimating the level of total revenue. The Ministry of Finance is still facing some challenges in consolidating all revenues, among other issues, and is committed to pursuing reforms of public finance management.

Revenue mobilization is a government priority, which needs to increase investment in human and physical capital but has little room for manoeuvre in reducing government spending. North Macedonia notably has one of the lowest tax rates in the region, at just 10% for corporate and personal income, compared to the EU average of approximately 22%. In consideration of these issues, the government adopted a Tax System Reform Strategy in December 2020 which outlines priorities for improving tax fairness, improving revenue collection, increasing tax transparency, improving the quality of taxpayer services, and introducing green taxation (Ministry of Finance, 2020b). This Strategy was further amended in 2022.

Figure 1.12. Revenue excluding grants as a percentage of GDP, 2021



Source: State Statistical Office (North Macedonia) and World Bank, 2023f (other countries).

Investment per school-age child has been increasing. Investment per school-age child has increased from an average of MKD 65,923 in 2012 (2022 prices) to MKD 80,302 (equivalent to Euro 1,304) in 2022. This represents a 22% increase over the ten-year period (see *Table 1.7* below).

Table 1.7. Trends in the priority of education financing, 2012–2022

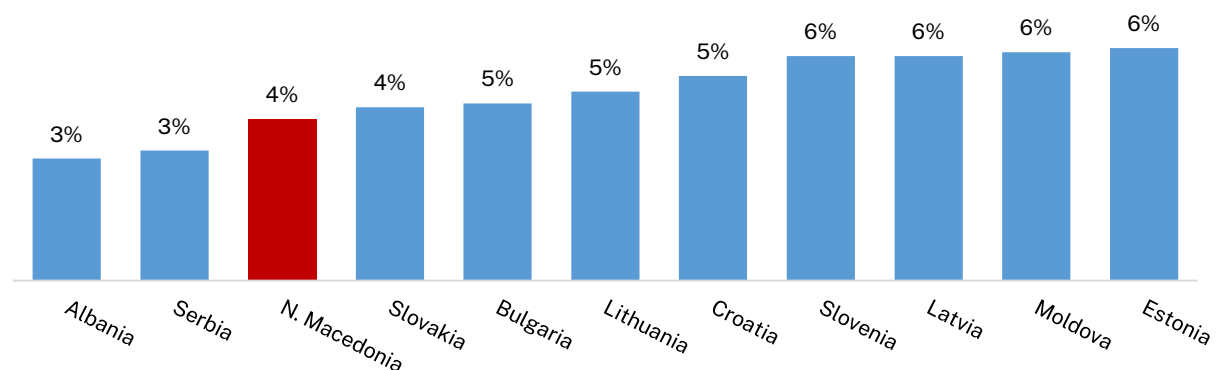
| | 2012 | 2014 | 2016 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Total education and training budget, million MKD constant (2022 prices) | 29,536 | 28,207 | 28,870 | 28,179 | 29,525 | 31,249 | 31,811 | 32,036 |
| Unit cost per school-age pop (3-21 years old) MKD constant (2022 prices) | 65,923 | 64,706 | 68,361 | 68,565 | 72,204 | 77,211 | 78,461 | 80,302 |
| Consolidated budget/RNM budget* | 18.7% | 16.5% | 11.5% | 10.8% | 11.2% | 9.8% | 9.8% | 11.0% |
| Consolidated education budget/GDP | 4.6% | 4.1% | 4.0% | 3.7% | 3.8% | 4.2% | 4.1% | 4.0% |

Source: Ministry of Finance, 2012-2019, 2020a, 2021a, 2023a, consolidated MoES and MoLSP realised budget (see *Table 6.1* in *Chapter 6*) and State Statistical Office, 2021e. *See *Table A1.2* in *Annex 1* for detailed expenditure by function.

However, the share of government expenditure spent on education has been rapidly decreasing. By function, the largest share of government expenditure is spent on social protection, accounting for 30% of the budget in 2021 (see *Table A1.2* in the annex). The proportion of the budget devoted to the education sector has nearly halved over the last decade, accounting for 18.7% of expenditure in 2012 and just 9.8% in 2021, and up to 11% in 2022, back to its pre-COVID level. In comparison, the percentage of the budget allocated to social protection has increased by 23% since 2012. This relative decrease in the share of education spending is driven by the drop in the school-age population and pressure to finance other sectors, such as social protection and health, with the increasing ageing population. National expenditure on education is now below the 12.6% global average and the 15-20% target recommended in the Education 2030 Incheon Declaration. In terms of GDP, the consolidated education budget accounted for 4.0% of GDP in 2022, down from 4.6% in 2012 (see *Table 1.7*).

Investment in education is low compared to more advanced economies in the region. In 2021, North Macedonia's share of government education expenditure as a percentage of GDP was relatively low in the region at 4.1%, behind most surrounding countries with the exception of Albania and Serbia (Figure 1.13). The recommended international benchmark is 4-6% of GDP.

Figure 1.13. Share of government education expenditure as a percentage of GDP, 2021



Source: *Table 1.7* (North Macedonia) and World Bank, 2023g (other countries).

Redesigning the budget policy and fiscal consolidation are key medium-term priorities. With the aim of improving macroeconomic stability and strengthening growth, the 2022-2024 Fiscal Strategy focuses on redesigning the budget policy and fiscal consolidation. It includes four pillars for redesigning the budget policy: (i) economic recovery from COVID-19; (ii) intensified, inclusive and sustainable economic growth; (iii) boosted competitiveness of the private sector; and (iv) development of human resources and equal opportunities. The planned measures for fiscal consolidation cover improving budget revenue collection by shrinking the informal economy and fighting corruption; reducing and restructuring budget expenditures by cutting non-essential costs; supporting the private sector, and innovation and increased social protection allocations; and changing the financing sources of the budget deficit with an increased diversification of financing sources, public-private partnerships and creating a Development Fund for Strategic Investments (Ministry of Finance, 2021b).

1.5. Key takeaway points

North Macedonia is ethnically and linguistically diverse, with many small linguistic groups – making the linguistic policy complex to implement. In 2021, 58.4% of the resident population was ethnically Macedonian and 24.3% was ethnically Albanian. The next largest ethnic groups are Turk (3.86% of the resident population); Roma (2.53%); Serb (1.3%); Bosnian (0.87%); and Vlach (0.47%). Most minorities speak their ethnic group's language as their mother tongue. This range of very small language groups makes it very complex to implement mother tongue instruction in schools, causing both practical issues as well as concerns about school segregation by ethnicity.

The share of young people is decreasing, putting less pressure on the education system but requiring major adjustments in school capacities. Declining birth rates and death rates, as well as widespread external immigration, has resulted in a shrinking child and working age population and an increased proportion of senior citizens. The overall resident population decreased from 2,021,344 individuals in 2002 to 1,836,713 in 2021. The median age of the population was 40 years old in 2021, compared to 32 in 2002, and dependency ratios have increased from 46% (2002) to 52% in 2021. The school-age population notably decreased by 31% between 2002 and 2021. The shrinking school-age population will require a major adjustment of school system capacities, while increased access to lifelong learning will be needed to equip the older working population with the skills to remain active in the workplace for longer.

There has been a high level of external migration over the last 50 years (brain drain), while internal migration remains limited, mostly to the urban Skopje region. There have been several large waves of outward migration over the last 50 years, driven mostly by socio-economic factors, as young people search for more promising employment opportunities abroad. While official figures on emigration are low, it is estimated that there are almost 700,000 Macedonian citizens living abroad, the majority in Germany, Italy, Switzerland, Austria and Slovenia (IOM, 2022). Internal migration has been limited and the Skopje region was the only region with positive net migration between 2000 and 2019.

Key social and health indicators have steadily been improving over the last 20 years, positively supporting the demand for education. Life expectancy at birth increased by nearly two years over 2000-2022, to 75 years old, while maternal mortality rates decreased from 12 to 3 per 100,000 live births. Meanwhile, the at-risk-of-poverty rate dropped from a 2010 rate of 27.0% to 21.8% in 2020. The under 5 mortality rate has more than halved, from 13.6% in 2000 to 3.8% in 2022, as has stunting among children under five, from 9% in 2005 to 4.3% in 2018. Nearly 100% of the adult population is literate. The country's HDI ranking has also improved from 85th in the world in 2000 to 78 in 2021. All of these advancements have positively supported increased demand for education.

The Roma ethnic minority remain the most marginalized. The Roma ethnic population is particularly vulnerable, reportedly experiencing higher at-risk-of-poverty rates (75% compared to 22% nationally in 2021); material deprivation (62% versus 30% nationally); lack of

education/unemployment (60% of 16-24 year olds are not employed, or in school/training, compared to 20% nationally); as well as stigma and discrimination (European Agency for Fundamental Rights, 2023). Roma girls and women are particularly at-risk, with high levels of child marriage (22.6% among girls aged 15-19) and early childbirth (29.2% giving birth before 18 years old) (State Statistical Office and UNICEF, 2020).

Overall, there has been stable growth over the last decade, but COVID-19 and the war in Ukraine have brought significant shocks to the economy. Despite the disrupted recovery in the short-term, the country's medium-term economic outlook is promising. The country experienced an average annual GDP growth of 1.8% between 2011 and 2022, increasing from MKD 640,957 million in 2011 (with 2022 as constant base), to 794,798 million in 2022. GDP per capita has also risen by 31%, equivalent to 7,060 euros in 2022. But the COVID-19 pandemic was a significant shock, resulting in a 4.7% drop in real GDP. Total government revenue likewise decreased from 29.4% of GDP in 2019 to 28.3% of GDP in 2020. While the country has been rebounding, the Ukraine war and associated energy crises have slowed down recovery and growth, causing increased inflation and a widening deficit. Medium-term GDP growth is expected to recover and there is the prospect of the country joining the EU to boost growth. Inflation is projected to peak at 14% in 2022 and decline to 2.3% by 2025 (IMF, 2021).

North Macedonia is transitioning to a tertiary sector-driven economy, entailing a shift in the skills needed for the labour market. Services make up the bulk of the economy, accounting for 58.8% of value added to GDP in 2022, up from 39.5% in 1990. Employment in the sector is also increasing, constituting 60% of total employment in 2021. This tertiary sector transition entails a corresponding shift in the required skills of the labour force.

The government is making efforts to boost revenues, as the tax-to-GDP ratio remains comparatively low. Revenue excluding grants accounted for 29.4% of GDP in North Macedonia in 2021; one of the lowest in the region. In addition, with one of the lowest tax rates in the region, at just 10% for corporate and personal income compared to the 22% EU average, the country has prioritized increasing tax revenues, adopting a Tax System Reform Strategy in December 2020.

The share of education budget is decreasing, in line with the fall in the school-age population. While investment per child is increasing, education investments remain comparatively low. The proportion of the budget devoted to the education sector has decreased from 18.7% in 2012 to just 11% in 2022 (back to its pre-COVID-19 level), driven by the decreasing school-age population and pressure to finance other sectors such as social protection and health. While investment per school-aged child has increased by 22% over the past decade, the proportion of GDP spent on education has decreased and is relatively low compared to other countries in the region, at 4.0% in 2022. North Macedonia's share of education spending remains below international benchmarks (which recommend that 15–20% of government expenditure is devoted to education, and 4–6% of GDP). More financial efforts would be needed to support quality education for all in the country.

Chapter 2. Schooling patterns

2.1. Structure of the education system

The North Macedonia education system is divided into four main levels: pre-primary education, primary education¹², secondary education¹³ (including vocational education and training (VET)) and tertiary education. Pre-primary education is managed by the Ministry of Labour and Social Policy, while the other levels are managed by the Ministry of Education and Science. Education is delivered by public and private institutions, all of which are under the supervision of the two ministries. Institutions must go through an official validation process before being allowed to enrol students.

The structure follows a 3-9-4-4 system consisting of three years of pre-primary (non-compulsory), nine years of primary education (compulsory), four years of secondary education (compulsory), with four streams, and four years of tertiary education (non-compulsory). A more detailed explanation of this system is found in *Annex 2*, and the structure of the North Macedonia education system is illustrated graphically (*Table A2.1 in Annex 2*).

2.2. Enrolment analysis

This sub-section describes historical trends in enrolment by education level and school type (public, private) over the past decade and for some specific sub-groups. It also analyses trends in enrolment coverage (GER, NER) for each level of education, as well as disparities between and within sub-groups. The purpose of this section is to understand the extent to which different educational levels have increased/decreased, and what has been driving that evolution.

Box 1.2. Challenges with population data

North Macedonia had its most recent census in 2021, after its previous one in 2002. The resulting headcount was well below the projected population constructed using the 2002 population census (see State Statistical Office, 2021b, 2021d). Failing to readjust these intercensal population estimates for the accurate calculation of population-based education indicators might lead to results with a downward bias.

To solve this issue, and while the State Statistical Office publishes the official re-estimates, the authors have prepared the intercensal population estimates by single years of age and sex, as well as a population projection for 2022. To do so, they calculated average annual growth rates (AAGR) from 2002 to 2021 for the age cohorts that were alive during both censuses. For the others, the official live births by sex (State Statistical Office, 2022b) were assumed as the population of age 0, and the corresponding AAGRs were calculated for each of the intercensal cohorts. Following these AAGRs, the cohorts were reconstructed for the period 2003–2020. To calculate the 2022 population, the AAGRs were calculated using the population of age 0 and this rate was applied to the population of age 0 in 2021. Each corresponding cohort was then multiplied by the survival rate of the appropriate age in 2021.

¹² Basic and primary education are used interchangeably.

¹³ Upper secondary and secondary education are used interchangeably.

2.2.1. Enrolment dynamics

Most levels of education have seen a decline in the number of students over the last 10 years, primarily driven by the shrinking school-age population, although growing enrolment for certain levels, such as pre-primary and doctorate, is observed, as shown in Table 2.1.

Table 2.1. Student enrolment by level, type of school and percentage change, 2012–2022¹⁴

| Total enrolment | | 2012 | 2014 | 2016 | 2018 | 2020 | 2022 | Change (%) 2012– 2022 |
|---------------------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|
| Pre-school | Public | 25,056 | 28,911 | 31,874 | 34,204 | 36,737 | 30,025 | 20 |
| | Private | 3,402 | 6,176 | 2,076 | 3,934 | 3,746 | 4,390 | 29 |
| | Total | 25,056 | 29,113 | 32,660 | 35,286 | 38,094 | 31,293 | 25 |
| Primary education | Public | 198,856 | 191,051 | 185,992 | 191,313 | 185,826 | 185,207 | -7 |
| | Private | | | | 1,135 | 1,414 | 1,442 | 27 |
| | Total | 198,856 | 191,051 | 185,992 | 192,448 | 187,240 | 186,649 | -6 |
| Secondary | Public | 91,322 | 85,006 | 78,211 | 69,780 | 68,334 | 69,305 | -24 |
| | Private | 1,742 | 1,412 | 2,084 | 1,678 | 1,646 | 1,713 | -2 |
| | Total | 93,064 | 86,418 | 80,295 | 71,458 | 69,980 | 71,018 | -24 |
| Art education secondary | Public | 1,080 | 1,329 | 1,271 | 1,122 | 1,169 | 1,099 | 2 |
| | Private | | | | | | | |
| | Total | 1,080 | 1,329 | 1,271 | 1,122 | 1,169 | 1,099 | 2 |
| Vocational secondary | Public | 54,186 | 49,849 | 46,643 | 41,347 | 41,282 | 43,215 | -20 |
| | Private | 152 | 117 | 85 | 127 | 190 | 217 | 43 |
| | Total | 54,338 | 49,966 | 46,728 | 41,474 | 41,472 | 43,432 | -20 |
| General secondary | Public | 36,056 | 33,828 | 30,297 | 27,311 | 25,883 | 24,991 | -31 |
| | Private | 1,590 | 1,295 | 1,999 | 1,551 | 1,456 | 1,496 | -6 |
| | Total | 37,646 | 35,123 | 32,296 | 28,862 | 27,339 | 26,487 | -30 |
| Bachelor programmes | Public | 49,777 | 51,173 | 52,027 | 48,869 | 44,203 | 42,677 | -14 |
| | Private | 8,970 | 6,573 | 7,838 | 8,072 | 7,531 | 8,905 | -1 |
| | Total | 58,747 | 57,746 | 59,865 | 56,941 | 51,734 | 51,582 | -12 |
| Specialisation programmes | Public | 135 | 178 | 157 | 32 | 191 | 330 | 144 |
| | Private | 417 | 202 | 130 | 105 | 128 | 100 | -76 |
| | Total | 552 | 380 | 287 | 137 | 319 | 430 | -22 |
| Master programmes | Public | 3,037 | 1,743 | 1,787 | 1,126 | 2,168 | 1,994 | -34 |
| | Private | 525 | 572 | 1,247 | 1,504 | 1,452 | 1,403 | 167 |
| | Total | 3,562 | 2,315 | 3,034 | 2,630 | 3,620 | 3,397 | -5 |
| Doctoral programmes | Public | 449 | 130 | 279 | 293 | 342 | 451 | 0 |
| | Private | 8 | 1 | 149 | 109 | 126 | 242 | 2925 |
| | Total | 457 | 131 | 428 | 402 | 468 | 693 | 52 |
| Total | Public | 368,632 | 358,192 | 350,327 | 345,617 | 337,801 | 329,989 | -10 |
| | Private | 15,064 | 14,936 | 13,524 | 16,537 | 16,043 | 18,195 | 21 |
| | Total | 383,696 | 373,128 | 363,851 | 362,154 | 353,844 | 348,184 | -9 |

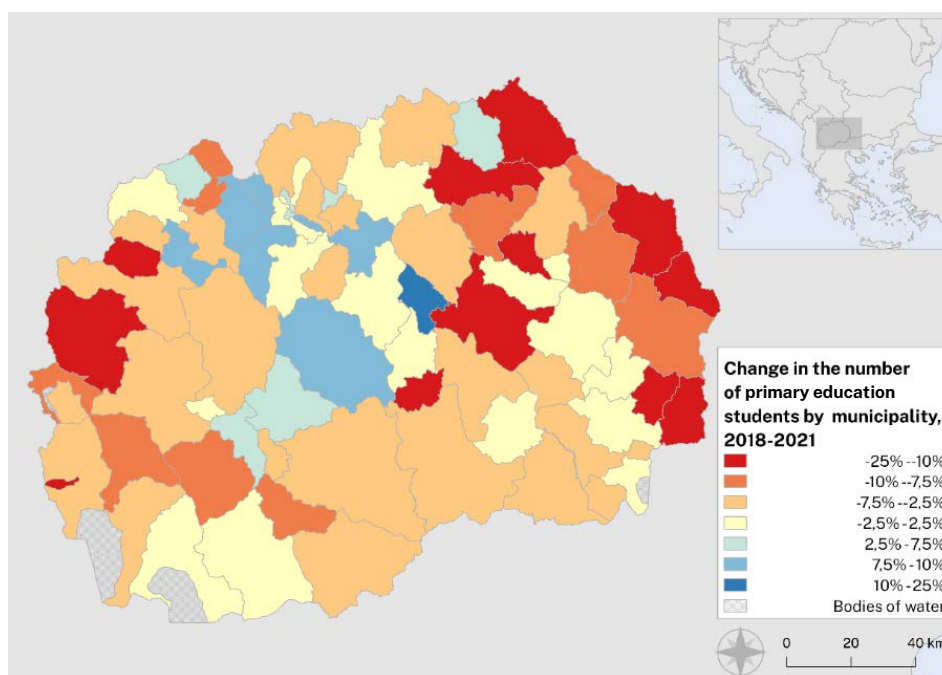
Source: Authors' calculations based on State Statistical Office, 2022k, 2022l, 2022o, 2023a.

¹⁴ Note that, throughout this document, whenever a year is mentioned in relation to the education system, it is referring to the school calendar year. By convention, for every school calendar T/T+1, the year mentioned is T+1. For example, the second to last column on the right here refers to the school year 2021/22.

Overall, the system has 9% fewer students than it had in 2012 (going from 380,294 to 345,062). For pre-university education, since 2012, the highest decreases have been in secondary schools (-24%) (general secondary with -30% and vocational secondary with -20%). At tertiary education level, bachelor, specialisation and master programmes enrolments have fallen by 12%, 22% and 5% respectively, while doctoral programmes are becoming more popular, growing by 52% over 10 years.

This change in the number of students is not homogeneous across the country, with municipalities in the east and west losing up to 21% (Novo Selo) of their primary education students over 2018-2022,¹⁵ while some others, particularly in the centre of the country and around the capital, increased by as much as 12% (Lozovo). The change is shown in Map 2.1, which presents this change by municipality.¹⁶

Map 2.1. Percentage change in the number of students in primary education by municipality, 2018–2021

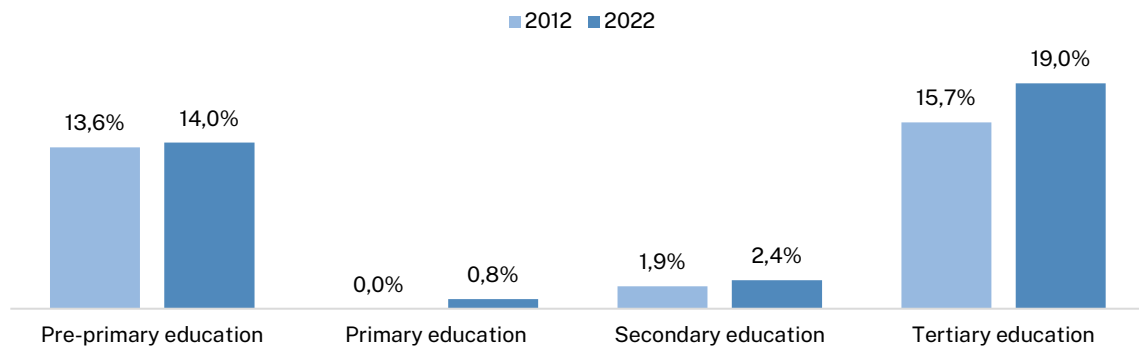


Source: Authors' calculations based on State Statistical Office, 2022k. National administrative boundaries from the Agency for Real Estate Registries, 2023. International boundaries from UN Geospatial, 2023.

The vast majority (94.7%) of students in North Macedonia are enrolled in public institutions (State Statistical Office, 2023a). In primary education, this proportion is higher, with only 0.8% of students enrolled in private institutions, as shown in Figure 2.1. However, at other educational levels, such as pre-primary and tertiary education, this proportion is much higher, at 14% and 19% respectively in 2022. Moreover, the proportion of students going to private institutions has increased for all educational levels over the last 10 years, from 3.9% in 2012 to 5.2% in 2022.

¹⁵ The period of analysis is restricted by the time series available from SSO for certain variables.

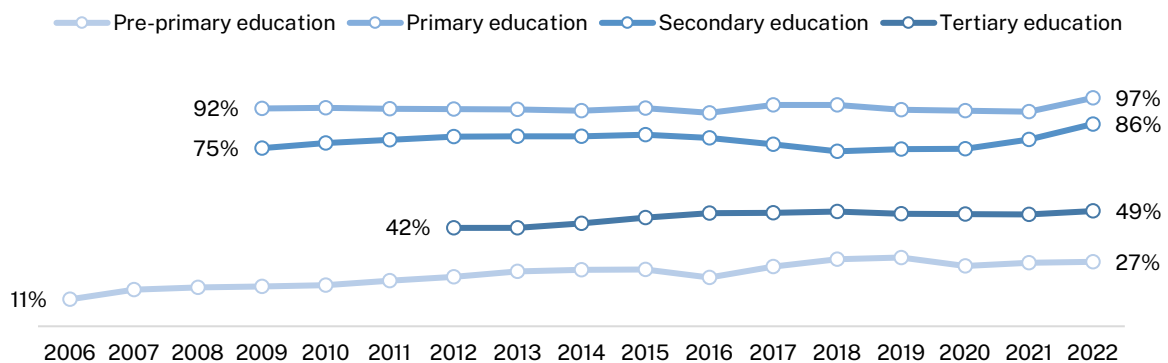
¹⁶ For more information on population movement, see Chapter 1.

Figure 2.1. Proportion of students enrolled in private institutions by educational level, 2012 and 2022

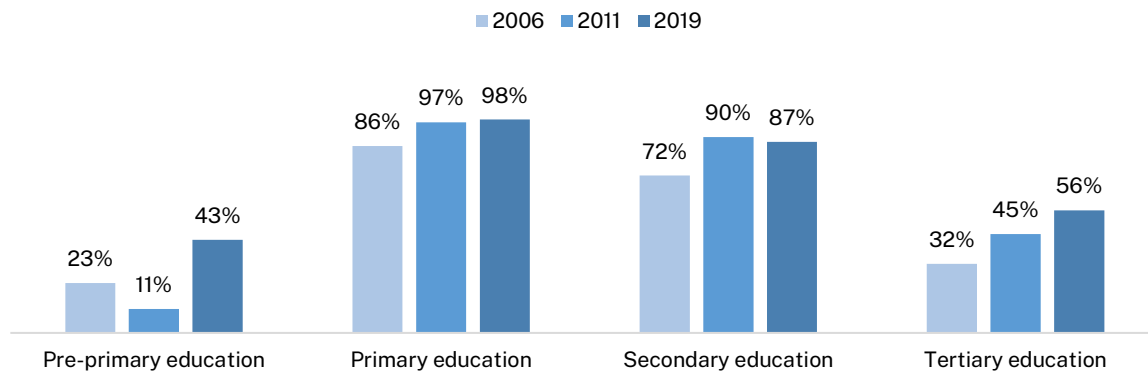
Source: Authors' calculations based on State Statistical Office, 2023a.

2.2.2. School coverage

All levels of education have seen an increase in enrolment ratios over the period of analysis. Growth by educational level varies: pre-primary gross enrolment ratio (GER) grew the most, at 139% between 2006 and 2022 (mostly due to the fact that it had a very low starting point at 11%); primary education grew the least (5%), given that the initial level was already close to 100%, while secondary education and tertiary education grew by 14% and 17% respectively. While there is a small dip in enrolment for pre-primary education in 2020, there is no visible effect from COVID-19 on enrolment levels from primary education to tertiary education.

Figure 2.2. Gross enrolment ratio by educational level, 2006–2022

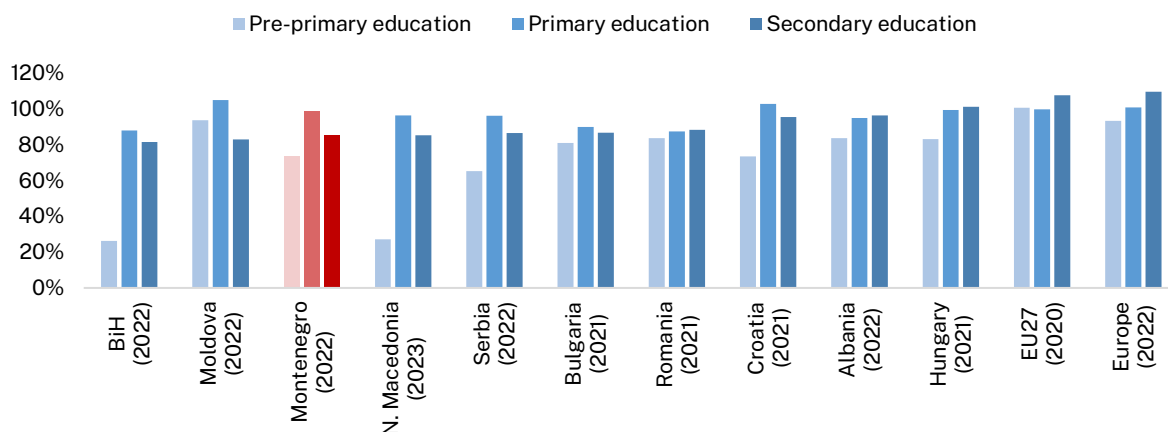
Source: Authors' calculations based on State Statistical Office, 2021b, 2022i, 2022j, 2022o, 2022p.

Figure 2.3. GER by educational level, 2006, 2011, 2019

Source: Authors' calculations based on State Statistical Office and UNICEF, 2006, 2011a, 2019a.

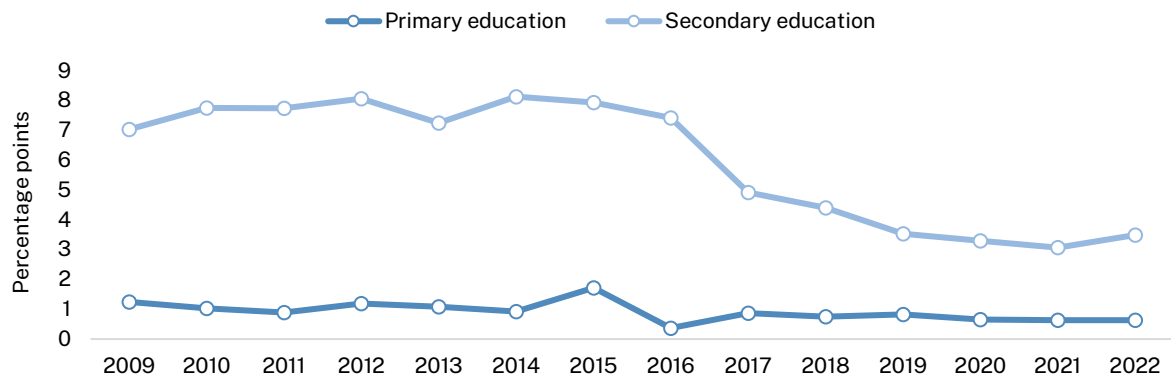
Household surveys help confirm this steady increase in the levels of enrolment for all levels of education in North Macedonia. Figure 2.3. shows a marked increase, particularly for pre-primary and tertiary education, which grew by 87% and 77% respectively from 2006 to 2019. The Gross Enrolment Ratio (GER) in primary education is also close to reaching 100%, up from 86% in 2006, and secondary education went up by 15 percentage points, suggesting an increase in educational coverage for the compulsory level.

While there has been a definite improvement in the levels of enrolment for all compulsory education levels in North Macedonia, the country is still among the lower half of the countries in the region for this metric. As seen in Figure, North Macedonia has the third lowest GER in primary education, and the second lowest in secondary, only above that of Moldova and Bosnia-Herzegovina. The country particularly lags behind at ECE level.

Figure 2.4. GER by educational level, selected countries, 2022 or MRY

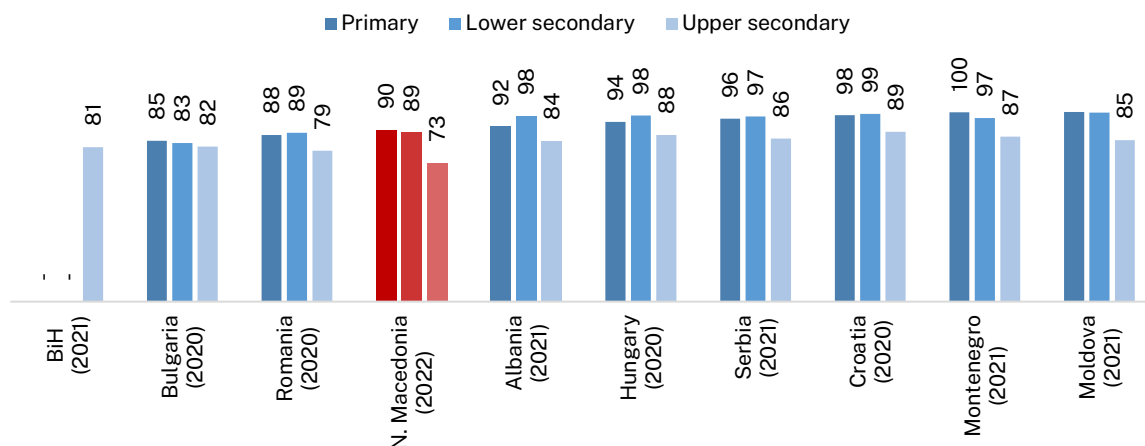
Source: Authors' calculations based on 2021b, 2022i, 2022j, 2022o (North Macedonia) and UIS, 2022b, 2022c, 2022d (other countries).

The proportion of under- and over-age students has been falling in secondary over the last decade. Figure 2.5. presents the difference between the GER and Net Enrolment Rate (NER) (i.e. the proportion of under- and over-age students in the total students enrolled) from 2009 to 2022 for primary education and secondary education. In primary education this difference is very small and has decreased slightly over the period of analysis. In secondary, where students tend to be more over-age, there is a gap between both measures. However, this difference has shrunk from seven to four percentage points over the last 13 years.

Figure 2.5. Difference between GER and NER, 2009–2022

Source: Authors' calculations based on State Statistical Office, 2022i, 2022j.

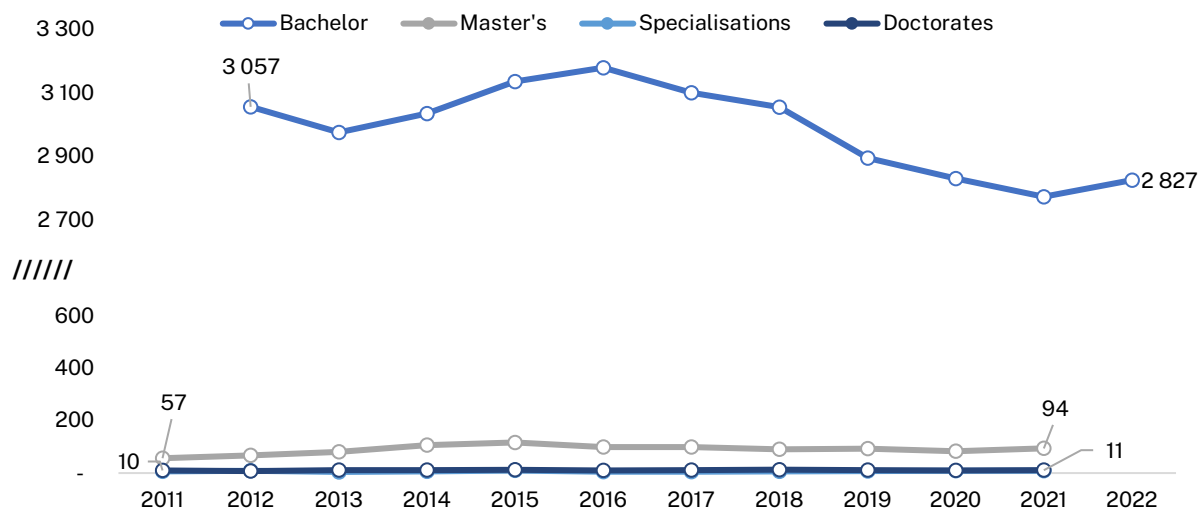
North Macedonia is in the middle of the reference countries in terms of its primary education NER, at 96%, and third to last for lower secondary, above Bulgaria and Romania. While there have been improvements in the NER in secondary in recent years, North Macedonia has the lowest reported level, at 73%, as seen in *Figure 2.6*.

Figure 2.6. NER by educational level, expressed in percentage, selected countries

Source: Authors' calculations based on State Statistical Office, 2021a, 2021b, 2022i, 2022h (North Macedonia), and UIS, 2022b (other countries).

Note: For North Macedonia, primary was calculated using the first two periods of the official primary cycle (Grade I to Grade VI) and lower secondary was calculated using the third period (Grade VII to Grade IX).

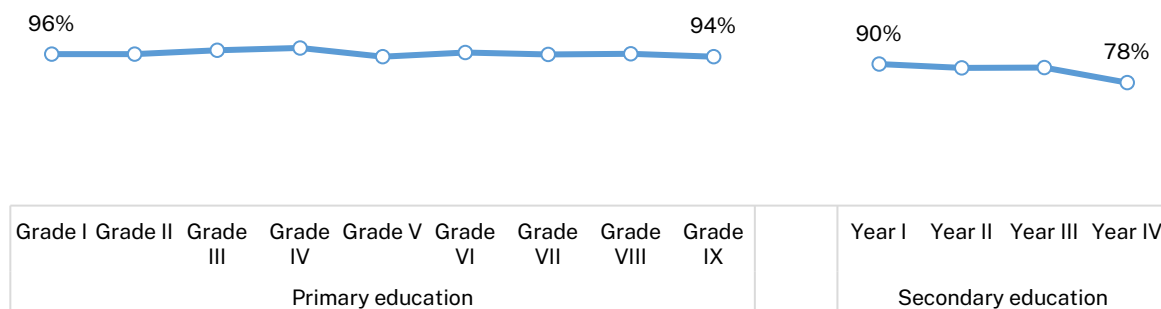
Regarding tertiary education, overall enrolment ratios have fallen by 10% since 2012 (greater than the 11.4% loss in tertiary students over the same period). This change has been heterogeneous depending on the type of programme, with bachelor's degrees dropping by 8% from 2012 to 2022, while master's, specialisations and doctorates have gone up by 66%, 44%, and 8% respectively. *Figure 2.7* presents the progression in the number of students for each of these tertiary education programmes per 100,000 inhabitants.

Figure 2.7. Number of students enrolled per 100,000 inhabitants, by tertiary education cycle, 2011–2022

Source: Authors' calculations based on State Statistical Office, 2022j.

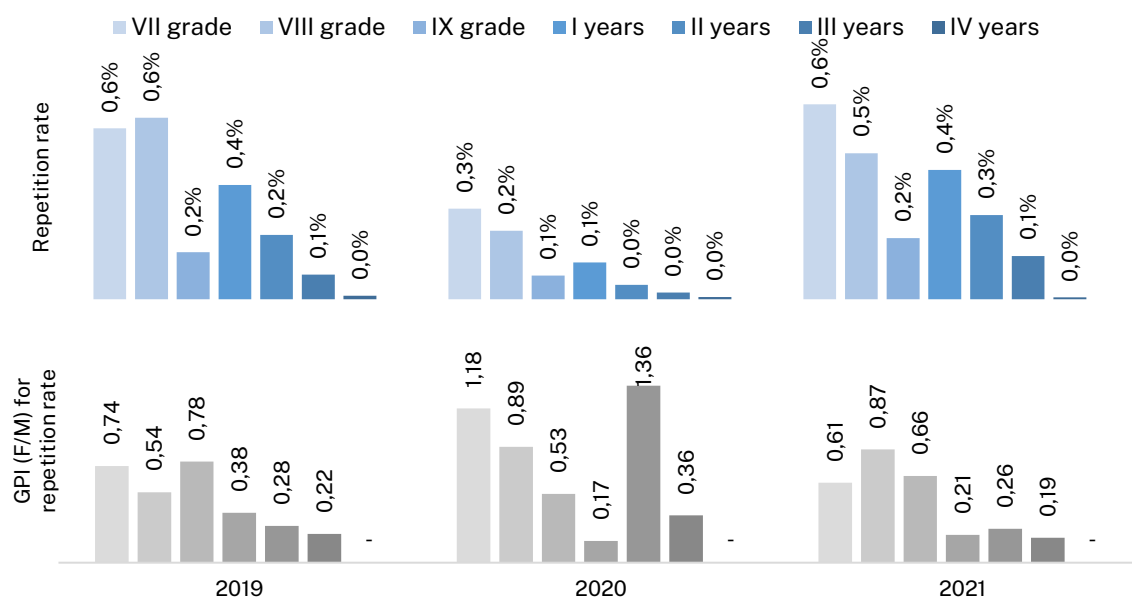
Note: Given the orders of magnitude in the difference between the time series presented, a truncated scale is presented in the y-axis.

Enrolment in primary school is almost universal, with most students entering and completing primary school. *Figure 2.8* shows the transversal schooling profile for primary education and secondary in 2022 in North Macedonia. New entrants in Grade 1 represented 96% of the population aged six. Most of the remaining 4% are enrolled in ECE, plus a small number of children that have not yet enrolled. The primary education completion rate is 94% and the intake ratio for the first grade of secondary is 90%, indicates an issue with the transition between primary and secondary education. Only 78% of children aged 18 are new entrants to the last grade of secondary, which indicates a major retention issue, with relatively high drop-out rates at this level.

Figure 2.8. Transversal schooling profile, 2022

Source: Authors' calculations based on State Statistical Office, 2021b, 2022k, 2022l. A transversal profile is a series of gross intake rates.

The Macedonian education system has high levels of internal efficiency, with low repetition rates over the last three years of primary education and for the whole of secondary. The school system in North Macedonia only allows repetition from Grade VII of primary education, ensuring automatic graduation from the start of primary education. In general, the younger the students are, the more likely they are to repeat, with a small spike in the first grade of secondary. In general, boys remain more likely to repeat than girls, particularly in secondary, where the Gender Parity Index (GPI) of the repetition rate was between 0.26 and 0.19 in 2021. This likelihood increases as they progress through the grades, with the GPI diminishing in the final grades of the analysis.

Figure 2.9. Repetition rate (above) and related Gender Parity Index (below) in the final grades of primary education and secondary, 2019–2021

Source: Authors' calculations based on State Statistical Office, 2022d, 2022f.

School life expectancy is a measure of the average number of years of schooling that a young Macedonian can expect to get, given current schooling conditions. It can be measured from school enrolment rates by age. The age-specific enrolment rate of 88% at the age of 15 also means that, on average, a young Macedonian aged 15 has an 88% probability of schooling at that age. By totalling across all ages, the school life expectancy is obtained. This average duration of schooling includes the years of repetition.

Table 2.2. School life expectancy (average years of schooling), 2021/22

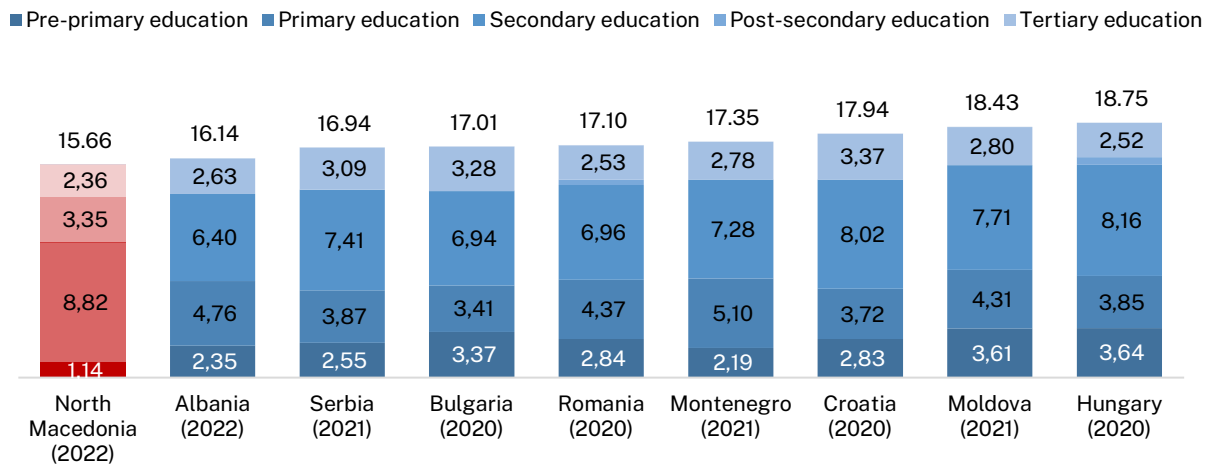
| Based on enrolment by age | |
|---------------------------|-------------|
| Pre-primary | 1.1 |
| Primary | 8.8 |
| Secondary | 3.4 |
| Total pre-university | 13.3 |
| Tertiary education | 2.4 |
| Total all levels | 15.7 |

Source: Calculations by the authors based on State Statistical Office, 2021b, 2022k, 2022l, 2022o, 2022p.

On average, based on the levels of schooling for the year 2021/22, **school life expectancy is 15.7 years, of which 13.3 at pre-university level and 2.4 for higher education studies.**

At pre-university level, the average duration is distributed between 1.1 years in pre-school, 8.8 years in primary education levels and 3.4 years at secondary.

School life expectancy in North Macedonia is the lowest in the region, as shown in *Figure 2.10*. The comparison is made for the years 2020 to 2022 (UIS, 2022f). The school life expectancy is particularly impacted by the low levels at pre-primary and tertiary, both the lowest in the sample of comparison countries. While the total number sits well below the European average of 19.40 years, the country has progressed significantly, having risen from 13.6 years in 2017 (*ibid.*).

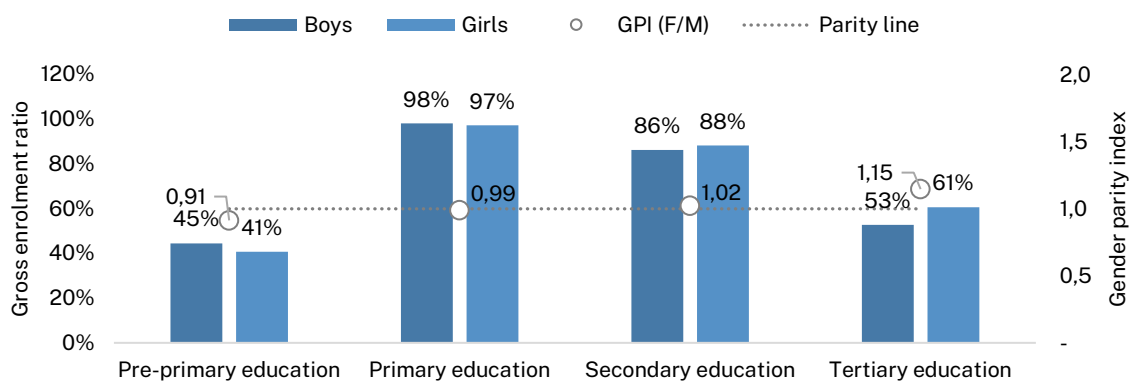
Figure 2.10. School life expectancy in years by country and educational level, 2021–2022

Source: Authors' calculations based on State Statistical Office 2021b, 2022k, 2022l, 2022o, 2022p (North Macedonia), IIEP-UNESCO (2024) (Albania) and UIS, 2022a.

2.3. Equity in access to education

2.3.1. Gender

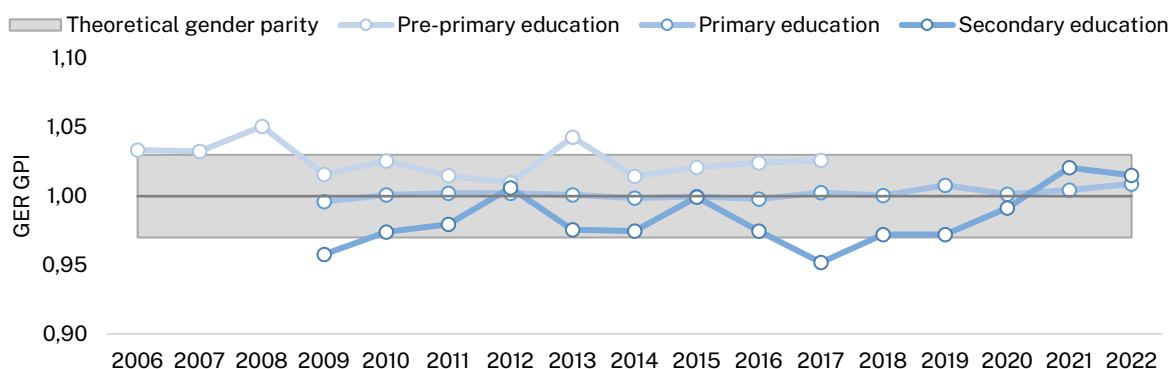
Gender parity in the GER between boys and girls was reached in both primary and secondary education in 2022; the relative balance between girls' and boys' enrolment is close to 1.

Figure 2.11. GER by educational level and sex, and related GPI, 2022

Source: Authors' calculations based on State Statistical Office, 2021a, 2022j, 2022f, 2022g, 2022k. There is parity between 0.97 and 1.03.

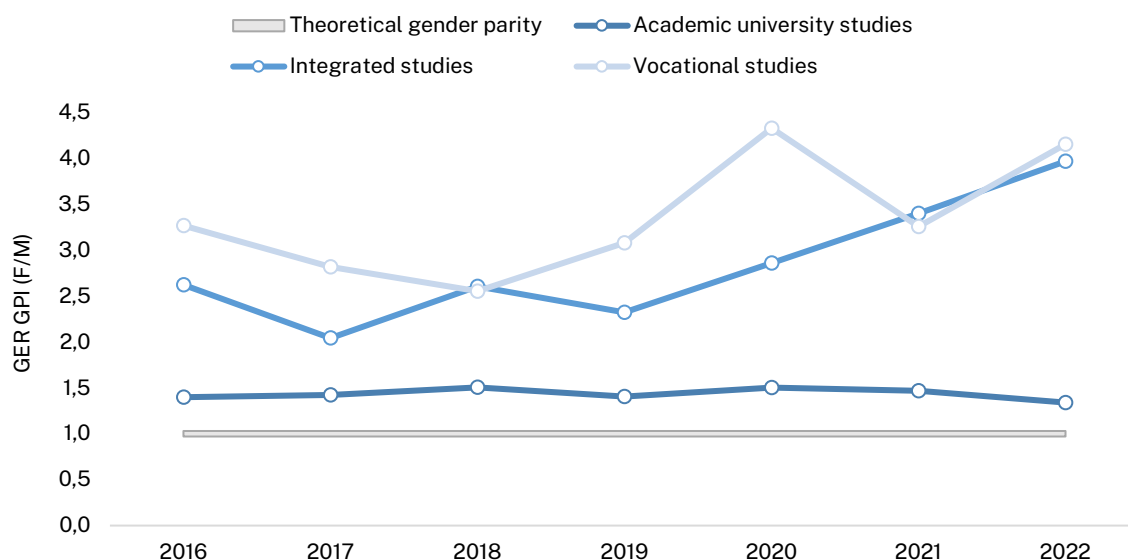
Note: Tertiary education refers exclusively to bachelor's degree level.

This same trend is observed across time, with most GPIs for the GER from pre-primary to secondary being between 0.97 and 1.03, the international standard for gender parity. As shown in Figure 2.2, only a few years fall outside of this range, with primary education being strongly pegged to absolute parity. Secondary education, which had seen a fall in GPI to 0.95 in 2017, has since recovered and now sits at 1.01.

Figure 2.12. GPI in the GER from pre-primary to secondary, 2006–2022

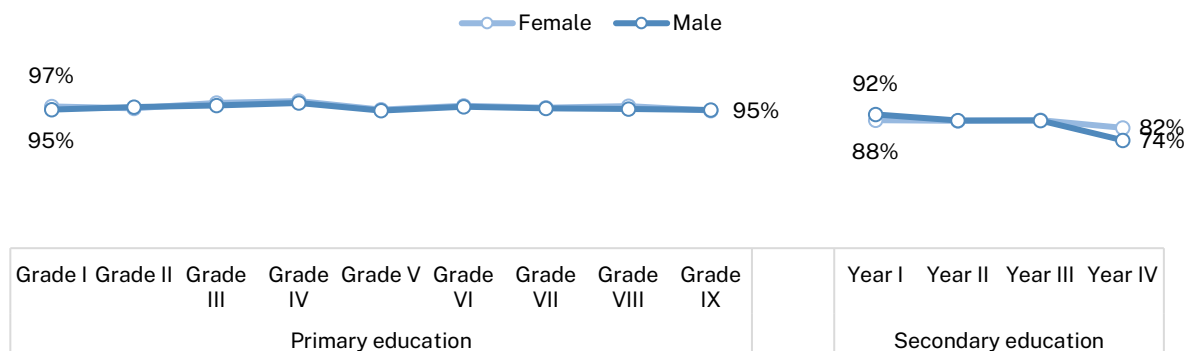
Source: Authors' calculations based on State Statistical Office, 2021b, 2022k, 2022l, 2022o. There is parity between 0.97 and 1.03.

This parity is broken in tertiary education, where female students are more likely to graduate, regardless of the type of programme. This is true for all years under analysis, with disparities in favour of female students increasing throughout the period of analysis, as shown in Figure 2.9. When looking at the GPI for graduation levels, a significant increase over the last five years is observed for vocational and integrated studies, with female students now almost four times more likely to graduate from these types of programmes than male students. For academic university studies, while there is a slight improvement in the GPI for graduation levels since 2020, at 1.34, female students are still 34% more likely to graduate than male students.

Figure 2.9. Gender Parity Index for graduates from tertiary education by type of programme, 2016–2022

Source: Authors' calculations based on State Statistical Office, 2022m. There is parity between 0.97 and 1.03.

While there are no gender disparities observed in primary education, differences tend to appear in the first and final grades of secondary, when girls are less likely to enter Year I and boys are less likely to enter Year IV (Figure 2.14).

Figure 2.10. Transversal schooling profile by sex, 2022

Source: Authors' calculations based on State Statistical Office, 2021b, 2022k, 2022l.

This is further shown in Table 2.3 which shows the GPI for the gross intake rate at the first and last level of each educational level in 2022. For primary education, there are no statistical differences in the gross intake rate between boys and girls for the first and last grade. However, in secondary education, girls are less likely to enrol than boys, with a GPI of 0.96, while boys are less likely to graduate than girls, with a GPI of 1.12. **This means that, while girls are less likely to transition from primary to secondary education, they are more likely to stay enrolled than boys, once accessing the cycle.**

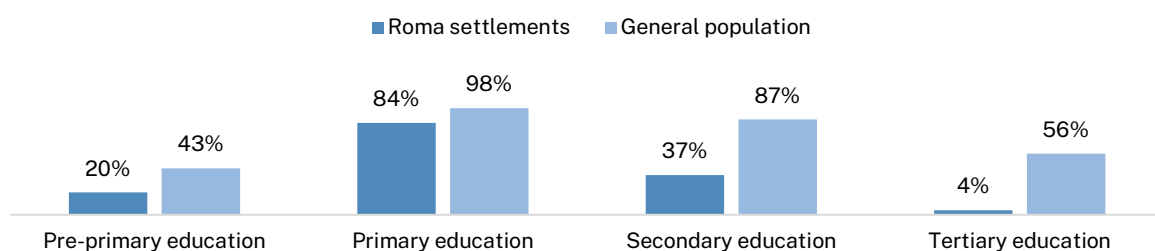
Table 2.3. Gross intake rate by educational level and sex for the first and last grade at each level, and related GPI, 2022

| Level | Grade | Girls | Boys | GPI (F/M) |
|---------------------|----------|-------|------|-----------|
| Primary education | Grade I | 97% | 95% | 1.02 |
| | Grade IX | 94% | 95% | 0.99 |
| Secondary education | Year I | 88% | 92% | 0.96 |
| | Year IV | 82% | 74% | 1.12 |

Source: Authors' calculations based on State Statistical Office, 2021b, 2022d, 2022e.

2.3.2. Roma

Children in Roma settlements are less likely to be enrolled at all levels of education in North Macedonia. They are less than half as likely to participate in pre-primary education, which diminishes their school readiness, with a GER of just 20%, as seen in Figure 2.11. They are also less likely to be enrolled for the primary education cycle of education, with a GER of 84%, and are more than twice as likely not to continue into secondary education, with enrolment dropping sharply to 37%. The situation is particularly troublesome in tertiary education, where a person from the general population is more than 13 times more likely to be enrolled than someone from a Roma settlement of the same age range.

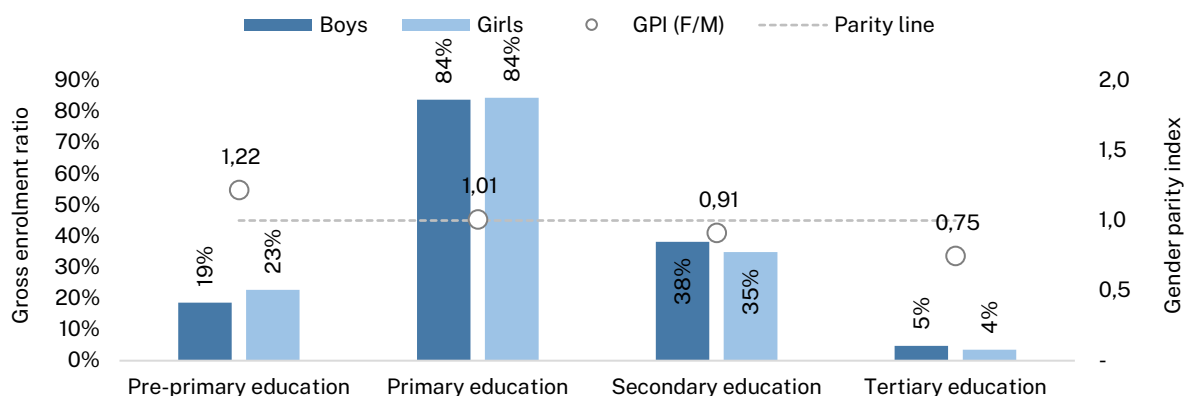
Figure 2.11. GER by educational level, Roma settlements and general population, 2019

Source: Authors' calculations based on UNICEF, 2019a, 2019b.

Within these communities, disparities exist between boys and girls. In pre-primary education, the disparities are tipped in favour of female pupils, but become tipped against them in tertiary education. As shown in

Figure 2.12, on average, for every 100 boys enrolled in pre-primary education, 122 girls are enrolled. However, by the time they get to tertiary education, this number has fallen to 75. Gender parity exists in primary education, with a GPI in the GER of 1.01, but by secondary education girls are already less likely to be enrolled than boys, with a GPI of 0.91.

Figure 2.12. GER by educational level and sex, Roma settlements, 2019



Source: Authors' calculations based on UNICEF, 2019b.

Knowing that the Roma population faces these challenges, the Ministry of Education, together with other partners, has developed several different strategies. These include the National Roma Strategy 2022-2030, and programmes such as targeted scholarships, specific criteria for secondary and tertiary admission for Roma children, and the Roma educational mediators' programme.

- **One such programme is that related to the inclusion in the education system of returnee or non-schooled Roma children and young adults**, formalised in the Concept for Inclusive Education (North Macedonia, 2020a). Over the last three years, between 1% and 2% of primary education students finishing the school year are returning from abroad, with this number being higher in secondary (Ibidem). To account for the diverse needs of these students, the Bureau for Development of Education has prepared a customised curriculum. This is a significant step in overcoming the obstacles to the inclusion of students who are over-age or have major gaps in their knowledge.
- **A number of scholarships are available for Roma children entering secondary, based on their school results.** This scholarship programme was formalised in 2016 with the Law on Pupil Standards, and over 4,500 scholarships have been awarded between 2019 and 2023 (North Macedonia, 2020a). Over this same period, between 47% and 50% of scholarship beneficiaries from the lowest category awarded successfully passed the school year and transferred to the upper scholarship categories.
- **Once Roma students graduate from secondary, a system of scholarships for tertiary education programmes is available**, having begun in 2016 and was later formalised by the Law on Pupil Standards (North Macedonia, 2020b). The number of Roma students enrolling in tertiary education programmes over the last three years has slightly increased, from 45 to 50, but remains low compared with the number of secondary graduates, at 18% in 2022.
- **Another significant programme being put in place by the Ministry of Education and Science is that of Roma educational mediators.** This programme, which started in the academic year 2018/2019, aims at helping the 'inclusion of Roma children in primary education, to assist towards the continuity and retention of Roma pupils in the educational process, and to facilitate communication between the school, the parents, the community, the

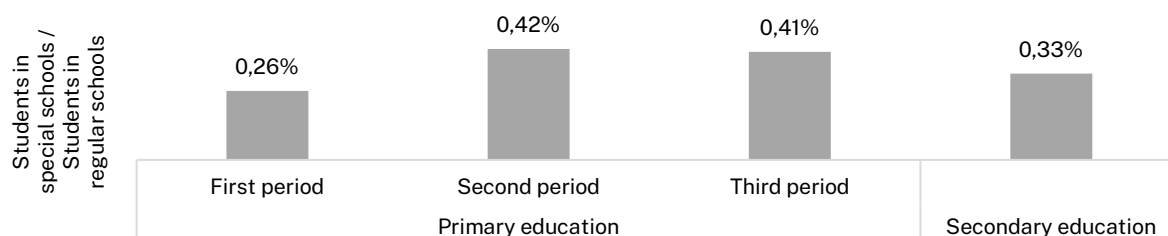
local government and the civil sector (Roma Education Fund, 2018). It has since become public policy through the amendment of the Law on Primary Education (North Macedonia, 2019a), and the number of Roma mediators has increased from 20 to 40.

All these policies have been enabled and supported by an increase in the budget for Roma educational policies in North Macedonia in recent years. Since 2007, the budget dedicated to the two main budget envelopes relating to Roma populations, implementation of the National Roma Strategy, and support for the secondary education of Roma, has seen an increase from MKD 4 million (about EUR 65,000) in 2007 to over MKD 30 million (500,000) in 2022, or about 632%. This places North Macedonia, and the Ministry of Education and Science, as one of the leaders in ensuring sustainability and public policies for Roma and ensuring the budgeting and implementation of the measures and strategic goals according to the national strategy for Roma in North Macedonia.

2.3.3. Children with disabilities

Children with disabilities are another population group for which targeted educational policies exist in North Macedonia. Since 2019, with the adoption of the new Law on Primary Education, the Ministry of Education and Science started the transition towards inclusive schools, with all children with disabilities being accepted and supported in mainstream schools since 2020. Special education schools have gradually been converted into resource centres for these other schools, with the registration of new students into these resource centres stopping from the 2022/2023 school year. Students enrolled in special education schools can choose to finish their educational cycle there or transition into regular schools. This has also begun to be replicated in pre-primary special education centres (UNICEF, 2020).

Figure 2.13. Proportion of students in special schools out of total number of students in regular schools, 2022



Source: Authors' calculations based on State Statistical Office, 2022g, 2022h, 2022i, 2022j.

Working under the reasonable assumption that the proportion of children with disabilities does not vary significantly within a country by year of birth, the proportion of students in special education schools out of the total number of students in regular schools should roughly follow the pattern of the GER by educational level in regular primary education. Note, however, that since children with disabilities can now enrol in regular schools, this result is likely to be underestimated. Regardless, the relative drop from one level to another is of interest, rather than the actual level of the indicator.

There is a drop of about 20% after primary education in special education schools, which is higher than the drop in GER for regular schools after the end of this cycle, which is around 11%, suggesting that children in special education schools are less likely to finish secondary than their peers.

Finally, as shown in Figure 2.13 the proportion of students with disabilities enrolled in special primary education, out of the total population of the first stage of primary education, is lower than the others. This suggests that parents might not know that their younger children have disabilities, or that they enrol them in these institutions after having passed through a mainstream primary education school.

- **The Ministry of Education and Science has put in place policies targeting children with disabilities.** 500 educational assistants (EA) were recruited and paid by the MoES (through

state schools) for students with disabilities in primary education in the 2020/2021 school year. This number increased to 720 in 2022 and to 820 in 2023. Additionally, in 2021, 49 additional special educators and rehabilitators were employed in schools to meet the needs of students with disabilities. Additionally, the budget allocated for inclusive education has been increased from MKD 50,000,000 in 2020 to MKD 390,848,000 in 2023 (a 680% increase) (MoES, 2023a).

- **In 2021, all state schools for students with disabilities were converted into resource centres.** They no longer enrol new students with disabilities but serve as a resource centre for all mainstream schools (providing/recruiting EA, support teachers, students with disabilities, professional associates, guardians and the inclusion team from other primary education schools, and helping schools prepare an individual education plan for each student with a disability, according to their individual capacities and needs) (ibid.).
- **Finally, each student with a disability enrolled in primary education has a recommendation (free of charge for the students and parents) given by the professional body** for assessment and based on the International Classification of Functioning (ICF) adopted by the World Health Organization. Based on the recommendation, the school is obliged to provide an educational assistant and to prepare an individual education plan (ibid.). However, there is currently insufficient capacity to carry out the assessments of all children and young people who are waiting for their recommendation to enrol in primary education, and there is a long waiting list. While eight such bodies (one for each region of the country) were envisioned, only six units are currently working (in five different cities: two in Skopje, and the others in Bitola, Gostivar, Strumica and Kumanovo). Three more are in the process of being established in the cities of Shtip, Ohrid and Veles.
- **In 2021, the Ministry for the first time developed a system for e-application where the municipalities can apply/submit proposals for schools' renovation.** One of the criteria for selection of a school is if the project has a component for making the school disability-friendly (MoES). Additionally, 17 schools were renovated in 2022 (nine from the Budget of the MoES and eight from IPA funds) and 51 schools in 2023 (11 from the Budget of the MoES and 40 within the Project PEIP (Project to Improve Primary Education), to make the schools disability-friendly through ramps, adapted sanitary facilities, and elevators) (MoES, 2023a).

The acceptance of children with disabilities in mainstream schools by parents of children in regular schools grew from 4% in 2014 to 24% in 2018, according to the Knowledge, Attitudes and Practices Survey. However, 66% of respondents still believe that 'including children with a disability in regular education will inevitably mean that other children will be deprived of sufficient attention by teachers' (UNICEF, 2020). Given that this study predates the entry into force of the 2019 Law on Primary Education, a new study to understand attitudes around disability in mainstream schools would be beneficial.

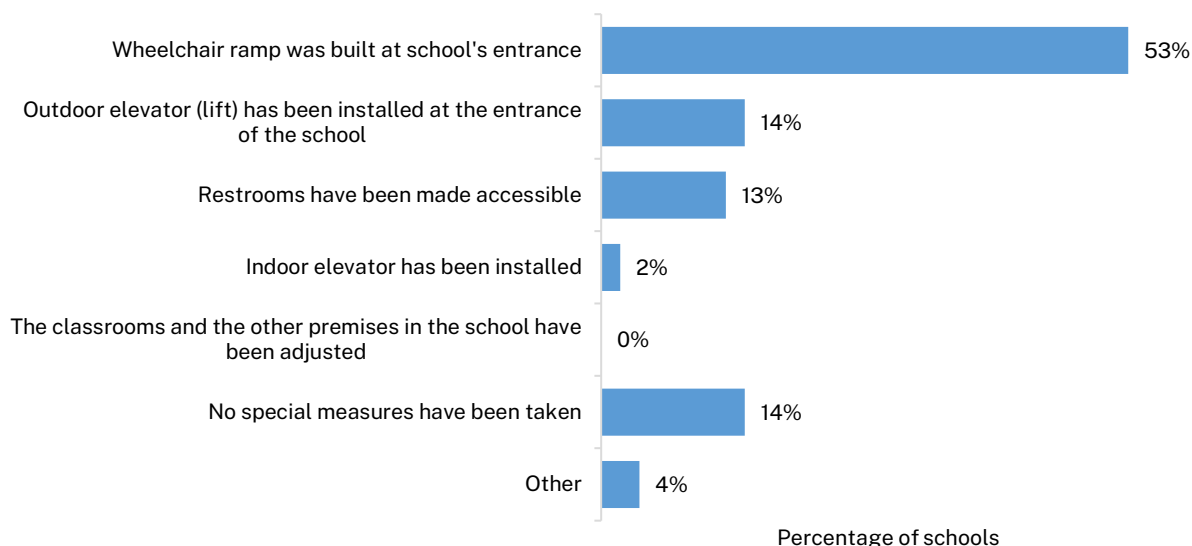
Unlike the Law on Primary Education, the Law on Secondary Education does not yet contain a provision guaranteeing and structuring inclusive education.¹⁷ A 2018 study found that the vocational training options given to students with disabilities in special schools at this level is not of the same quality of the one provided in regular schools, and it often does not reflect the needs of the labour market, making it harder for graduates to find adequate jobs (Shavreski, 2018). A draft law is currently being prepared to include these guarantees.

Despite improvements, having appropriate materials and facilities remains a barrier to the access and adequate schooling of children with disabilities in secondary education. While only 14% of schools assessed in a 2018 survey reported not having any special measures to ensure physical access to school for students with disabilities (see *Figure 2.14*), 80% of them reported not having

¹⁷ There is a draft for a new Law on Secondary Education that includes provisions for inclusive education, but it has not yet been approved by Parliament.

pedagogical or didactic resources that had been made accessible to children with disabilities, and 63% reported not having any type of special educator on their staff (Ombudsman, 2018).

Figure 2.14. Percentage of surveyed secondary schools that report adjustments made to ensure physical access for students with disabilities, 2018

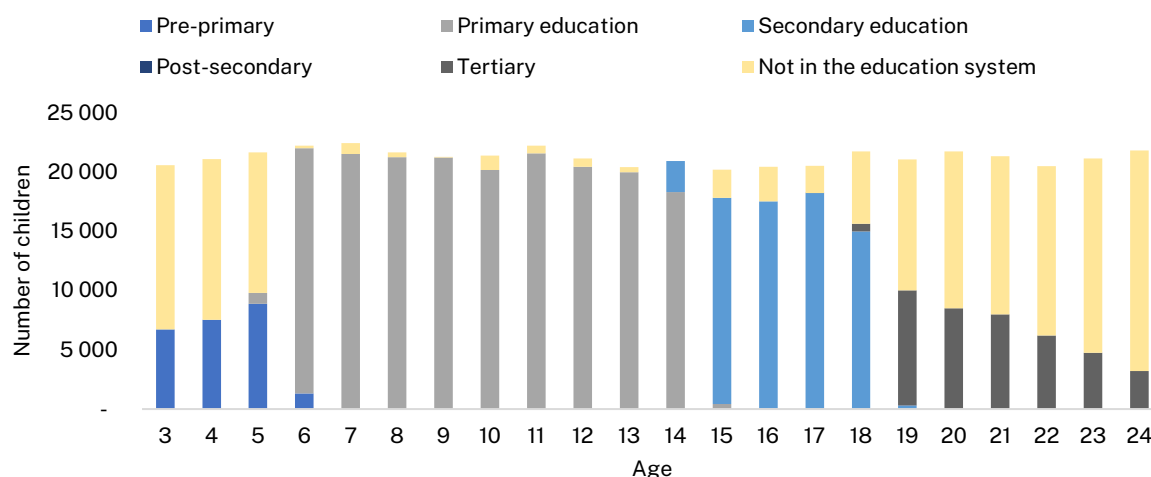


Source: Taken from Ombudsman, 2018.

2.4. Out-of-school children

Most Macedonian children enter primary school at the right age. At age six, about 1,300 children are still at pre-school level, equivalent to 6% of their generation, while the vast majority has already enrolled in the first grade of primary education.

Figure 2.15. Enrolment by age, 2022

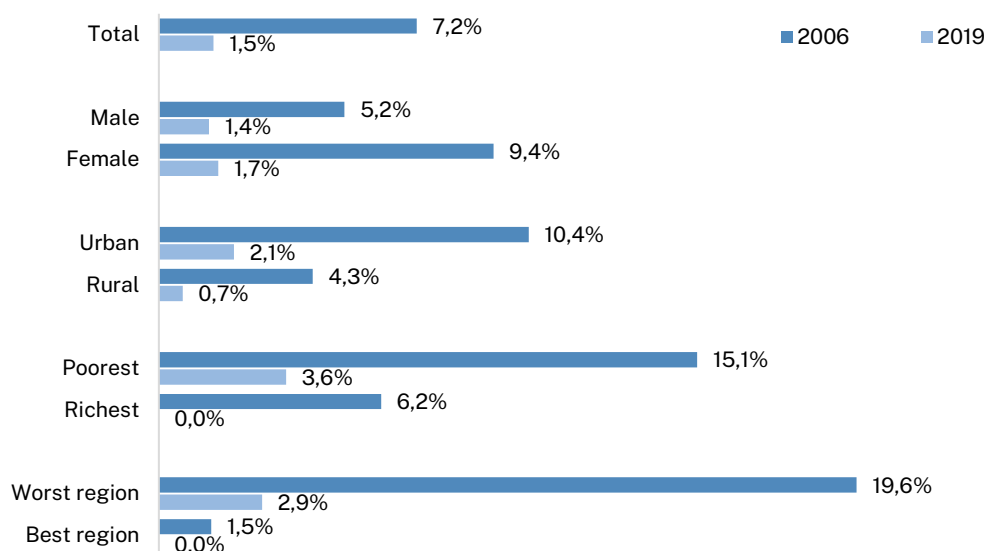


Source: Authors' calculations based on State Statistical Office 2022k, 2022l, 2022o, 2022p.

In 2019, out of the general population, only 1.5% of children aged 6 to 14 (the age corresponding to primary education) were out of school, a number that has fallen significantly from 7.2% in 2006. This number is not distributed evenly across location and socioeconomic status, as shown in

Figure. While girls are still more likely to be out of school than boys, this disparity has greatly diminished since 2006, with the GPI going from 1.8 to 1.2, and with sex playing no statistically significant role in determining the likelihood of being out of school in 2019.

Figure 2.16. Share of children aged 6–14 that report being out of school, by sex, location and socioeconomic status, 2006 and 2019

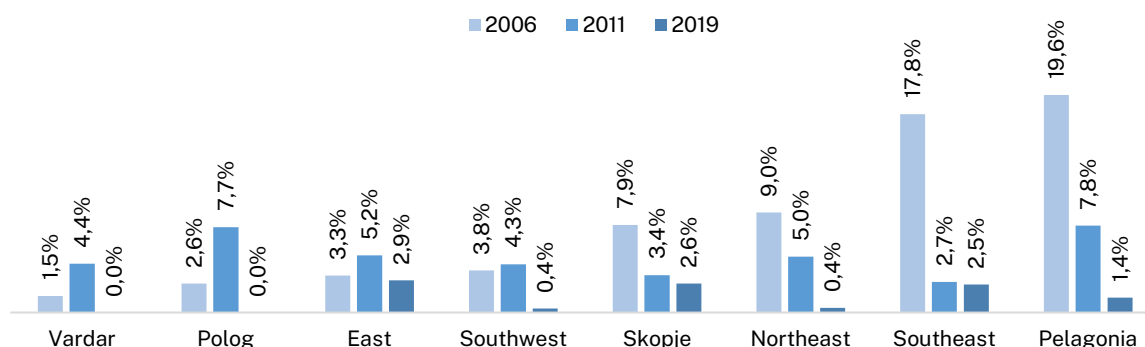


Source: Authors' calculations based on UNICEF 2006, 2019a.

Urban children are three times more likely to be out of school than their rural counterparts, with an OOSC rate of 2.1%. However, the biggest factor in predicting the likelihood of being out of school during the primary education cycle is wealth. While the MICS survey finds no children not enrolled in school in 2019 for the two highest quintiles of wealth in North Macedonia, children from the poorest households have a rate of 3.6%. It should be noted, however, that this group has also benefited from the considerable drop in OOSC rates in the country, which have fallen by 74.6% since 2006.

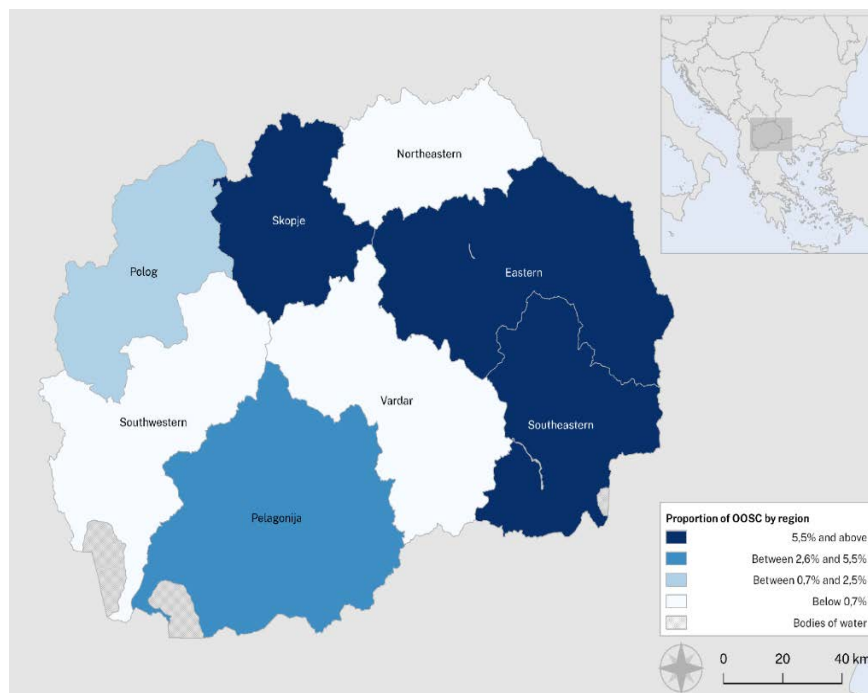
The overall decrease in the rate of OOSC has not been evenly distributed across regions either, as seen in Figure 2.17 and Map 2.2. While every region has seen a decrease in this rate from 2006, some regions, such as Vardar and Polog, have seen this rate drop to 0%. Others, with initial high levels of OOSC, have seen a decrease of 95%, 86% and 93%, such as the northeast, southeast and Pelagonia regions respectively. The only region to see a limited reduction was the east region, which saw a decrease of 12% between 2006 and 2019.

Figure 2.17. Prevalence of OOSC by region, 2006, 2011, and 2019



Source: Authors' calculations based on UNICEF, 2006, 2011, 2019a.

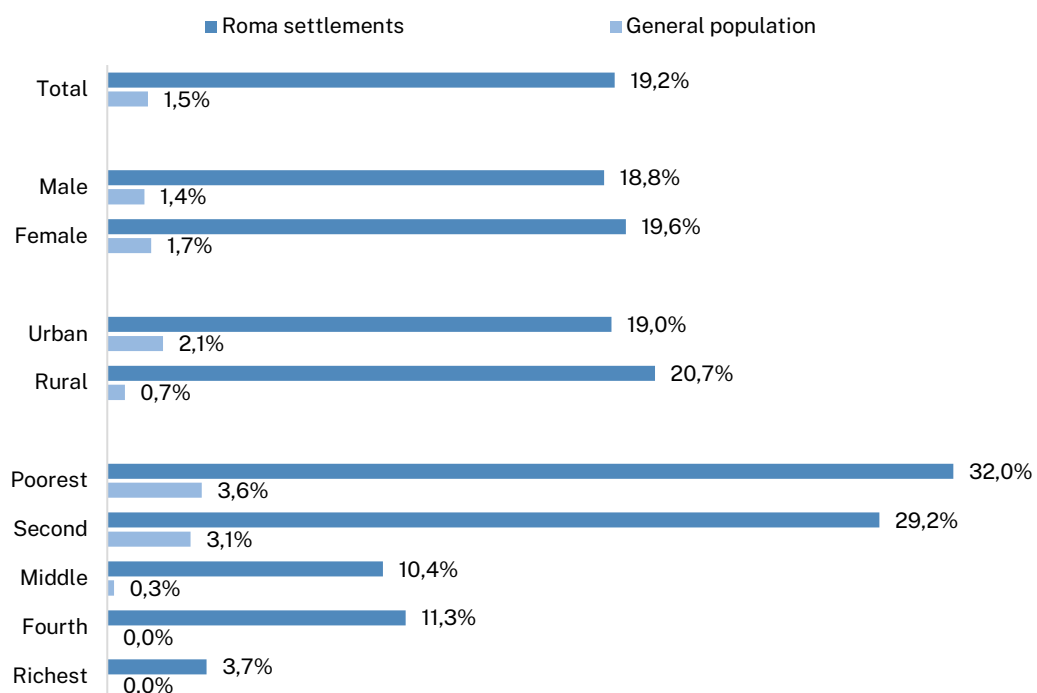
Map 2.2. Proportion of OOSC by region, expressed in percentage, 2019



Source: Authors' calculations based on UNICEF, 2019a. National administrative boundaries from Agency for Real Estate Cadastre, 2023. International boundaries from UN Geospatial, 2023.

While the rate of OOSC in the general population is low, at 1.5% in 2019, it is significantly higher for children in Roma settlements, at more than 12 times higher (19.2%) in the same year, as shown in Figure 2.18.

Figure 2.18. Share of children aged 6 to 14 that report being out of school by sex, location and socioeconomic status, Roma settlements and general population, 2019



Source: Authors' calculations based on UNICEF, 2019a, 2019b.

Girls remain more likely to be out of school for the 6 to 14-year age group, with a GPI of 1.04 (although less than that of the general population, at 1.18). For rural populations, however, the tendency with the general population is reversed. Children in Roma settlements were more likely to be out of school if they lived in rural areas than in urban areas, being 31 times more likely to be out of school than their counterparts from the general population.

Finally, as with the general population, **wealth remains the biggest factor that explains being out of school**. Children from the richest quintile in the Roma settlements are twice as likely to be out of school than the general population of the same age, and one in three children from the poorest households in the same community were out of school in 2019.

To understand the determinants for children being out of school, a regression analysis using MICS data from 2019 was performed, with the results presented in Table 2.4. The regression was run using the general MICS, which sampled the whole population of North Macedonia, and the special Roma settlements sampling, which concentrates exclusively on populated settlements with a high concentration of Roma population.

The results show that sex and rurality do not play a role in explaining the likelihood of being out of school for either population group. The region of residency does not play a role for the general population either, but it does for the Roma population in two regions – Pelagonia and the northeast – where children are on average more likely to be out of the education system than their counterparts in Skopje. In both populations, wealth plays a very important role, and more so for Roma settlements, where increasing the wealth index of the household by 1% is on average associated with a child being 8.15 percentage points less likely to be out of school. For the general population, this is only 0.7 percentage points, suggesting that targeted cash transfers for Roma children might prove cost-effective in reducing the chance of them leaving the school system.

Wealth is the biggest predictor for children at secondary age not being enrolled in school. Poor students are almost 10 times more likely to be out of school than their rich counterparts, as seen in Figure 2.19. More than half of all poor boys living in urban areas are not enrolled in secondary, while for poor urban girls the figure is 45%. For comparison, only 1.6% of rural rich girls have left school between the ages of 15 and 18. However, as with children at primary education age, gender plays no role in being out of school in secondary education.

Table 2.4. Determinants for out-of-school status in children aged 7 to 14 by population group, 2019

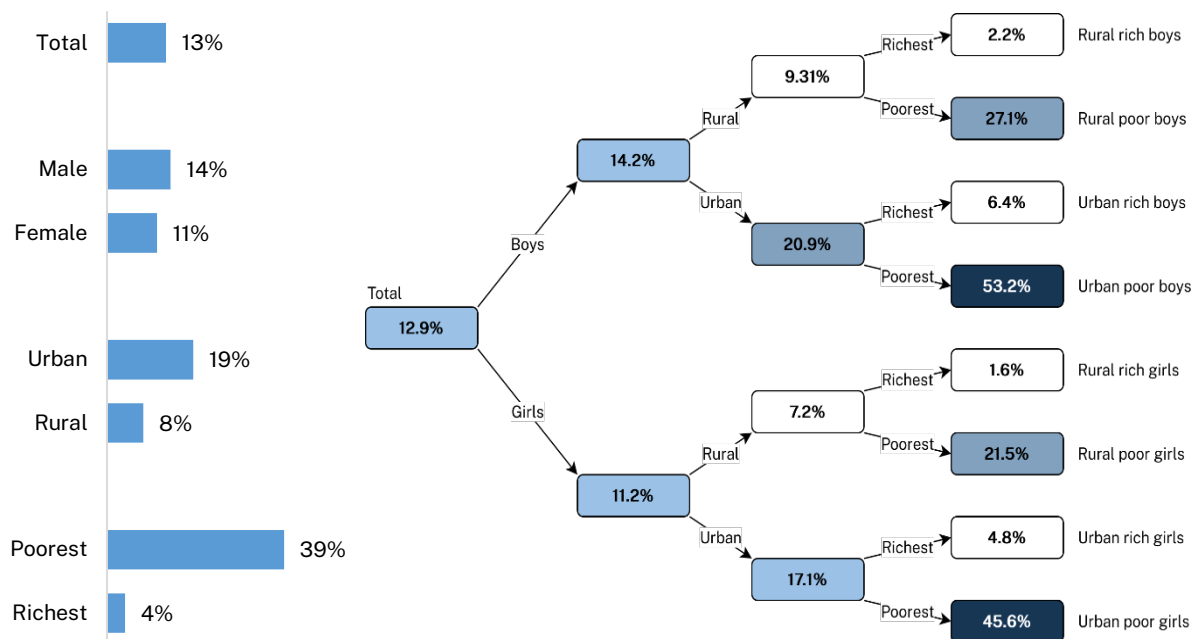
| Variable | | General population | Roma settlements |
|-------------------------------------|------------|-----------------------|-----------------------|
| Sex of the student (Base = Male) | | -0.00440 | 0.0141 |
| | | (0.00788) | (0.0222) |
| Rurality (Base = Urban) | | -0.0133 | 0.00316 |
| | | (0.0111) | (0.0566) |
| Region (Base = Skopje) | Vardar | - | 0.0999 (0.0956) |
| | East | -0.00787 (0.00965) | 0.0766* (0.0398) |
| | Southwest | -0.0140 (0.0139) | -0.0592 (0.0471) |
| | Southeast | -0.00993 (0.0124) | - |
| | Pelagonjia | 0.0122 (0.0220) | 0.0866*** (0.0274) |
| | Polog | - | 0.114 |

| Variable | General population | Roma settlements |
|----------------------------------|--------------------|------------------|
| | | (0.0778) |
| | | |
| | Northeast | -0.0112 |
| | | (0.0147) |
| | | |
| | Albanian | 0.00819 |
| | | (0.00682) |
| | | |
| Ethnicity (Base = Macedonian) | Other ethnicity | 0.0531*** |
| | | (0.0164) |
| | | |
| | | -0.00696*** |
| Wealth score | | (0.00238) |
| | | |
| | | -0.0815*** |
| | | (0.00874) |
| Observations | 1,242 | 1,146 |

Source: Authors' calculations based on UNICEF, 2019a.

Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure 2.19. Share of children aged 15-18 that report being out of school by sex, location, and socioeconomic status, 2019



Source: Authors' calculations based on UNICEF, 2019a.

2.5. Supply and demand issues affecting access, retention, and transition¹⁸

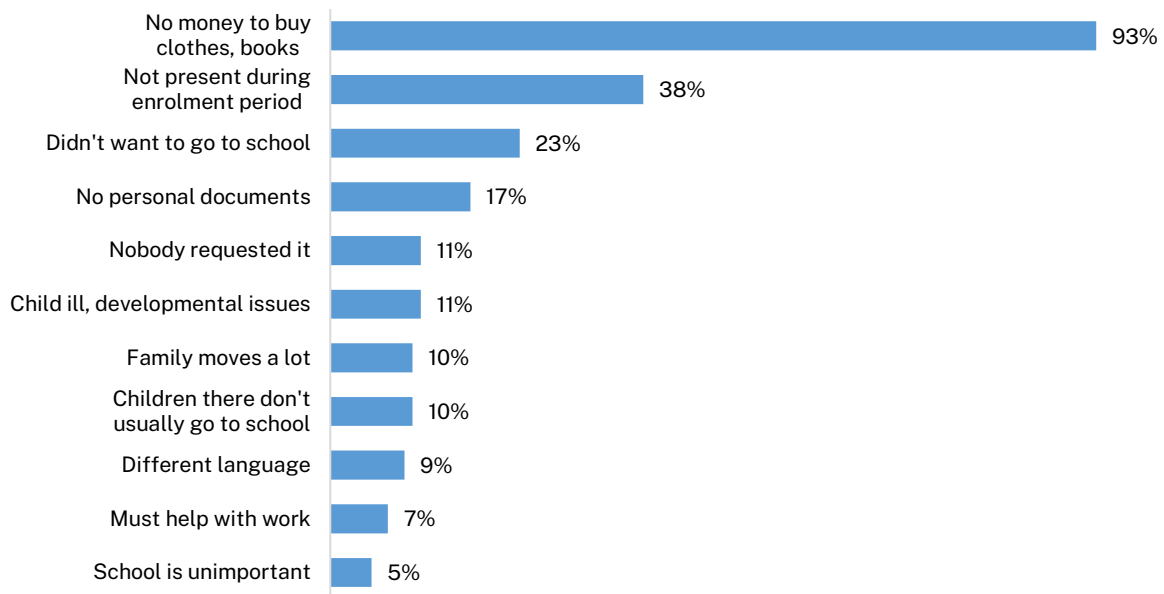
Demand issues are major constraints on schooling. In 2017, a report developed by the Ministry of Education and Science and the Macedonian Civic Education Centre surveyed families with primary-aged children that were either never enrolled in primary school or dropped out before completing it. The survey was conducted in 12 municipalities in North Macedonia with high levels of OOSC, interviewing 604 families (with 1,144 OOSC) (Mickovska, Chupi, and Spasovski, 2017). According to this research, **the main factors explaining non-enrolment in primary education are limited**

¹⁸ Here primary refers to the first two periods of basic education (first six grades).

financial means (with 93% of parents reporting it), **families not being present during the enrolment period** (38% of respondents), and **low interest in going to school** (23%) (see Figure 2.20).

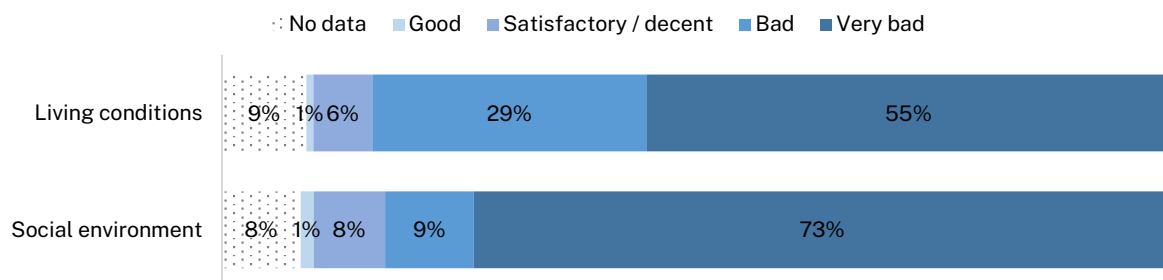
The research also found that **children who never enrol tend to come from poor and very poor living conditions and social environments**, as seen in Figure 2.21. Their parents are more likely to be unemployed or have sporadic work and have little or no education. There is also evidence that suggests that most children come from Roma communities, which confirms the disparities seen in OOSC rates in Figure 2.18.

Figure 2.20. Reason given by parents of children not enrolled in primary school, 2017



Source: Mickovska, Chupi, and Spasovski, 2017: 31.

Figure 2.21. Social environment and conditions in which children never enrolled live,¹⁹ 2017



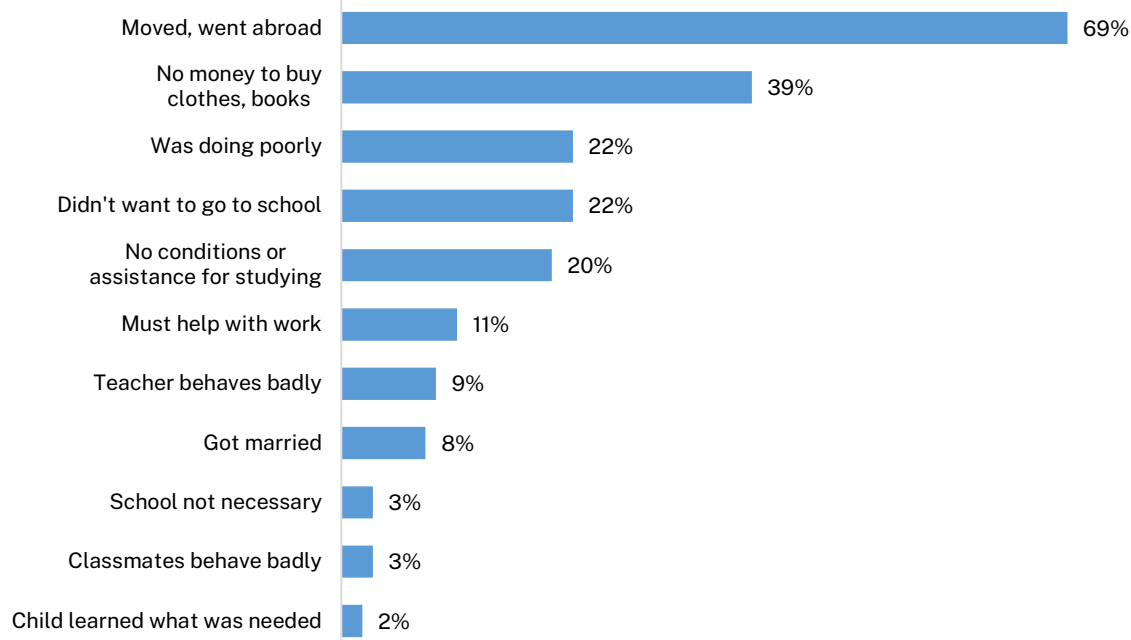
Source: Authors' calculations based on Mickovska, Chupi, and Spasovski, 2017: 30.

The study also looks at the reasons and conditions that explain why students of primary age who were enrolled in primary dropped out. It finds that moving or going abroad is the main reason, with 69%, while economic reasons are the second reason for dropping out, at 39% (see Figure 2.22). As with children that never enrol, there is evidence to suggest they tend to belong to Roma communities, come from a harsh social environment and living conditions, and their parents tend to be unemployed and poorly educated (Mickovska, Chupi, and Spasovski, 2017). Finally, 8% of

¹⁹ The authors define social environment as “ghettos without sewage, basic infrastructure and poor hygiene” and (poor) living conditions as being “without income, frequently without one of the parents, in substandard dwellings and without basic household appliances” (Mickovska, Chupi, and Spasovski, 2017: 28).

respondents reported that they dropped out of primary school because of early marriage. In light of this, the 2019 Law on Primary Education includes the prevention of underage marriage as one of the tasks of Roma mediators (Government of North Macedonia, 2019a: art. 97).

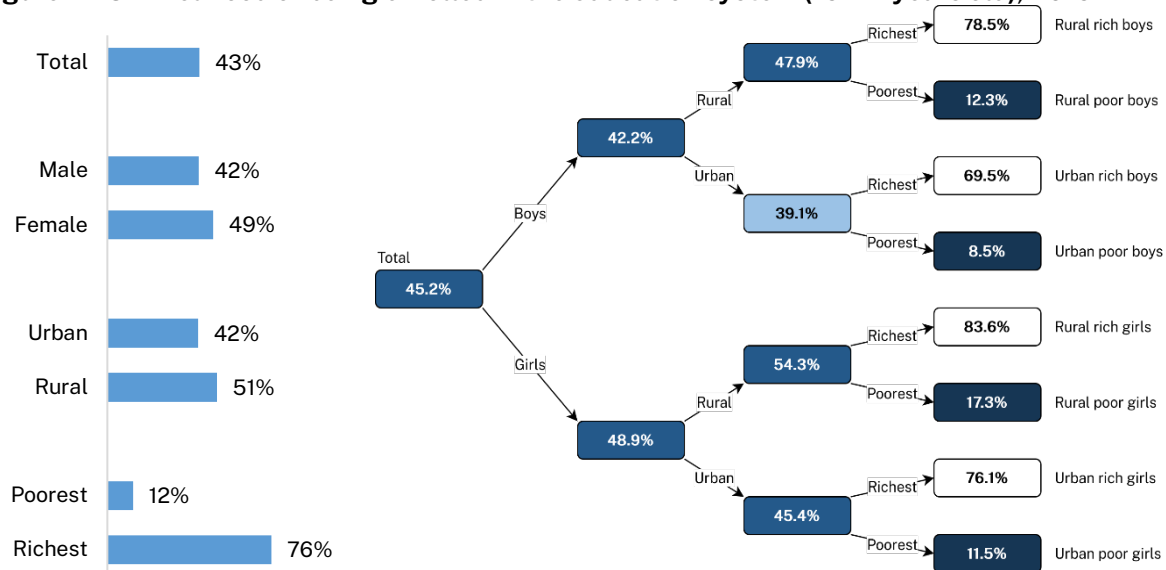
Figure 2.22. Reason given by parents of children who dropped out of primary school, 2017



Source: Mickovska, Chupi, and Spasovski, 2017: 39.

Regarding the reasons for not attending tertiary education, wealth is also the bigger predictor for enrolment, as shown in Figure 2.23. Girls are statistically more likely to be enrolled in tertiary education than boys, and rich students are more than six times more likely to be enrolled in tertiary education than their poor counterparts. Only 8.5% of urban poor boys are enrolled in tertiary education, against 83.6% of rural rich girls. Overall, current funding allocations to tertiary education students seem to be benefiting richer families disproportionately.

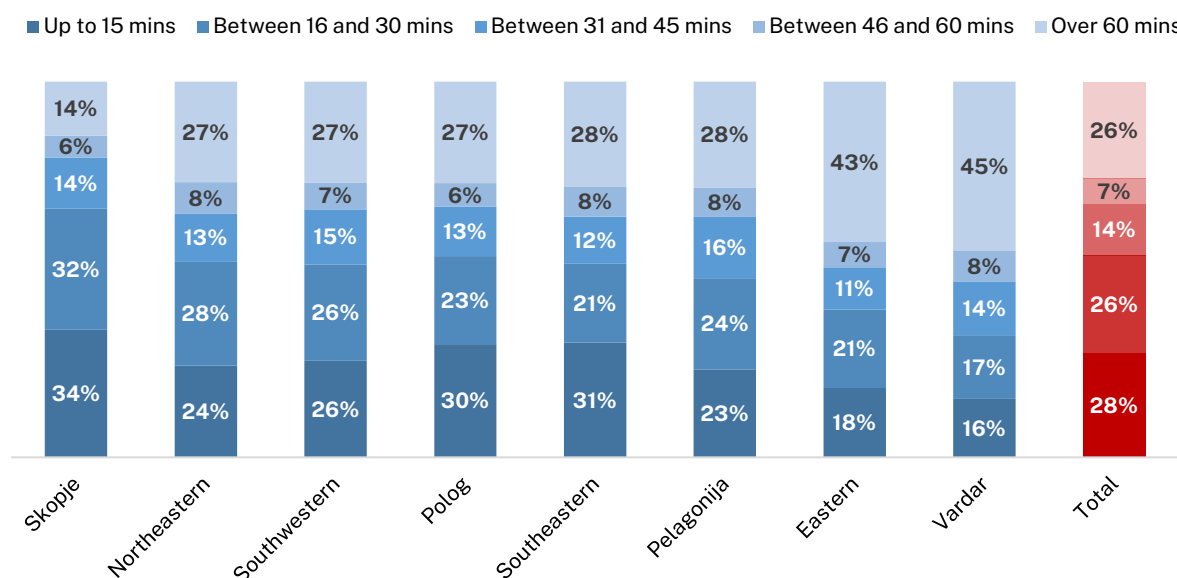
Figure 2.23. Likelihood of being enrolled in the education system (19-24 years old), 2019



Source: Authors' calculations based on UNICEF, 2019a.

Based on catchment areas,²⁰ and on spatialised population estimates produced by WorldPop (2018), Figure 2.24 presents the proportion of the school-age population for each region by travel time on foot to the nearest primary education school. It shows that **26% of primary education-aged children live further than one hour away from the closest school on foot**, while only 28% of them live less than a 15-minute walk away. Additionally, the disparities between regions can be considerable. While only 14% of children live more than an hour away in Skopje, this percentage goes up to 43% and 45% in the eastern and Vardar regions respectively.

Figure 2.24. Proportion of the school-age population by travel time to the nearest primary education school, by region, 2021



Source: Authors' calculations based on State Statistical Office, 2021b; UNICEF, 2022a; WorldPop, 2018; OpenStreetMap contributors, 2022. National administrative boundaries from Agency for Real Estate Cadastre for the Republic of North Macedonia, 2023.

Given the need for a school rationalisation exercise in the face of a declining school-age population, making sure the current free transportation policy is sufficient and can adequately support the future increase in demand is of great importance. While this is not within the scope of this document, a thorough analysis could be beneficial.

2.6. Key takeaway points

The country has seen a decrease in the number of children in the education system, directly tied to the population decrease. Despite this, North Macedonia has seen a positive increase in enrolment ratios over the last 15 years, with levels almost reaching 100% for primary education in 2022. Nonetheless, the country still has relatively low levels of GER compared to its neighbours.

While there has been an increase in the number of pre-primary schools and students, low levels of enrolment, together with low levels of tertiary enrolment, have pushed North Macedonia to having

²⁰ This was constructed by combining school locations with the country's road network to determine the effective coverage of each school if children get there by foot, using IIEP's QGIS catchment area plugin (Gagnon et al., 2022) in QGIS using the OpenStreetMap road network.

the lowest levels of school life expectancy (average number of years of schooling expected) in the region.

The country presents low levels of repetition, which continue to diminish as students progress through the cycle. These low levels do not allow for a robust econometric analysis of the determinants. However, the results seem to indicate that sex and place of residence play no role in the likelihood of having repeated the last grade, while wealth has an inverse correlation, although only in 2011.

Enrolment in compulsory education in North Macedonia does not show disparities between boys and girls, when administrative data and household surveys are analysed. Disparities exist in the general population between boys and girls in pre-primary and tertiary. For secondary education and tertiary education, wealth is the biggest predictor of attendance.

Roma children are much less likely to be enrolled in education than their counterparts from the general population, particularly in tertiary education, where they are 0.07 times as likely to enrol as their peers. While there are no disparities in enrolment in primary education between Roma boys and girls, there are disparities in the other levels, with girls being more likely to be enrolled in pre-primary, and less likely to be enrolled in secondary and tertiary. Nonetheless, great advancements have been made to keep Roma children enrolled in school, with policies ranging from monetary incentives to social community mediators.

While policies have been put in place to facilitate the inclusion of children with disabilities into the education system, barriers still exist that hamper the likelihood of them attending school. These challenges range from physical access to school infrastructure, to lack of teaching materials and trained teachers, to public perception about the presence of children with disabilities in regular schools.

The share of out-of-school children has been steadily decreasing over the last 13 years, going from 7.2% to 1.5%. Urban children are more likely to be out of school than their rural counterparts, and with poorer children being more likely to be out of the system than their richer peers. Urban poor boys and urban poor girls are the two groups with the highest likelihood of being outside of school, being 3.7 and 8.3 times more likely to be out of the system than the average.

The distribution of OOSC is not even across the country, with some regions, such as east, Skopje and southeast, having higher levels than the national average. Great advancements have been made in regions such as Pelagonia and Southeast, where the rate of OOSC has gone down by 93% and 86% respectively over the last 13 years.

Strong differences in the likelihood of being out of school exist between the general population and children from Roma settlements, with the latter being almost 13 times more likely to be out of school than the former. Roma girls and children in rural environments are more likely to be out of the system than their counterparts, as are Roma children from poorer households.

Gender and rurality do not seem to be correlated with the probability of being out of school, but wealth is, both for the general population and for children from Roma settlements. Conditional cash transfers could prove highly effective in keeping these children in school.

The main factor explaining school non-attendance for primary-aged children in North Macedonia is related to lack of financial means. The same is true for secondary education and tertiary education.

Distance from school is another potential reason for children dropping out of the system. While overall, 24% of all children live more than one hour away from school by foot, this varies greatly by region, with some, such as eastern and Vardar regions, having 43% and 45%. While school transportation services could help solve this, there is no statistically significant relation between this proportion and the share of students with access to free transportation services in primary schools.

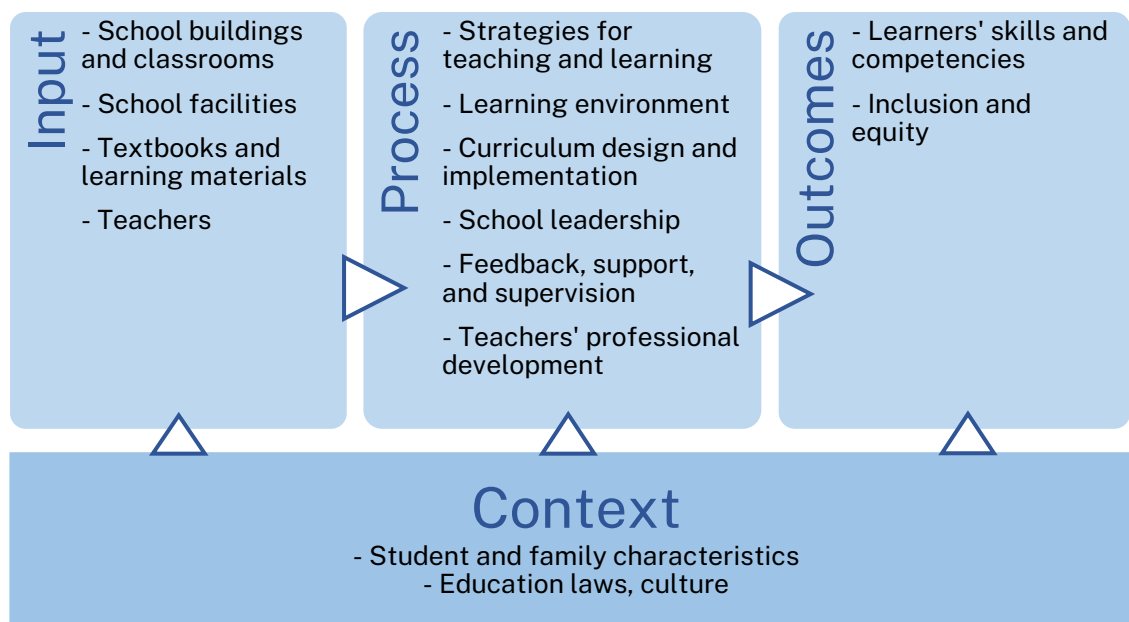
Chapter 3. Quality

Quality in education must be given the utmost attention and investment if we want to create generations of minds that foster development in society.

Educational policies and practices are essential to providing a varied and wide spectrum of opportunities for its citizens, by providing them with quality and relevant educational services. A quality education system should result in the acquisition of key competences and professional skills that foster people's social responsibility and civic engagement, convey human values, as well as supporting their personal growth and well-being. As economies develop and modernise, the ability of the education and training system to teach students more complex skills and knowledge becomes even more critical.

Achieving the goal of equipping students with the right behavioural skills and cognitive skills means paying attention to the range of factors necessary for quality learning. These factors can be divided into input factors, processes, and outcomes (see *Figure 3.1* below). High-quality learning outcomes require adequate input resources such as classrooms and facilities, learning materials and competent teachers. These elements are essential to creating good learning conditions. A number of process-related factors are also critical for improved learning, including pedagogy and strategies for teaching and learning, curriculum implementation, structures for feedback, support and supervision for students and teachers, school leadership, and professional development for teachers. An effective process is one that enables resources allocated to schools to be translated into pupil learning outcomes. However, contextual factors, including the child and his/her family background, also play an important role in the delivery of quality of education.

Figure 3.1. Framework to assess quality in education



Source: Adapted from IIEP, 2023.

This chapter will assess the various aspects relating to quality, responding through six sections:

1. Assessing the level of learning outcomes
2. Looking at learning outcomes through an equity lens
3. Factors affecting learning and skills development

4. Schooling conditions
5. Focus on teacher management
6. Parents' participation in the schooling and home learning environment

The analysis will be based on existing student assessments conducted throughout the general education system (e.g. pre-school, primary, secondary) and data and information collected from different sources (national legislation, policy documents, OECD, Eurydice [European Commission], UNICEF, World Bank, Multi Indicator Cluster Survey – MICS, National Examinations Centre, State Statistical Office, and so on).

3.1. Assessing the level of learning outcomes

A battery of assessments help assess the level of children throughout their education career. They include national examinations and international assessments.

3.1.1. National examinations

National assessments, while conducted on a large scale, have the advantage of providing a good assessment of the level of mastery of the curriculum, given that their content is based on the existing curriculum of the given grade and domain tested.

National testing for primary education was introduced in 2022, as a pilot.²¹ The testing is sample-based,²² and intended to be implemented in the third grade (as the end of the first period of primary education), fifth grade (as a transitional year to subject teaching that begins in the sixth grade), and in ninth grade (as the final grade ending primary education). The national testing for primary is regulated through the Concept on National Testing, whose purpose is to use standardised testing procedures and instruments, to provide objective and reliable data on the students' attainment of the standards; to provide data about achievements in teaching subjects of particular importance in primary education. Such data should provide evidence for the development and promotion of educational policies in North Macedonia aimed at achieving international educational standards (NEC, 2020).

The state Matura is conducted at the end of secondary school and is taken by both general and VET stream students. In addition, the examination can be taken in three languages: Macedonian, Albanian and Turkish. The state Matura is an external examination, which in addition to its certifying and selective role, aims to monitor and check the quality of secondary education. Students who successfully pass the Matura receive a four-year high school education diploma and have the possibility of enrolling in the faculties in North Macedonia. Students from four-year secondary vocational education who do not take the state Matura exam have to take the final exam to obtain a certificate for completing four-year vocational secondary education. Students from gymnasium and art education who do not take the state Matura exam have to take the school Matura to obtain a certificate for completing four-year secondary education. See *Section 3.4* for details.

3.1.2. International assessments

North Macedonia participates in a number of international assessments over the years that contribute to collecting data and informing policy decisions.

²¹ The pilot was conducted on a sample of third graders for mathematics. The results of the pilot are expected to be made available by the end of 2023.

²² The testing is to be sample-based, with at least 30% or 100 schools that have teaching in Macedonian and Albanian language (NEC, 2020).

Pre-primary

MELQO (measuring early learning quality and outcomes). MELQO tools help assess both i) 3–6-year-old children’s level of development and learning (in early literacy and mathematics, executive function, and socioemotional development); and ii) the early learning environments of the ECE setting (around dimensions related to pedagogy, play, inclusion, personnel, interactions, environment and parental engagement). MELQO was piloted in North Macedonia for the first time in 2022 on a nationally representative sample of 1,019 children from 103 pre-schools. It is intended to provide a starting point for generating nationally relevant, usable data to guide policy decisions and strengthen ECE programme implementation with a view to improving pre-primary schooling for young children aged 3-6 years.

Multiple Indicators Cluster Survey (MICS). The last MICS was conducted in North Macedonia in 2018-2019, with the objectives of providing high-quality data for assessing the situation of children, adolescents, women and households in the country. A national representative sample of 4,082 households were successfully interviewed, including 665 children aged 3-4 and 1,275 children aged 7-14. In addition, 1,390 households were interviewed in Roma settlements, including 305 children aged 3-4 and 877 children aged 7-14. MICS allows for assessments of whether children aged 3 to 4 years are developmentally on track in various domains (literacy/numeracy, physical, socioemotional learning), while assessing the home learning environment (State Statistical Office and UNICEF, 2020).

Primary

MICS also assess the foundational reading and numeracy skills in Macedonian and Albanian of children aged 7 to 14. It also assesses the quality of the home learning environment, known to have a major effect on children’s learning development (State Statistical Office and UNICEF, 2020).

Early Grade Reading/Mathematics Assessments (EGRA/EGMA) were conducted nationwide in 2016 of around 3,800 students at the end of Grade 2 and 3,800 students at the end of Grade 3 (in each instrument) from all 336 public primary schools with a Macedonian, Albanian and Turkish language of instruction. Additionally, longitudinal data were collected from the sample of 506 Grade 4 students (for a third year in a row) from the initial 42 schools. The baseline data for this cohort of students was collected as part of the baseline study conducted in May 2014, when the students were in Grade 2.²³ The objectives of the early grade assessments are to ‘inform education stakeholders of the current status of students’ performance and establish reading and maths performance standards based on national average scores’ with the intention to open the policy dialogue to improve the early grade reading and mathematics skills of students and enhance teachers’ pedagogical skills (USAID and Step by Step Foundation, 2017).

Trends in International Mathematics and Science Study (TIMSS) is the international study of the mathematics and science group of subjects, which measures the knowledge and abilities of students in mathematics and science subjects in the fourth and eighth grades. Through the questionnaires for students, teachers and principals, results are obtained on how the cultural environment, teaching practice, the goals of the curricula and the systematic organisation of education affect students’ achievements. North Macedonia participated in this study with sample students in the eighth grade in 1999, 2003 and 2011, and in the fourth grade in 2019 and 2023.

Progress in International Reading Literacy Study (PIRLS) is the international study to check the ability to read with comprehension of students in Grade 4. It is focused on three aspects related to reading: the process of understanding; the purposes for which students read; reading habits and attitudes. North Macedonia participated in this study in 2001, 2006 and 2021.

Secondary

²³ Pilot assessments were conducted in 2014 and 2015.

Programme for International Student Assessment (PISA) is an international study that assesses students' abilities, knowledge and skills in applying what they have learned at school in life situations at the age of 15 (e.g. the end of compulsory education) in three areas: ability to read with comprehension – and a critical approach in reading written materials; mathematical literacy – reading, interpreting and solving a given problem by organizing and interpreting given information and choosing a solution method; literacy in the natural sciences – recognizing scientific questions, using scientific knowledge, identifying content in scientific research and connecting scientific data with evidence and conclusions. North Macedonia participated in the study in 2000, 2015, 2018 and 2022.

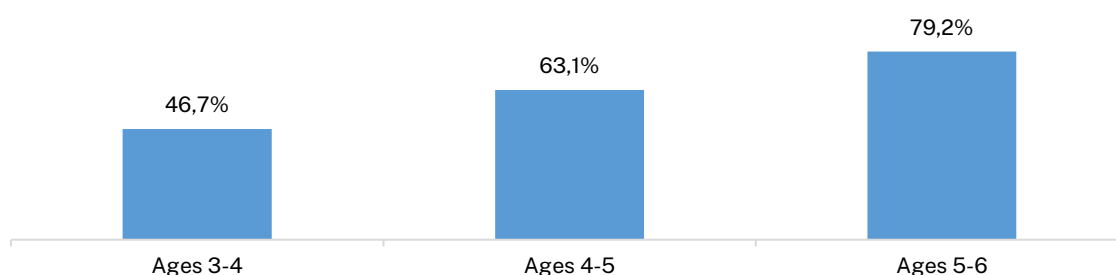
3.1.3. Skills acquired during early childhood education

It is now widely acknowledged that the skills that children acquire throughout their early learning experiences will be the foundation for their later learning and success. Ensuring that the pre-school years are adequately imparting children with the right skills is therefore critical.

Children who attend pre-school (e.g. kindergarten or centres for early childhood development) follow a comprehensive programme which covers different development domains, including physical, social, emotional and intellectual development (Ministry of Labour and Social Policy, 2014). In 2009, the Early Learning and Development standards were adopted (Ministry of Labour and Social Policy, 2009). These standards outline the expected development milestones for pre-school-aged children in different areas. Based on these standards, the early learning and development curriculum was prepared and implemented in kindergartens. Through an early childhood development (ECD) database, pre-school teachers are monitoring and evaluating the progress of pre-school children. While defining specific goals, standards and expected results for each stage/age of child development, the level of children's achievement was not measured externally until recently. To remedy to this situation, the Ministry of Labour and Social Policy (MoLSP), with the support of the World Bank, piloted the MELQO instrument for pre-school children aged 3–6 years in 2022.

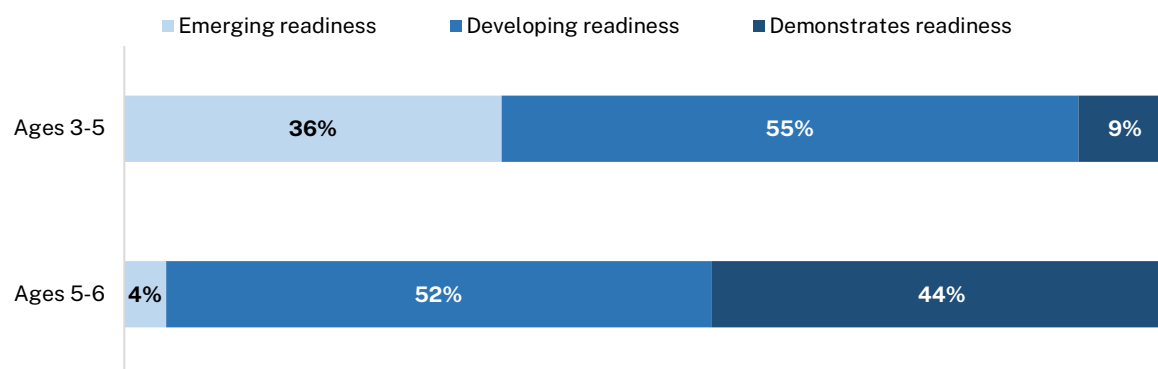
Key results show that, as children grow older, their progression in learning increases, with more and more children moving from 'emerging readiness' and towards 'demonstrating readiness'. The percentage of achievement increases with the age of the child, from 46.7% for the 3-4 age group to 79.2% for the 5-6 age group. It can also be noted that, while 45% of 5-6-year-old children 'demonstrate readiness', 9% were demonstrating readiness among the 3–5-year-olds.

Figure 3.2. Learning progression by age (percentage of achievement), MELQO direct assessment, 2022



Source: MoLSP and World Bank, 2023.

However, many children at the end of pre-primary education are not fully school ready. Four per cent of children aged 5-6 still fall under 'emerging readiness' and 52% are 'developing readiness', which could highlight some quality issues (Figure 3.3). Disparities in children's learning and development outcomes across domains are also observed (Figure 3.9).

Figure 3.3. Average level of readiness by cohort, MELQO direct assessment, 2022

Source: MoLSP and World Bank, 2023.

The MICS conducted in 2019 showed that a total of 82% of children aged 3-4 years were on track developmentally. Yet, while almost all of them were physically and learning-wise developmentally on track, 79% of children were developmentally on track in the socioemotional domain, and only 32% were on track in the literacy and numeracy domain.

3.1.4. Learning acquisition during primary education

Student achievement at primary education level can be assessed using sample-based surveys that cover various primary grades from Grades 2 to 4 (MICS 2019 data (G2 to G9), EGRA and EGMA 2016 assessment (G2 to G4), TIMSS (Grade 4) and PIRLS (2021)).

MICS 2019 data shows that only 28.5% and 60.4% of children in 2nd and 3rd grade respectively had foundational reading skills²⁴ i.e. are able to read 90% of words in a story correctly, answer three literal comprehension questions and answer two inferential comprehension questions. While 57% and 79% respectively managed to read words correctly, only 34% and 68% respectively answered inferential comprehension questions correctly. **Even more worrying facts relate to children's numeracy skills, with 11.1% and 38.4% of children in 2nd and 3rd grades respectively having foundational numeracy skills** (number reading, number discrimination, addition and pattern recognition and completion). 48.6%/85.3% successfully performed number discrimination, but only 30.7%/50.8% succeeded in addition and pattern recognition and completion tasks (State Statistical Office and UNICEF, 2020).

Of major worry is that, by the end of primary education, not all children master full early literacy and numeracy skills, entailing that weakness tends to remain as they move to the next grades. By Grade 9, 79.7% of children demonstrated foundational reading skills, and 46.9% demonstrated foundational mathematics skills.

The findings of the 2016 EGRA and EGMA assessments show similar findings: **oral reading fluency and comprehension results in early primary education are still significantly below international benchmarks**, even though there are improvements in reading skills between Grades 2 and 3.

²⁴ The reading assessment module consists of a reading passage and a set of comprehension questions related to the story. The assessment is customised in each country to ensure vocabulary and cultural references are relevant and appropriate. The numeracy assessment consists of four number tasks based on universal maths skills expected at 2nd grade level. The 2018–2019 North Macedonia MICS reading assessment was conducted in Macedonian and Albanian.

Table 3.1. Grades 2 to 4 student results per task on EGRA instrument, 2016

| Language of instruction (N) | Grade 2 (baseline) | | | Grade 3 (baseline) | | |
|-------------------------------------|--------------------|--------------|--------------|--------------------|--------------|------------|
| | Mac. (2,442) | Alb. (1,173) | Tur. (2,448) | Mac. (2,442) | Alb. (1,210) | Tur. (160) |
| Correct letters per minute | 78 | 84 | 77 | 88 | 96 | 95 |
| Correct familiar words per minute | 34 | 37 | 31 | 51 | 55 | 54 |
| Correct words per minute in a story | 44 | 47 | 27 | 68 | 70 | 47 |
| US oral reading fluency norms | (47-53) | | | (72-89) | | |
| Reading comprehension (%) | 40% | 35% | 20% | 60% | 55% | 40% |
| International benchmark | 80% | | | 80% | | |

Source: USAID and Step by Step Foundation, 2017.

The international benchmark of 80% of answered questions is not close to being met in either grade or language, which is highly alarming. The average comprehension score in Grade 2 ranges from 20% for Turkish, 35% for Albanian and 40% for Macedonian language of instruction. In Grade 3, it ranges from 40% for Turkish, 55% for Albanian and 60% for Macedonian language of instruction.

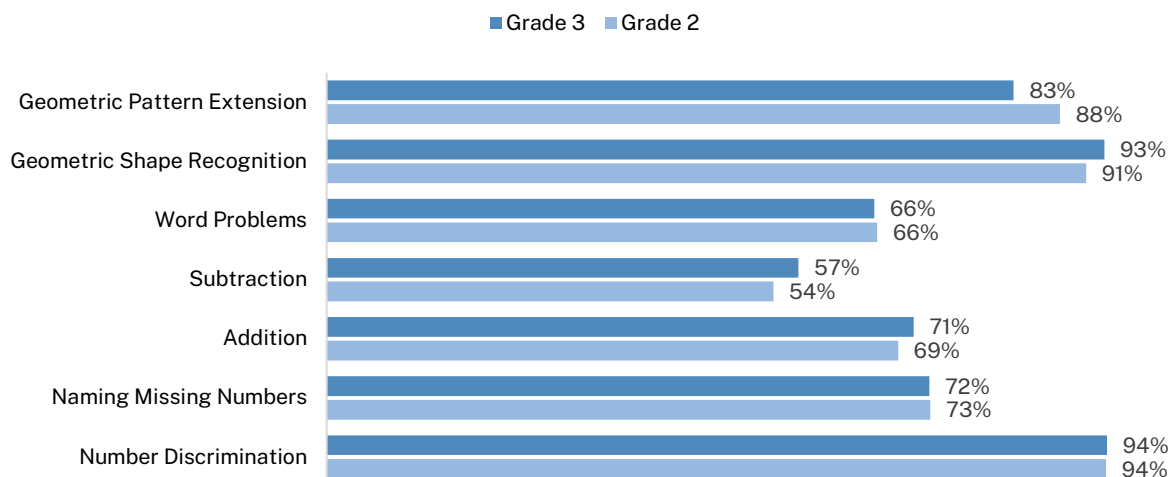
While progression in learning outcomes is observed over the years, results remain below international benchmarks, particularly among Albanian-speaking pupils. EGRA Longitudinal study results in the reading comprehension record significant improvement, from 46% in Grade 2 (2014) to 75% in Grade 4 (2016) for Macedonian language and from 37% to 62% in Albanian language. However, even these results are still below the international standard of at least 80% comprehension.

Table 3.2. Progress of Grades 2-4 students' results per task and grade, EGRA instrument, longitudinal cohort, 2014-2016

| Language of instruction (N) | Grade 2 (2014) | | Grade 3 (2015) | | Grade 4 (2016) | |
|-------------------------------------|----------------|------------|----------------|------------|-----------------|------------|
| | Mac. (731) | Alb. (250) | Mac. (692) | Alb. (229) | Mac. (372) | Alb. (136) |
| Correct letters per minute | 74 | 83 | 87 | 108 | 104 | 106 |
| Correct familiar words per minute | 31 | 30 | 49 | 53 | 69 | 68 |
| Correct words per minute in a story | 41 | 40 | 81 | 77 | 94 | 89 |
| US oral reading fluency norms | (47-53) | | (72-89) | | (92-107) | |
| Reading comprehension (%) | 46% | 37% | 69% | 58% | 75% | 62% |
| International benchmark | 80% | | | | | |

Source: USAID and Step by Step Foundation, 2017.

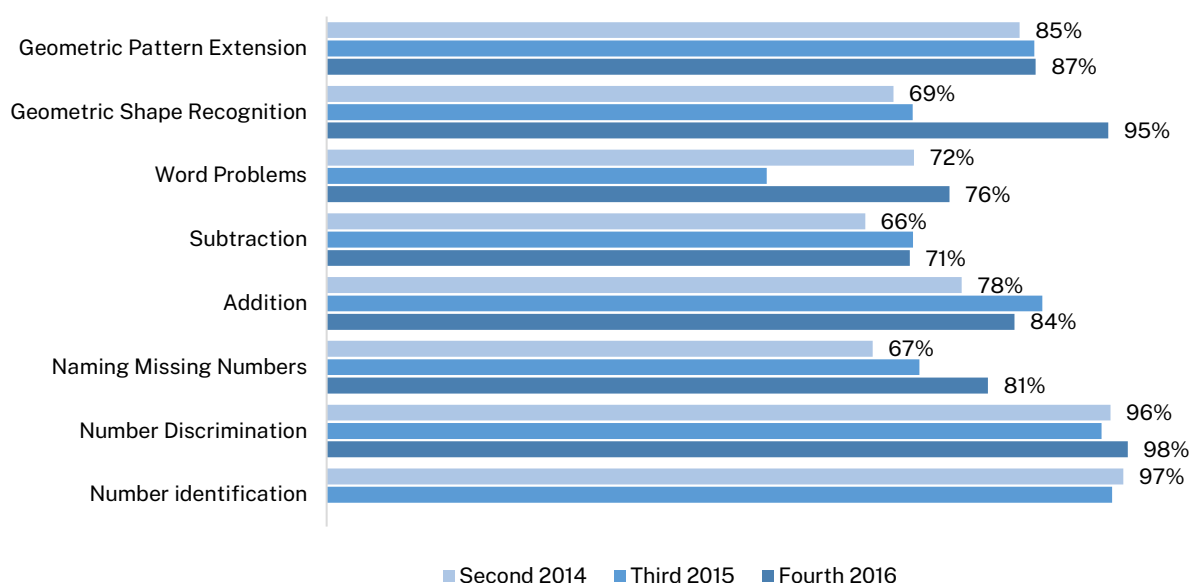
EGMA study results (Figure 3.4) reveal that 'number discrimination' and 'geometric pattern extension' are the tasks completed by most students (by more than 90% of respondents), making them the easiest tasks in the instrument. The most difficult task is 'subtraction' for both grades (54% in Grade 2 and 57% in Grade 3) followed by 'word problems' (66% for Grade 2 and 3).

Figure 3.4. Percentage of students completing different EGMA subtasks, per grade, 2016

Source: USAID and Step by Step Foundation, 2017.

Children who entered Grade 3 at the time of the introduction of the new mathematics curriculum in 2014/2015 have engaged in more complex mathematical concepts learning before fully mastering foundational operations, which may impair their later learning experience.

Longitudinally, in the area of mathematics, while Grade 4 students showed progress in doing ‘word problems’ (with a mastery of 54% in Grade 3 to 76% in Grade 4) and ‘geometric shape recognition’ (with a mastery of 72% in Grade 3 to 95% in Grade 4), a drop in foundational domains is observed in ‘addition’ (from 87% in Grade 3 to 84% in Grade 4) and ‘subtraction’ (from 72% in Grade 3 to 71% in Grade 4). Note that those students were second-grade students at the time of the EGMA pilot in 2014 and they have learned according to the old maths curriculum, where addition and subtraction were taught up to 20. When the new maths curriculum was introduced in 2014/2015, there were in third grade, and were taught how to do addition and subtraction up to 1,000, without practising these two mathematical operations up to 100.

Figure 3.5. Percentage of students completing different EGMA subtasks, longitudinal cohort, 2014–2016

Source: USAID and Step by Step Foundation, 2017.

The performance of students in Grade 4 in the TIMSS 2019 survey points to a similar trend that Macedonian students in general fare poorly and below their peers internationally (Mullis et al., 2020). With a score of 472 in mathematics and 426 in sciences, Macedonian students rank 45th place in mathematics and 51st place in science among the 58 countries that have undergone this assessment. Compared to their peers in the Western Balkans region, students in North Macedonia are showing weaker results than Albanian, Serbian and Croatian, but better results than in Bosnia, Montenegro, or Kosovo.

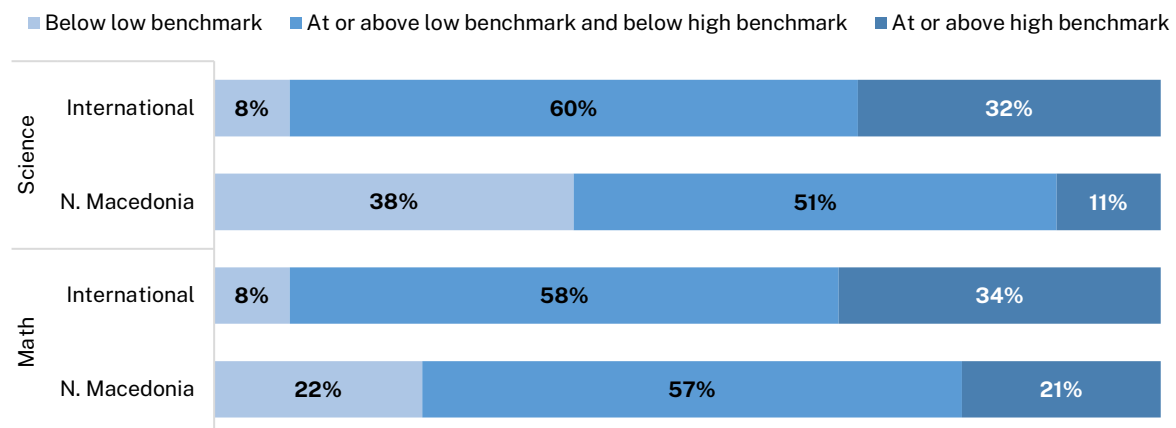
Table 3.3. TIMSS Scores in mathematics and science, various years, and regional comparisons

| | Maths | Science |
|--|-------|---------|
| North Macedonia (2019 (4 th grade) | 472 | 426 |
| North Macedonia (2011) (8 th grade) | 426 | 407 |
| North Macedonia (2001) (8 th grade) | 447 | 458 |
| Regional (2019) | | |
| Albania | 494 | 489 |
| BiH | 452 | 459 |
| Croatia | 509 | 524 |
| Kosovo | 444 | 413 |
| Montenegro | 453 | 453 |
| Serbia | 508 | 517 |

Source: Mullis et. al, 2020.

Many 4th graders, particularly in science, do not meet minimum international requirements. Twenty-two per cent of Macedonian 4th graders fall below the low benchmark in maths and 38% in sciences (compared with 8% and 8% internationally). On the other side of the spectrum, 21% of 4th graders reach or exceed a high benchmark in maths, and 11% in science, compared to 34% and 32% respectively internationally.

Figure 3.6. Share of students reaching a given benchmark, by subject, TIMSS 2019



Source: Mullis et al., 2020.

For reading, the same observation is made: Macedonian 4th graders score below average in reading, according to the International Reading Study (PIRLS 2021). Macedonian fourth graders scored 442 points; below the average of 500 points for which the ranking was made. They ranked 34th out of the 43 countries who participated in the assessment. Unfortunately, Macedonian students had the same score (442) in the assessment implemented in 2001 and 2006.

Most regional neighbours tend to fare better than North Macedonia, except Kosovo, which with 421 points, ranks in 38th place.

Table 3.4. PIRLS results over time and regional comparisons, 2001, 2006 and 2021

| | Scores | Below low benchmark | At and above high benchmark |
|-----------------------------|------------|---------------------|-----------------------------|
| North Macedonia (2021) | 442 | 30% | 11% |
| North Macedonia (2006) | 442 | 34% | 15% |
| North Macedonia (2001) | 442 | 45% | 10% |
| International (2021) | 500 | 6% | 36% |
| Regional (2021) | | | |
| Albania | 513 | 8% | 33% |
| Croatia | 557 | 2% | 56% |
| Kosovo | 421 | 38% | 5% |
| Montenegro | 487 | 13% | 21% |
| Serbia | 514 | 7% | 33% |
| Slovenia | 520 | 6% | 35% |

Source: Mullis et al., 2023.

Fourth graders in North Macedonia have better reading achievements for literary experience (442 points) compared to reading for finding and using information (439 points). Ten-year-old children were more successful in finding and directly deriving conclusions (443 points) than they were in interpreting, integrating and evaluating (44 points).

3.1.5. Student achievement at secondary education level

At secondary level, the PISA that assesses students aged 15 (most of them in the first year of upper secondary) and the state Matura exam at the end of secondary provide insights into students' achievements at that level.

Table 3.5. PISA scores, by region, 2015, 2018 and 2022

| Year | Science | Reading | Mathematics |
|--------------------------------------|---------|---------|-------------|
| OECD average (2018) | 493 | 493 | 490 |
| EU (2018) | 484 | 482 | 489 |
| WB (2018) | 408 | 402 | 414 |
| North Macedonia (2022) ²⁵ | 380 | 359 | 389 |
| North Macedonia (2018) | 413 | 393 | 394 |
| North Macedonia (2015) | 384 | 352 | 371 |
| Differences | | | |
| 2018-2015 | 29 | 41 | 23 |
| 2018-OECD average | -76 | -94 | -95 |

Source: National Examinations Centre, 2018; OECD, 2023b (for 2022).

Students in North Macedonia scored lower than the OECD average in reading, mathematics and science, although improvements have been recorded over the years. With average scores of 413 points in science, 393 in reading and 394 in mathematics, students at the age of 15 in North

²⁵ Results from 2022 are not further analysed throughout the report as the results were announced after completing this report. Note that it corresponds to post-COVID times, and in many countries, a drop in results has been recorded.

Macedonia are still behind their peers in OECD countries in 2018, despite major improvements registered over 2015-2018.

However, over the 2015-2018 period, students in the Republic of North Macedonia improved significantly in all three subjects. 'While performance is still significantly below the OECD average in reading, mathematics and science, the percentage of low performers in each subject shrank by at least nine percentage points. Improvements were observed throughout the performance distribution, as the lowest- and highest-achieving students improved their proficiency between 2015 and 2018. The highest- and lowest-performing students in mathematics saw similar improvements in performance, while the highest-performing students in science improved significantly more than the lowest-performing students' (OECD, 2019b).

Compared to the 2018 OECD average, a smaller proportion of students in North Macedonia performed at the highest levels of proficiency (Level 5 or 6) in at least one subject; at the same time, a smaller proportion of students achieved a minimum level of proficiency (Level 2 or higher) in at least one subject.²⁶ While the share of students performing below basic proficiency (Level 2) in all three PISA subjects has dropped, approximately half of all students still find themselves at that level: in 2018, 55%, 61%, and 49% of students found themselves at below basic proficiency in reading, mathematics and science.

- In North Macedonia, 45% of students attained at least Level 2 proficiency in reading (OECD average: 77%). At a minimum, these students can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex, criteria and can reflect on the purpose and form of texts when explicitly directed to do so.' (OECD, 2019b)
- 'Some negligible percentage of students in North Macedonia were top performers in reading, meaning that they attained Level 5 or 6 in the PISA reading test (OECD average: 9%). At these levels, students can form a full and detailed understanding of a text whose content or form is unfamiliar, and deal with concepts that are contrary to expectations. In 20 education systems, including those of 15 OECD countries, more than 10% of 15-year-old students were top performers' (OECD, 2019b).
- Some 39% of students in North Macedonia attained Level 2 or higher in mathematics (OECD average: 76%). At a minimum, these students can interpret and recognise, without direct instructions, how a (simple) situation can be represented mathematically (e.g. comparing the total distance across two alternative routes or converting prices into a different currency).
- In North Macedonia, 1% of students scored Level 5 or higher in mathematics (OECD average: 11%).
- Some 51% of students in North Macedonia attained Level 2 or higher in science (OECD average: 78%). At a minimum, these students can provide possible explanations in familiar contexts or draw conclusions based on simple investigations.
- In North Macedonia, 1% of students were top performers in science, meaning that they were proficient at Level 5 or 6 (OECD average: 7%). These students can creatively and autonomously apply their knowledge of and about science to a wide variety of situations, including unfamiliar ones.

²⁶ PISA divides students' skill proficiencies into six (6) levels in mathematics, science and reading comprehension, where Level 2 is considered the minimum expected standard for students aged 15. As such, it allows the identification of low (below Level 2) and high achievers (Levels 5 and above).

Table 3.6. Distribution of students' achievements in reading comprehension by level, PISA 2018

| Level | OECD average | North Macedonia |
|-------|--------------|-----------------|
| 6 | 1.3% | 0.0% |
| 5 | 8.7% | 0.3% |
| 4 | 27.6% | 3.9% |
| 3 | 53.6% | 18.3% |
| 2 | 77.6% | 44.9% |
| 1a | 92.3% | 72.8% |
| 1b | 98.5% | 91.1% |
| 1c | 99.9% | 98.4% |

Source: National Examinations Centre, 2018.

Table 3.7 records the results in the Matura exam's June examination session over the last five years. In June 2022, the latest available state Matura exam data, 15,899 registered candidates took the exams (of whom 53% were female). Results show the following key patterns:

- In the first subject in the compulsory part, the average grade for language varies from 3.64 for Albanian language to 4.14 for Macedonian language in 2021/2022, which shows the highest level of achievement compared with previous years of examination. The highest drop in grades was in the 2019/2020 period, probably influenced by the COVID-19 crisis and the longer period of time where there were no classes and then online classes were organised but with lots of challenges in implementation.
- In the second elective subject, the average grade for mathematics is 4.19, while for the English language it is 3.49. In this subject, the lowest achievements were in the 2019/20 school year, and again due to the challenges in organising teaching during COVID-19.
- **Very few students (only 7.7%) took mathematics as a second subject.** They are mainly students who plan to continue their education at technical faculties. Among them, 48% are girls and only about 25% are in vocational education. Their average achievements are much lower (3.54) compared to those from general high schools (4.42). These differences are statistically significant. The results of an analysis conducted by the Ministry of Education and Science (MoES) and the NEC in 2015 on the small percentage of graduates taking mathematics as a second subject for Matura led to the introduction of mathematics as a compulsory subject for the state Matura. Yet following students' protests, the MoES and NEC withdrew the new concept. In contrast to national examinations in many OECD countries, mathematics is not compulsory in North Macedonia. Internationally, mathematics, alongside reading and writing, is considered to be a core competence that students should acquire at school and an area where information on student achievement is important to informing university selection.
- **The average achievements of high school graduates from gymnasiums are higher than those in vocational education and training in all subjects.** This is to be expected because high school students from gymnasiums have different curricula than vocational schools, in which the subjects from the state Matura are taught in more classes per week.

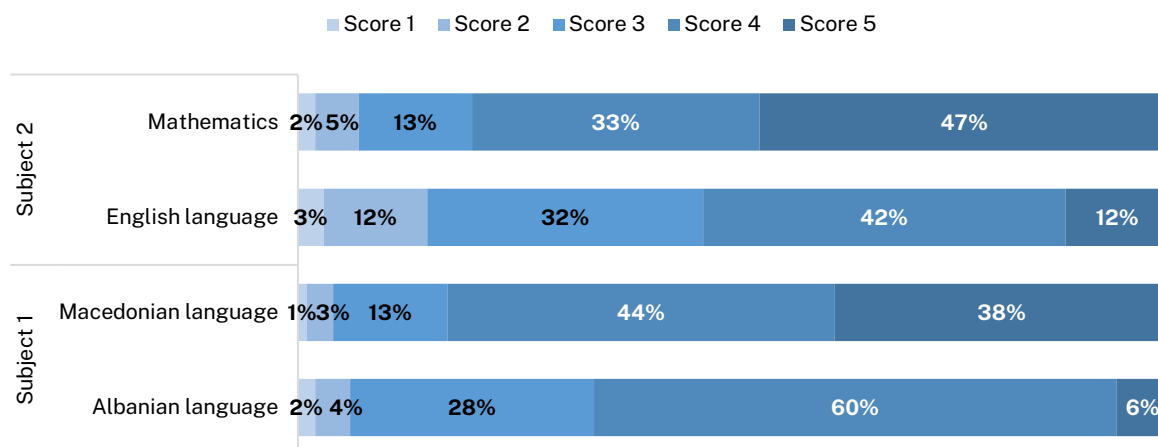
Table 3.7. Matura results with average grades by subject and year, June examination period, 2018–2021

| Subject | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 |
|------------------------------------|-----------|-----------|-----------|-----------|
| Compulsory subjects | | | | |
| Macedonian language and literature | 3.69 | 2.36 | 3.93 | 4.14 |
| Albanian language and literature | 3.85 | 2.69 | 3.60 | 3.64 |
| Turkish language and literature | 3.73 | 1.00 | 3.57 | 3.95 |
| Elective subjects | | | | |
| English language | 3.07 | 2.33 | 3.28 | 3.49 |
| French language | 4.61 | 2.50 | 4.58 | 4.79 |
| German language | 4.41 | 3.60 | 4.56 | 4.70 |
| Russian language | 4.07 | 3.00 | 4.78 | 5.00 |
| Mathematics | 3.66 | 2.27 | 4.08 | 4.19 |
| Philosophy | 3.89 | 3.23 | 4.23 | 3.93 |
| Aesthetics | 4.38 | 3.50 | 4.03 | 4.54 |

Source: National Examinations Centre, 2022.

Note: Grades are out of 5. A Pass grade is 2.

Few candidates fail the exam (1–2%, as seen in Figure 3.7), while many pass with high scores such as in Macedonian language and mathematics. The discrepancy observed with international achievements question what is being tested in the state Matura exam, while also questioning the possible gap in curriculum content as well as how the exam is organised in schools.

Figure 3.7. Results from state Matura exam for two subjects evaluated externally, June 2022

Source: National Examinations Centre, 2022.

Note: Scores are out of 5. A Pass grade is 2.

North Macedonia's results in international student assessments reveal comparatively weak levels of student achievements throughout the education cycle, starting at ECE level. Learning deficiencies start in the early years, with many children entering primary school not ready, and persist through to later grades. The education system fails to provide students with the skills they need to successfully complete each stage and move confidently to the next.

3.2. Looking at learning outcomes through an equity lens

Disparities in the level of skills development and achievements exist among students due to several factors that are external to the school system but have a major effect on the skills and learning outcomes of children. These include students' gender, the socioeconomic status of the families, the education level of parents, the place where they live, and the ethnic and linguistic background of the family. These factors tend to shape children's outcomes, which may necessitate active policy interventions to narrow and eliminate existing gaps.

Table 3.8 below offers a recap of disparities across the various assessments available from pre-primary until entering secondary school, using a parity index. The paucity of disaggregated data in reports did not allow for a proper mapping of disparities by equity dimensions. In addition, few statistical analyses to assess whether the differences observed were significant could be performed, limiting the scope of the analysis. With these limits in mind, few observations can be made:

Table 3.8. Disparities in learning achievements throughout the general education system, by various equity dimensions

| Year/grade | Source | Indicator | Parity index | | | | |
|------------------------|-------------------|---------------|--------------------|----------------------------|-----------------------------|-------------------------------------|---|
| | | | Sex Girls/ boys | HH wealth rich/ Poor | Location urban/ Rural | Linguistic Macedonia n/others | Mother's education Higher/ primary and less |
| 3-6 years old | MELQO 2022 | Achieved, % | | | 1.20 | 1.29 | |
| 3-4 years old | MICS 2021 | ECD Index, % | 1.18 | 1.35 | 0.97 | 1.43 | 1.26 |
| 6-14 years old | MICS 2019 | Literacy, % | 1.20 | 1.69 | 1.08 | 2.41 | 1.74 |
| | | Numeracy, % | 0.76 | 2.03 | 1.13 | 2.71 | 1.82 |
| Grade 3 | EGRA 2015 | Macedonian, % | 1.06 | | | | 1.43 |
| | | Albanian, % | 1.03 | | 1.98 | | 1.27 |
| Grade 3 | EGMA 2015 | Maths, % | 0.99 | | 2.00 | 1.02 | 1.27 |
| Grade 4 | TIMSS 2019 | Score Maths | 1.00 | 1.10 | | 1.11 | |
| | | Score Science | 1.03 | 1.13 | | 1.13 | |
| | PIRLS 2021 | Score Reading | 1.06 | 1.23 | | | |
| 15 years old (Grade 9) | PISA 2018 | Score Reading | 1.14 | 1.22 | | | 1.17* |
| | | Score Maths | 1.02 | | | | 1.19* |
| | | Score Science | 1.05 | 1.15 | | 1.13 | 1.20* |
| Grade 12 | Matura 2021 /2022 | Score | 0.97 | | | | |

Source: Authors calculations based on data from various assessments. See Table A3.2 in the annex for the underlying scores.

Note: Gender Parity index of 0.85: for 100 boys who are developmentally on track, there are 85 girls developmentally on track. A parity index between 0.97 and 1.03 entails parity. * PISA reconstructed results are related to *parents'* education.

Girls outperform boys in most assessments, yet differences are in many cases small or marginal.

As often seen in the literature, girls systematically outperform boys in reading and literature. In mathematics, the pattern is less clear. As far as PISA results are concerned, girls outperformed boys in all subjects, with differences being significant.²⁷

Socioeconomic status is one of the strongest predictors of performance, with socioeconomically advantaged students outperforming disadvantaged students. Household wealth is positively correlated with higher levels of achievement, starting at ECE level, and continuing across the various education cycles. The effect on learning can be sizeable: in the PISA 2018 testing, the

²⁷ Linear regressions analysis conducted on TIMSS 2019 and PISA 2018 results confirm those results.

learning gap between the top and bottom socioeconomic status groups was 80 points,²⁸ equivalent to almost two years of schooling (OECD, 2019b).

Higher socioeconomic status is associated, among other things, with parents having a higher level of education and better-paid professions that lead to the availability and use of more education resources (books, games, etc.) at home, systematically associated with higher performances.²⁹ The positive effect of education resources at home is at play for all education levels, starting at pre-primary and through to secondary, as highlighted in all assessments reviewed. In Section 3.5 below, we will look more closely at the home learning environment for Macedonian students, to better assess their learning experience.

While strongly affecting the trajectory of children, there is some patchy evidence that some children, despite their low socioeconomic background, can achieve high results, which is a reassuring outcome. PISA 2018 results are showing that ‘13% of disadvantaged students in North Macedonia were able to score in the top quarter for reading performance, indicating that disadvantage is not destiny’ (OECD, 2019b). This is also slightly better than is seen on average in the OECD, where on average 11% of disadvantaged students scored among the highest performers in reading in their countries.

Another important result from the PISA 2018 report is that, in North Macedonia, low- and high-performing students are clustered in the same schools more often than the OECD average. This points to the existing differences within the same schools for students who lag behind in achievement and the lack of efficient mechanisms for supporting low-achieving students.

The level of education of parents, and of mothers, is among the most prominent predictors of skills and learning achievements, positively affecting learning outcomes of children throughout their school career. The higher the level of parents’ education, the higher the child’s level of achievement; the effect is linear. This observation is seen already in pre-school, as shown by the MELQO results, which observe that children from homes with parents who have completed secondary education and above achieved progressively higher skills and development outcomes than their peers from families where their parents’ highest level of education was secondary education. This effect remains throughout the school journey, up to the end of the secondary cycle. Conducting statistical linear regression, on TIMSS 2019 and PISA, parents’ education remains an important predictor, even when controlling for the socioeconomic status (SES) of the household. Supporting parents to adequately support their children’s learning experience at home will prove critical if inequities are to be reduced.

The urban-rural location is an important factor affecting children’s achievement, although it may be compounded by other factors such as the SES and education level of parents, and the quality of the school supply (these aspects will be analysed in the next section). All assessments reviewed show that children living in urban settings tend to outperform their peers living in rural settings. This pattern prevails from ECE to secondary. Data from 2015 PISA show that North Macedonia had among the largest rural-urban performance gaps of all PISA-participating economies in 2015. Fifteen-year-old students in rural areas perform 4 score points behind their peers in urban settings in science (compared to the average difference across OECD countries of 17 score points). This gap is equivalent to nearly 1.5 years of schooling (OECD, 2019a). Linear regressions conducted on TIMSS 2019 confirmed the importance of location in shaping the learning outcomes of students for maths, but not for science.

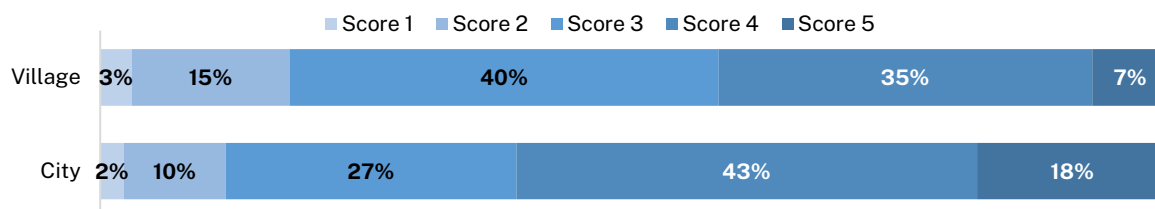
Results from the Matura exam also pinpoint differences in results depending on the place where students live. **There are statistically significant differences between students who come from an urban environment versus those who come from a rural environment in the Matura results from**

²⁸ This is smaller than the average difference between the two groups (89 score points) across OECD countries (OECD, 2019b).

²⁹ This pattern remains valid across countries and could partially explain the lower scores observed in North Macedonia, compared to OECD countries.

June 2022. Students in urban areas more often get the highest grade (5), while students from rural areas more often get lower grades (from 1 to 3), compared to students from urban areas in the first subject (maternal language). Furthermore, results in the Matura show that 61.1% of students in urban areas obtained a high grade (4 or 5) in the second chosen subject. Compared to that, 42.1% of students in rural areas had a high grade (4 or 5) in the second chosen subject.

Figure 3.8. Distribution of scores for state Matura for subject 2, by residence type, June 2022



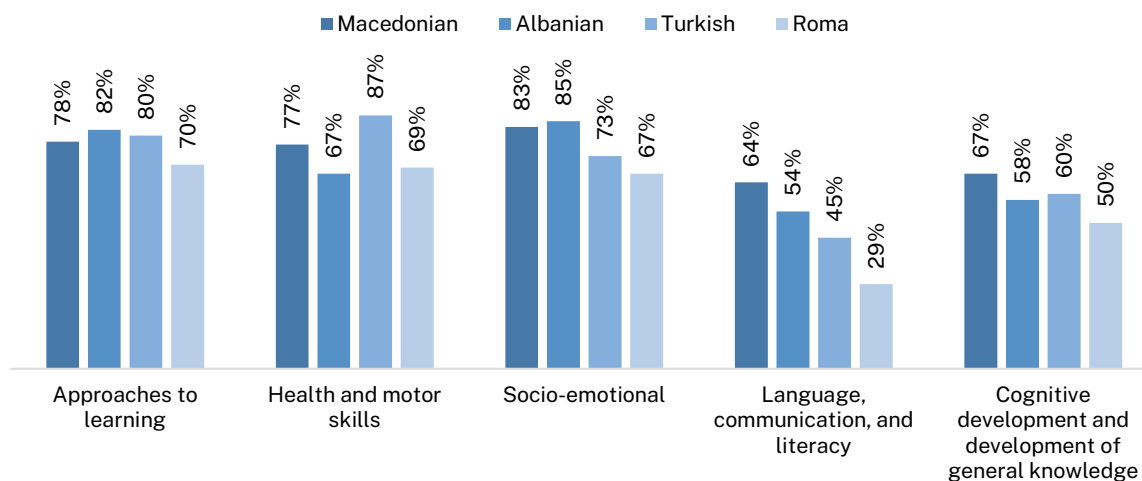
Source: National Examinations Centre, 2022.

Note: Scores are out of 5. A Pass grade is 2.

The ethnic and linguist gap persists throughout the education system and in general tends to favour (albeit not systematically) Macedonian speakers over other linguistic groups. Roma children are also consistently lagging behind their peers, with significant gaps. Figure 3.9 shows the level of disparities in children's learning and development outcomes among 3-6-year-olds across ethnic and linguistic groups. It shows differences between ethnic and linguistic groups and inconsistencies across domains, with Roma children lagging behind in all domains.

Ethnic and linguist disparities continue until the end of secondary, with some evidence suggesting that they tend to increase as students move up the education ladder. For example, in the TIMSS 2019 study, students taking the test in the Macedonian language score 24 and 39 points more in mathematics and science respectively, compared to students taking the test in the Albanian language. The breakdown by domain shows a similar pattern. PISA results display a similar conclusion (see Table A3.2 in the annex), with Macedonian speakers outperforming their peers by 66 points in the field of natural sciences, 65 points in the field of reading and 54 points in the field of mathematics (these differences being statistically different from zero). Mean grades are also higher at the state Matura among those who are taught in Macedonian followed by students taught in Turkish and then in Albanian.

Figure 3.9. Achievement level, by ethnic and linguistic groups, MELQO, 2022



Source: MoLSP and World Bank, 2023.

Disparities are numerous and for most, form very early (already in ECE) and tend to remain throughout children's schooling careers. The diversity in assessment methods and tools (which do not equate), however, makes it difficult to properly assess the extent to which disparities decrease or increase as students move up the education ladder.

3.3. Factors affecting learning and skills development

A well-performing school is a school that first and foremost ensures that its students acquire what is expected of them at each school level. Beyond the availability of pedagogical inputs and school organisation methods, it is the school's ability to help students progress that counts. In order to better identify, from among the various factors, those that are at play in affecting students' achievement, we will look at the results obtained from various learning assessment analyses.³⁰ As described in *Figure 3.1* in the introduction, the factors at play are numerous, and while some fall under the domain of education policies (i.e. teachers' qualification, access to teaching and learning materials, class size, teaching approaches, etc.) others, such as family and child characteristics, tend to be outside the school field, although some remedial public actions are possible. This section is based on the results of multivariate analyses conducted on TIMSS 2019 and PISA 2018.

3.3.1 What does it take to support effective learning?

In primary school

Table 3.9 below provides a recap of factors that positively and negatively affect the learning outcomes at Grade 4 relying on TIMSS 2019.

Table 3.9. Factors affecting Grade 4 students' TIMSS score, by subject, 2019

| Positive effect | Negative effect | No effect (key ones) |
|---|---|--|
| Maths | | |
| Student is a girl* Exposure to early stimulation (literacy/numeracy) Student very confident in mathematics Parents' level of education Principal's year of experience Instructional clarity in maths is high School emphasis on academic success is high* Total instructional hours per year* Urban setting | Disorderly behaviour Exposure to bullying Principal years of experience after a while | Home socioeconomic status Urban-rural location Level of maths resource shortage Language of the test Issue with discipline in school |
| Science | | |
| Exposure to early stimulation (literacy/numeracy) Students like learning science Parents' level of education Principal's year of experience | Exposure to bullying | Student's sex Home socioeconomic status Urban-rural location Instructional clarity level Level of science resource shortage School emphasis on success Total instructional hours per year Language of the test Issue with discipline in school |

Source: Authors' calculations based on TIMSS 2019 database (IEA, 2019).

Note: *statistically significant at 10%, otherwise at either 5% or 1%.

³⁰ We have conducted linear regression of scores using TIMSS 2019 data and PISA 2018 data. These types of analyses are particularly useful in helping to distinguish from among the various factors at stake, those which are the most decisive and possibly constitute a potential lever for action to improve the quality of learning.

Both student-level factors and classroom/school-level factors affect learning in Grade 4. For both mathematics and science, the following factors are positively (+) or negatively (-) at play, all things being equal:

- Exposure to early stimulation (literacy/numeracy) (+)
- Parents' level of education (+)
- Exposure to bullying (-)
- Principal's year of experience (+)

Students' behaviour, interests in learning and the subject's learning methods are important factors that influence learning outcomes. For mathematics, 'pupils' confidence in the subject' and 'instructional clarity' are positively at play, while 'disorderly behaviour' is negatively affecting results. In science, students' interest in the subject is positively affecting results. In both subjects, exposure to bullying is having a major detrimental effect on learning outcomes. Students who are not fully engaged with school and learning (due to lack of interest or fear) do not make the most of their learning experience while in school. In that regard, teachers' and principals' roles become critical. Teachers' abilities in fostering learning interest and motivation in their students, as well as nurturing efforts, perseverance and commitment through adequate – and if needed targeted – pedagogical approaches, is of foremost importance, and would need to be regularly assessed. Tackling bullying should also be a major priority for the entire school community. In that regard, the years of experience of school principals are a key element in creating a climate hospitable to education, while shaping a vision of academic success for all students.

Students' location, while affecting students' mathematics score, is not significant in science. In the same vein, 'being a girl', 'school emphasis on success' and 'total instructional hours per year' tend to some extent to be correlated with better results (significant at only 10%) in maths, but not in science. This latter result could entail that numeracy skills require more time practising for proper mastery. Of interest is that neither the school's level of resources nor the home socioeconomic status is significant. Yet, the factors are somehow indirectly captured in the location and education level of parents.

Children having attended ECE programmes do perform much better than those who did not. This is a very encouraging result, highlighting the ability of ECE programmes to adequately prepare children for primary, by teaching them relevant skills and abilities to ensure a good academic journey. It is well acknowledged today that ECE is one of the most cost-efficient investments, with the highest returns, and has strong lifetime and intergenerational benefits that can serve to break out of the cycle of poverty.³¹ Providing disadvantaged groups with access to quality ECE will prove critical to ensure they arrive at primary school ready and are able to thrive throughout their school career. Without a good start, gaps observed at school entry will only widen and lead to poor outcomes, including early drop-out.

At secondary level

Table 3.10 provides a recap of factors that positively and negatively affect learning outcomes among 15-year-old students, using the PISA 2018 data.

³¹ Heckman's work even shows that this investment in the early years, especially in disadvantaged groups, is one of the most cost-effective interventions, with a social return as high as 12% (Heckman, 2017). As such, ECE can act as a major equaliser by reducing social and economic inequality among groups (UNESCO, 2006; Irwin et al., 2007).

Table 3.10. Factors affecting students' PISA score, by subject, 2018

| Positive effect | Negative effect |
|--|---|
| READING | |
| Student is female Household socioeconomic status Level of education of parents* Language at home is Macedonian Pre-school (start age at 3 or 4) General stream (over VET stream) School socioeconomic and cultural status Class size (small effect) Teacher fully certified STR2 (small effect) | Share of teachers with a master's degree Lack of teaching staff Lack of educational material* Lack of physical infrastructure* School size (small effect) STR (small effect) Starting pre-school at 6 years old |
| MATHS | |
| Household socioeconomic status Level of education of parents* Language at home is Macedonian General stream (over VET stream) Teacher fully certified Class size (small effect) STR2 (small effect) | Student is female Share of teachers with a master's degree* School size (small effect) STR (small effect) Lack of physical infrastructure* Starting pre-school at 6 years old |
| SCIENCE | |
| Student is female* Household socioeconomic status Language at home is Macedonian General stream (over VET stream) Teacher fully certified Class size (small effect) STR2 (small effect) | Share of teachers with a master's degree* School size (small effect) STR (small effect) Lack of physical infrastructure* Starting pre-school at 6 years old |

Source: Authors' calculations based on PISA 2018 database (OECD, 2018).

Note: *statistically significant at 10%, otherwise it is at either 5% or 1%.

Students' characteristics and learning environment heavily shape learning outcome results.

- Students' living and studying conditions, understood as the household's socioeconomic background, the level of parents' education and the use of Macedonian at home, heavily and significantly affect learning outcomes.
- Additional evidence also shows that, **while girls outperform boys in reading (by 34 points), this is less marked in science and the opposite in maths, where boys outperform girls by an additional eight points.** Further analyses would be needed to better understand what accounts for those disparities.
- **Having been exposed to ECE (starting at the age of 3 and 4) is positively associated with reading scores,** while late ECE exposure (at the age of six) is having a negative effect on all scores. The long-lasting effect of ECE on reading during teenage years is worth mentioning. It makes ECE a particularly powerful and interesting strategy for bridging learning gaps across groups and help make the argument for an expansion of quality ECE in the country.

School factors, such as the quality of the school environment, teachers' qualifications, and the organisation of teaching and learning at school are positively affecting learning outcomes but are not that prominent. A quality educational environment (i.e. an advantaged school (assessed by the school's socioeconomic and cultural status, adequate level of infrastructure and equipment, adequate staffing in both number and quality)) is generally associated with more diverse and quality opportunities being offered to students to practise skills and develop higher capacities in learning, as is the school's teaching and learning organisation (i.e. class size, student-teacher ratio). These all combine to offer students quality and diverse learning experiences that support educational success. These school effects are not systematically at play throughout all subjects (i.e. less marked in maths and science) and, when at play, with a small effect (class size, STR). The shape of the effect of the student-teacher ratio (STR) on the scores is having an interesting U shape: the level of score tends to decrease and then improve as the STR increases. This result is

illustrative of the fact that classes that are too small are not necessarily conducive to better achievement, owing to limited ability for exchanges between students. The overall limited effect of school factors could also be associated with limited variances in the variables at stake (e.g. very few school principals report staff shortages).

Students in the general stream outperform their peers in the vocational stream. This is one of the most prominent and significant factors that are at play across the three subjects tested, with a score higher by 50 (reading) to 64 (maths) points in general versus VET stream, *all things being equal*.

In the next section, we go into more depth with the various process structural quality inputs highlighted here. To conclude this section, we would like to further highlight the following point: that **family socioeconomic and cultural conditions are prominent in shaping students' learning outcomes in the early stages³² and tend to cumulate with other factors, exacerbating disparities**. Parents with high levels of education often have the economic conditions to help their children learn, further fostering their children's potential and interest in learning. At the same time, families in more advanced socioeconomic environments (cities and towns), can send their children to schools with better facilities, meeting national standards. There are many excellent teachers in these schools, who have the opportunity to be innovative in teaching methods. Students encountering the opposite factors tend to face difficulties in their learning process. Addressing socioeconomic and cultural disparities will be important to ensure all children have equal opportunities to learn, starting at an early age.

3.4. Schooling conditions: more in-depth analysis of structural and process quality factors³³

In this section, we will turn our attention to a series of structural and process factors in education that have proven to be important in shaping students' learning success (as highlighted above). By assessing their main features, as well as their degree of compliance with set regulations, we will be able to highlight their strengths and weaknesses and reflect on possible actions to further strengthen the learning achievement of young people in North Macedonia throughout the education system.

3.4.1. How well provisioned are schools?

Core education inputs related to teachers (number and qualifications), school leaders' qualifications, school and classroom facilities characteristics, and the availability of teaching and learning materials (TLM) will be successively reviewed in this section and the following one.

Teacher supply and class size

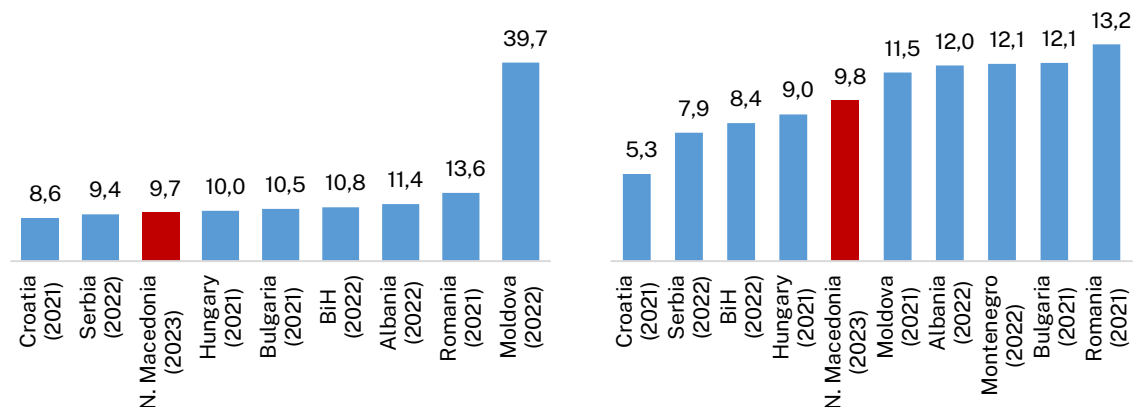
Student teaching conditions are quite favourable, with falling and relatively low student-to-teacher ratios (STRs). The number of students per class in primary schools should be 20 to 30 students. There might be classes with fewer than 20 students if they receive the necessary approval from the founder. The combined classes can have up to 10 students in total. The number of students in a class at public secondary schools cannot be less than 25 or greater than 34 students. A class may also be formed with a smaller number of students, after consent is obtained from the founder, and prior approval by the Minister of Education and Science. Over the past two decades, the student-to-teacher ratio has decreased from 18.3 students per teacher in 2001/02 to

³² Students whose parents 'often' involved them in early language and maths literacy activities have higher average achievement in maths and science than those who were only 'sometimes' or 'never' involved (NEC, 2021).

³³ Structural factors refer to educational inputs such as the level of qualification and training of teaching staff, class size, teacher-class, student-teacher ratios and the quality of the physical and learning environment. Process measures focus on the relationship between teachers and children, the use of class time, and the pedagogical and disciplinary approaches adopted.

9.7 students per teacher in 2022/23 in primary, and from 16.6 to 9.8 in secondary (SSO). This situation results from the fact that teachers have continued to be recruited and classes opened despite the significant drop in students.³⁴ In ECE, the drop is less sizeable – the STR went from 8.7 in 2001/02 to 6.4 in 2021/22.

Figure 3.10. STR in primary (left) and secondary (right), regional comparison, 2023 or MRY



Source: State Statistical Office 2022d, 2022k, 2022l, 2022s (North Macedonia) and UIS, 2023a, 2023b (other countries).

Half of primary schools operate with fewer than 10 students per teacher, while 13% have fewer than five students per teacher, which makes the running of schools very costly, while not warranting higher learning outcomes. Some schools in some localities may have a higher number of teachers because of different languages of instruction (there are five languages of instruction in primary education), especially in schools that have satellite schools under their jurisdiction. However, this wide diversity is mostly due to the current funding formulas for primary and secondary education, which are input based and incorporate no motivation for municipalities to optimise the delivery of education services. This is the most obvious shortcoming that should be addressed, both from the perspective of network optimisation and of revisiting the financing formulas for schools – an area on which North Macedonia has already started working. Dealing with this problem is critical for both efficiency and equity issues: PISA results in the Western Balkans suggest that neither smaller school sizes nor lower student-teacher ratios (as also seen above) lead to improvements in learning outcomes. Furthermore, low student-teacher ratios adversely affect the school network's cost efficiency.

Table 3.11. Student-teacher ratio according to number of municipalities, primary, 2020/21

| Student-teacher ratio | Number of municipalities | Proportion |
|-----------------------|--------------------------|------------|
| 0-5 | 10 | 13% |
| 6-10 | 43 | 54% |
| 11-15 | 24 | 30% |
| 16-20 | 3 | 4% |

Source: UNICEF, 2022b.

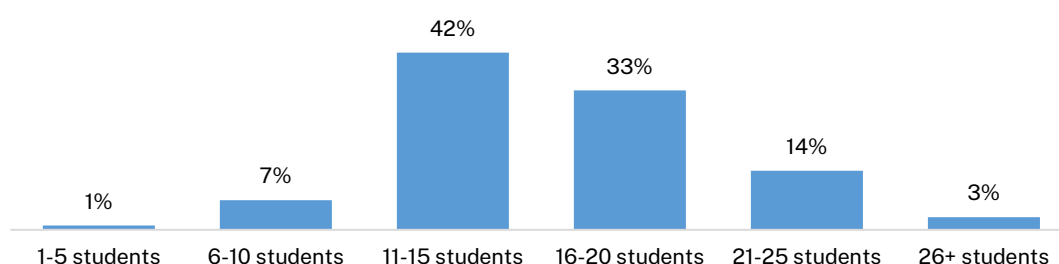
Due to the demographic shift and internal migration pattern, some municipalities face a major deficit of teachers, while in others human resources are underutilised. A more detailed municipal level analysis of the structure of the existing teacher workforce also highlights a major **shortage**

³⁴ Over the past two decades, the population aged 6-17 has dropped by 32.5%, directly affecting enrolment. While the number of students in primary education has decreased by 24%, the number of teachers has increased by 43% over 2002–2022. Similar trends are observed in secondary education, with respective figures of -23% and -28%.

of subject teachers in some areas (UNICEF, 2022b). Among subject teachers, some evidence of a shortage of teachers qualified to deliver maths, physics and chemistry subjects compared to teachers of social science subjects is observed. Schools delivering education in a mother tongue other than Macedonian are also faced with additional challenges in adjusting the teachers' workforce.

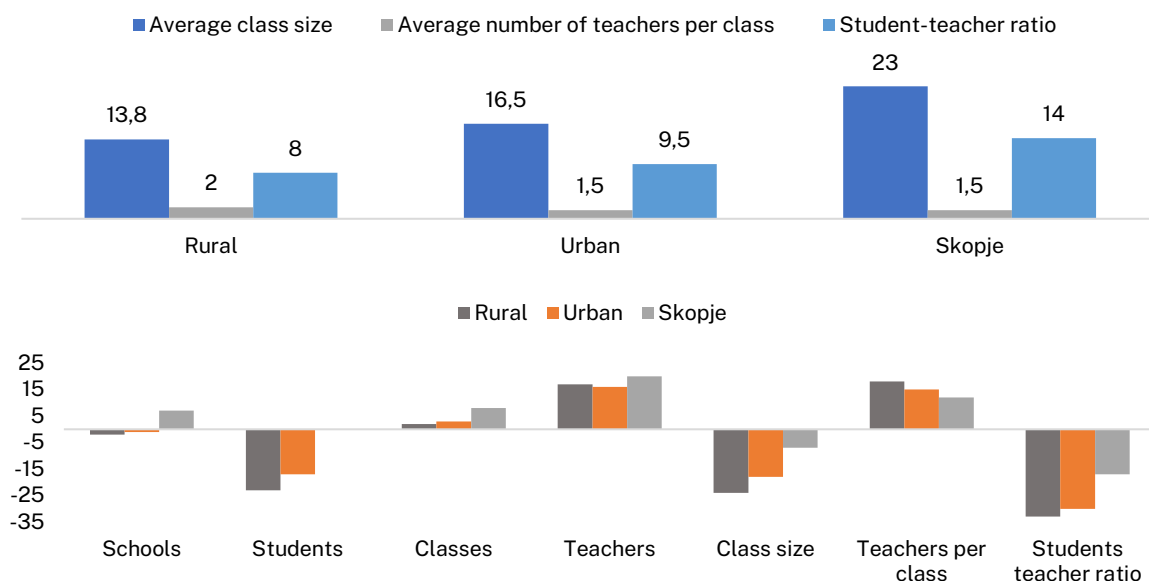
Class sizes have witnessed a similar downwards trend, although less marked. Over the past decade, class sizes have dropped to reach 16.7 (2022) in primary and 19.6 (2023) in secondary; levels below the norm set by the Law on Primary Education, which prescribes that each class should have at least 20 students. Only 17% of municipalities do meet this requirement, with the majority of municipalities (42%) having an average class size of between 11 and 15 students. In some schools, particularly those in remote areas, it may be justified to have smaller class sizes, to ensure all children enjoy the right to education within their community.

Figure 3.11. Distribution of municipalities, by average class size, 2020/21



Source: UNICEF, 2022b.

Patterns tend to vary according to the urban-rural location. The drop in enrolment, while declining overall, has particularly affected smaller municipalities. However, the number of classes (as one of the main policy variables for controlling efficiency) did not change as much in those areas, despite a major loss of students. As a result, the average class size shrunk, and at the same time there was a significant hiring of teachers, leading to a drop in the STR. Despite a limited evolution in enrolments, large municipalities have opened new schools and classes, which led to the hiring of teachers. In both cases, this has and is leading to major losses in efficiency (World Bank, 2023b).

Figure 3.12. Primary school networks in 2019, by municipality type (top) and changes of networks 2007–2019, by municipality type (bottom)

Source: World Bank, 2023b.

School facilities and equipment

In the last four years, there has been increased investment in the construction of new school buildings (10), reconstruction and rehabilitation (153), equipping schools with didactic materials and resources for teaching and laboratories. In addition, 10,000 laptops were distributed to students from families with low socioeconomic status in 2021/22. This trend of reconstruction of school buildings and adequate equipment with modern laboratories and didactic materials and resources should continue, as many primary and secondary school buildings require repair and reconstruction, according to data from the State Statistics Office. This situation stems partly from the fact that many primary and secondary schools (15%, or 157 schools) were built or rehabilitated in the 1980s or earlier. However, the MoES, through the Primary Education Improvement project (PEIP) funded by the World Bank, in 2022, equipped 264 primary schools with amenities/units/furniture for cabinets for natural sciences, while 358 schools were equipped with teaching and didactic materials for cabinets for natural sciences.

'Infrastructure in kindergartens have yet to achieve 100% across the six areas considered for this study; most offer child-friendly chairs and tables, however learning opportunities for many children are compromised in terms of the size of learning environments, access to outdoor play facilities and learning stations' (MoLSP and World Bank, 2023).

Table 3.12. Physical infrastructure to support early learning, 2022

| Quality criteria | % |
|---|-------|
| 1 All children have a seat and access to a writing surface that are appropriately sized for pre-primary-aged children | 96.1% |
| 2 There is sufficient light and ventilation in the classroom to allow for good airflow | 90.3% |
| 3 The school yard has adequate space for play and some equipment for gross motor activities | 83.5% |
| 4 Children access materials that are organised into learning corners/stations | 79.6% |
| 5 Classroom space is enough for all attending children to do all indoor activities | 75.7% |
| 6 Classroom space is enough for children to maintain a healthy distance between each other | 67.0% |

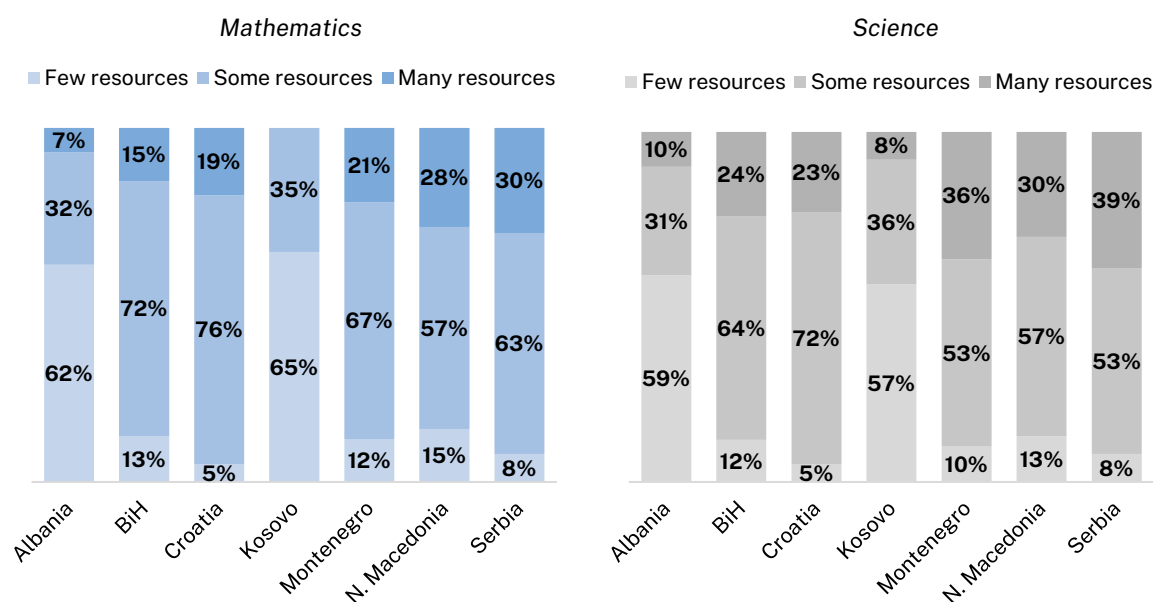
Source: MoLSP and World Bank, 2023.

Major reasons are linked to low capital investments, but also the way capital spends are funded.

Over 2018-2021, 4.4% of overall spending was for pre-primary, primary, and secondary (see Chapter 6 for details). This is less than the average of 7% for regional peers that are at a higher level of development and likely have less immediate needs for reconstruction but still invest more (World Bank, 2023b). Capital funding mechanisms are also at stake: the central government is responsible for capital spending on schools; however, local government has a significant role to play in the maintenance and repair of buildings, as per the division of delegated functions, which they are often hesitant to fund as their financial situation is far from optimal. As further mentioned by Mitevski et al. (2020) ‘a significant part of infrastructure projects is funded by donations or programmes supported by international institutions, as well as donations from companies or individuals. There is currently no central registry of these investments, which prevents the process of fair and objective distribution, not only of transfers from central to local government, but also of the distribution of funds by local government to primary schools. Going forward, it will be useful if any plans for investment or network optimisation include these schools, so that they are either rehabilitated or repurposed under a network optimisation plan (World Bank, 2023b).

Teaching and learning materials

‘Resources are crucial for improving schooling, as the extent and quality of school resources can have an important impact on the quality of classroom instruction. Provision of reading and didactical materials to classrooms is paramount in improving student literacy and numeracy’ (USAID, 2016).

Figure 3.13. Index of School Material Resources for Mathematics (left) and Science (right), 2019

Source: Mullis et al., 2020.

While many schools have some teaching and learning resources to support students' learning, more efforts are needed to provide them with adequate instructional resources. Results from 2019 TIMSS show that 57% of Grade 4 students were in schools where principals indicated that their school was equipped with ‘some maths resources’ and 28% with ‘many maths resources’, while 15% of them belonged to schools where ‘few maths resources’ were reported. In science, the respective figures were 57%, 30% and 13%.³⁵ This situation is better on average in other studied

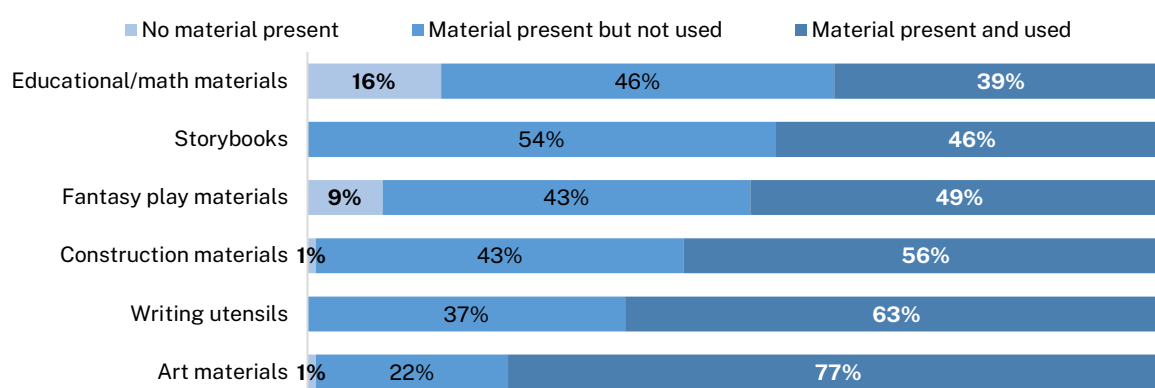
³⁵ The Index of School Material Resources combines information collected by TIMSS 2019 on the availability of computers during mathematics/science lessons, existence and size of the school library, existence of classroom libraries, provision of digital learning resources, and instruction being affected by mathematics/science lesson resource shortages. The Index

countries, with 75% of school principals reporting limited or no resources (Dinaric Perspectives on TIMSS 2019, Teaching and Learning Mathematics and Science in south-eastern Europe). Although old, 2015 EGRA/EGMA data also indicated that 46% of primary schools surveyed had mathematics materials.

Secondary school principals in North Macedonia reported more material resources shortages (16%) or inadequate or poor-quality educational materials (7%) than the OECD average (5% and 4% respectively) (OECD, 2019b).

While most pre-schools do have materials, they are not systemically used, as illustrated in kindergarten, which could reflect weaknesses in the training received by kindergarten teachers (MoLSP and World Bank, 2023).

Figure 3.14. Availability and percentage of use of learning support materials in observed kindergartens, 2022



Source: MoLSP and World Bank, 2023.

Textbooks

Libraries are available in most schools and used by a majority of students but would need to better target children's needs and be modernised. As stressed in the 2015 EGRA report, 'the presence of a library or multimedia centre may be particularly relevant for developing reading literacy'. EGRA/EGMA 2015 results show that most primary schools (92%) surveyed had a library, and in 72% of the cases a librarian. In half of the cases, the library had books suitable for early grade students, apart from the compulsory reading series, which needs attention. The majority of early grade students (87%), according to the school directors, are borrowing books from the school library.' 'With the growing use of technology, libraries should increasingly become media centres offering a range of materials and internet access, which is not the case in Macedonia, as neither school directors nor teachers are satisfied with the speed of the internet'.

Technological conditions in all schools could be further improved. Most schools do have access to the internet, and where there is access, directors complain of the speed and quality of connection (USAID and Step by Step Foundation, 2016, Mitveski et al., 2020). TIMSS 2019 results show that most students (67%) were in schools that were equipped with computers for class use. While low, compared to other Western Balkans countries, it is interesting to note that the computer-student ratio is the highest in North Macedonia at 0.77, compared to 0.14 in Albania and Kosovo and up to 0.41 in Bosnia and Herzegovina.

of School Material Resources for teaching science comprised one additional variable about the availability of a dedicated science laboratory in the school. For both mathematics and science, we split the derived index into three categories: (1) few resources available, (2) some resources available, and (3) many resources available in the school' (Mullis et al., 2023: 130).

Box 3.1. Textbook management in North Macedonia

The educational system in North Macedonia provides textbooks approved by the Ministry of Education and Science to all schools and are free for each student at primary school level. By law, textbooks should be available in all languages of instruction: Macedonian, Albanian, Turkish, Serbian and Bosnian as from 2018, when this language became the official language of instruction in primary education.

Challenges in the availability of textbooks for all students in primary education are observed, following problems in meeting deadlines for translation, or delays in the distribution of certain textbooks to schools, for instance. In 2023, many factual mistakes were discovered in newly printed textbooks.

In the past, primary education textbooks were used for more than three years in the same school. Each student receives textbooks at the beginning of the year and then returns them at the end of the year. This does not apply for the new curricula already implemented for 1st, 2nd, 4th and 5th grades up to this school year. The new school year in 2023/24 started without new textbooks for 3rd and 6th grades, and were distributed with delays following printing issues, as announced by the ministry through the media.

The lack of textbooks and teaching materials is most notable in secondary education, and particularly in vocational education. One of the major challenges is to find professors and teachers willing to write textbooks for secondary vocational education: indeed, unfavourable copyright contracts, short deadlines, cumbersome administrative procedures and low fees are among the many reasons preventing authors from engaging in textbook development. Those who once had the desire to write a textbook withdraw. In the competition for authors of textbooks for secondary vocational education in 2019, not a single author applied for as many as 457 subjects from the first to the fourth year. The new modularly designed curricula, introduced as a reform in secondary vocational education, introduced difficulties in using previous textbooks. Although the reform gives more freedom to teachers to follow the curriculum and convey the material to students, and for textbooks to be used as aids, there are many students who need printed textbooks in order to follow the teaching.

Table 3.13. Computer availability, TIMSS 2019

| | Percentage of students with available computer | | | Computer-student Ratio |
|------------------------|--|----------|-----------|---|
| | Every student | To share | Class use | |
| Maths | | | | North Macedonia: 0.77 Western Balkans (Min-Max): 0.14-0.77 |
| North Macedonia | 31% | 56% | 63% | |
| W. Balkans (Min – Max) | 2–36% | 45–93% | 54–97% | |
| Sciences | | | | |
| North Macedonia | 27% | 61% | 63% | |
| W. Balkans (Min – Max) | 0–30% | 56–70% | 63–97% | |

Source: Mullis et al., 2020.

‘As well as providing hardware, there is a more sophisticated aspect to ICT in schools, reflected by the construction of online networks through interactive tools and the publication of online content for teaching and learning, such as providing digital learning resources. The progress towards full

integration of ICT into teaching and learning has been largely gradual up until 2020, when the COVID-19 pandemic threw education systems around the world into ‘overnight’ digitalization, whether they were prepared for it or not.’ (Mullis et al., 2023). When COVID-19 forced schools across North Macedonia to close in March 2020, understanding the great need for a coordinated approach to remote learning, the MoES, the Ministry of Labour and Social Policy (MoLSP), the Bureau for Development of Education (BDE), UNICEF and SmartUp Social Innovation Lab worked to expand the scope of EDUINO³⁶ to become a national digital learning platform for pre-primary to secondary levels. During the spring semester in 2020 and throughout 2021, the platform became the main channel of educational content delivery, with more than four million video views or downloads.

TIMSS 2019 data indicated that the provision of ‘online learning management systems’ was ensured in 62% of school in North Macedonia, with 68% of principals reporting that students accessed digital learning resources.

Table 3.14. Principals’ reports of access to digital resources in TIMSS, 2019

| Education system | Schools have access to online learning management systems (%) | | Students have access to digital learning resources (%) | |
|------------------------|---|--------------|--|--------------|
| Albania | 15% | (2.9) | 26% | (3.8) |
| BiH | 27% | (3.3) | 47% | (4.2) |
| Croatia | 50% | (4.3) | 80% | (3.6) |
| Kosovo | 13% | (3.0) | 31% | (4.3) |
| Montenegro | 46% | (0.5) | 63% | (0.5) |
| North Macedonia | 62% | (4.6) | 68% | (3.8) |
| Serbia | 71% | (3.5) | 76% | (3.4) |

Source: Mullis et al., 2020.

Note: Standard errors appear in parentheses.

There are gaps and challenges in schooling conditions, according to location. Large differences are noted in infrastructural and other working conditions in small rural primary schools and those located in larger cities. Small rural schools, especially district schools, have less access to resources, fewer teachers available, and are often forced to conduct joint classes with students from different grades (combined classes) and/or hire teachers who do not meet the teaching staff standard (Mullis et al., 2020).

Historic underfunding and a lack of transparency in funding allocations means that many schools do not have adequate resources to cover their basic running costs, and certainly not invest in improvements in the learning and teaching environment. Most of the spending in pre-primary, primary and secondary education is for covering salary expenditure, while little is spent on materials and buildings maintenance.

3.4.2. Teaching and learning environment and educational practice in classrooms

Children’s in-class learning experience strongly affects their learning and skills development. In this section, we will look at various dimensions of process quality (curriculum development, classroom teacher practice and assessment) and see how they support effective teaching and learning, and what could be further improved for optimal use of existing resources.

In recent years, building on the recommendations of a UNICEF-supported OECD Review of Evaluation and Assessment in Education in North Macedonia, the country has initiated reforms in education so that all children are able to reach their full potential. The reform puts children’s

³⁶ EDUINO is a digital learning platform that started in 2019, with the support of the UK Government. It was initially designed to support early childhood education and provide caregivers with tools to support young children’s social and emotional learning.

learning outcomes at its centre and focuses on improving student assessment; supporting teacher capacity development and career development; establishing national standards; improving access to quality learning materials and aids; digitalization; and investment in school infrastructure, including equipment to support practical skills development and vocational training. While these efforts promise to contribute to improving student learning outcomes, the impact they will have also depends on the extent to which the education resources (infrastructure, human resources and financial) are efficiently and equitably allocated and utilised so that every child in the country has access to high-quality and equitable education (UNICEF, 2019c)

3.4.3. Curriculum

North Macedonia initiated a bold reform of its curricula and programmes for compulsory education to increase their relevance and attractiveness, better aligning them to children's stages of development and to focus more on learning outcomes. Changes occurred in the primary curricula and national standards (North Macedonia, 2021b) following the introduction of the Concept Note for Primary Education in 2021.³⁷ Overcoming a series of challenges, including ensuring more compatibility throughout the subsystems (pre-school, primary and secondary education), following the introduction of nine-year primary education in 2007³⁸ was becoming critical. Ensuring that standards are based on the key competences for lifelong learning, as defined in the European reference framework, and the framework of separate competences developed by the European Commission (for foreign languages, digital competences and entrepreneurship) was also important, as it puts emphasis on the knowledge, skills and attitudes students need to acquire in primary education in the Macedonian social context.³⁹

Curricula for general education subjects for secondary vocational education is carried out by the Bureau for Development of Education (BDE), and for vocational subjects by the Vocational Education and Training Centre (VETC). There is a delay in adopting the new Law on Secondary Education, which is expected to include additional guidelines for standards, inclusion, and other elements for modernisation of this level of education. There is no official announcement on the reasons for postponing this legal basis that should enable improvements in many components of secondary education, including curricula, teaching methodology and conditions for learning.

3.4.4. Pedagogical approach

In pre-school

Pre-school children's learning experiences across key domains are inconsistent and of insufficient quality to promote the development of key readiness for school skills and abilities. Learning approaches to language, literacy and communication, numeracy and motor skills are not sufficiently child-centred, of sufficient substance (e.g. they are not rich in opportunities to develop language and numeracy skills) and miss key opportunities to strengthen children's holistic development and learning (MoLSP and World Bank, 2023).

Classroom culture is generally positive and supportive, with attention needed on child-centred pedagogies, including play-based learning approaches. 'Gaps in quality relate to child-centred approaches, play-based pedagogies and enriching opportunities to engage children in their own learning by providing clear instructions, being explicit about learning objectives and supporting

³⁷ There were so called 'zabavista' in schools that served as preparatory for children before compulsory primary education. Then a so-called 'zero year' was introduced, serving the same purpose and mandatory, but with the introduction of the nine years of compulsory primary education this became first grade and children are now enrolled at 6 years of age.

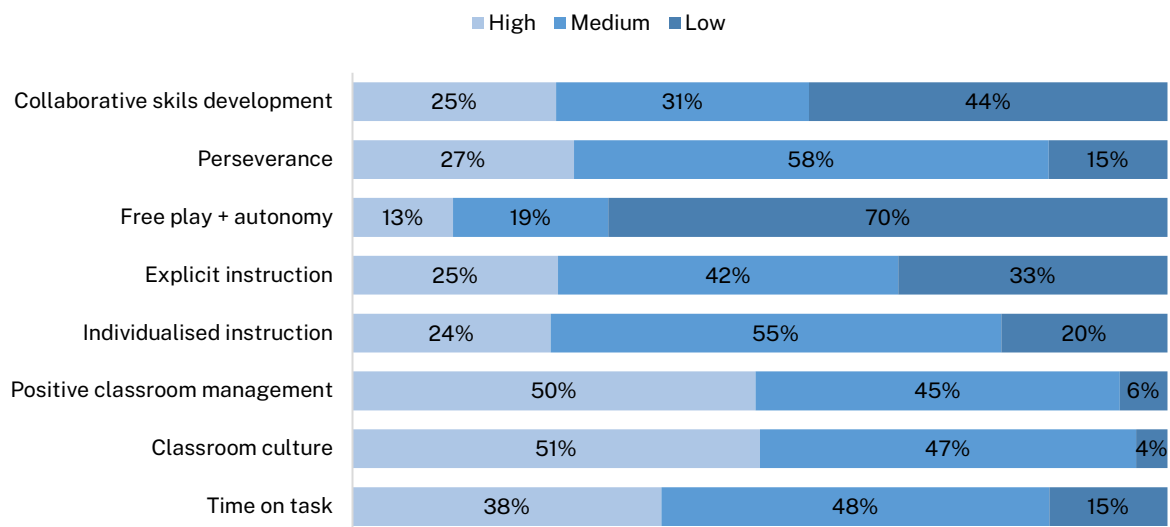
³⁸ This was done by 'merging' the compulsory year before primary school starts with the previous eight years of primary education.

³⁹ Eight areas of national standards in primary education are determined that include transversal competences and/or competences related to certain subject areas: I. Language literacy II. Using other languages III. Mathematics and natural sciences IV. Digital literacy V. Personal and social development VI. Society and democratic culture VII. Tech, technology and entrepreneurship VIII. Artistic expression and culture.

the development of important 21st century skills like collaboration and group work' (MLSP & World Bank, 2023).

Learning support across and within domains is insufficiently supported. Observers and kindergarten teachers both rated the extent to which different learning domains were covered over the period of observation – teachers found the extent to which they covered multiple domains as part of integrated learning to be in the medium range, while observers found it in the low range (MLSP & World Bank, 2023).

Figure 3.15. Percentage of the learning and teaching approaches experienced by children in their classrooms, pre-primary, 2022



Source: MoLSP and World Bank, 2023.

In primary education

A baseline survey on Teacher Practices in North Macedonia was conducted in 2022 by a Rating Agency, with support from the MoES and in cooperation with the BDE (2022) in 35 primary schools, capturing the practices of 104 teachers (79% female). Classroom observations were conducted in Grades 1-9 and across several subjects including mathematics, language, science and history. The results of the baseline survey show that, even though more than half of the teachers (54%) provide thinking tasks to their students, these activities are basic or superficial (e.g. identifying important pieces of information or key concepts, or matching sets of items). The majority of students (83%) are not asking open-ended questions or only engaging in basic thinking tasks. Three out of five students (58%) do not ask any open-ended question but perform thinking tasks on a superficial level. Moreover, it is important to note that a full one quarter of students (25%) do not ask any open-ended questions or engage in any thinking tasks during the lesson. **The data clearly shows that the 'critical thinking' element and its three associated behaviours (i.e. (1) The teacher asks open-ended questions, (2) The teacher provides thinking tasks and (3) The students ask open-ended questions or performs thinking tasks) are skills which could be improved in primary classrooms in North Macedonia.**

In the area of 'instruction', teachers have above-average skills in facilitating their lessons and checking for their students' level of understanding of the lesson's content. Although teachers struggle with making connections between the lesson content and students' daily lives or other content, they effectively facilitate lessons by clearly articulating the lesson objective, using multiple forms of representation to explain the lesson content, and by modelling procedures during lesson activities. Teachers at primary level also show evidence of effectively checking for understanding when verifying the level of understanding of most students, monitoring them

during classwork, and altering their teaching to meet the level of the students. Teachers are, however, less skilled in three of the behaviours in the Area of Instruction. In this regard, **primary teachers struggle more with giving effective feedback to students so they can understand their successes. They also need to develop their skills in connecting lesson content to the daily lives of their students and to previous or different content.** Equally, they have difficulty providing activities that will allow students to develop their critical thinking skills by asking open-ended questions and encouraging students to ask these types of questions, as well, and by offering activities that require higher-level thinking.

Results from the Teach Primary Classroom Observation study further show that teachers have a moderately strong ability in the area of ‘classroom culture’. Regarding ‘classroom culture’, **primary teachers in North Macedonia show evidence of their ability to create a supportive learning environment in their classrooms by treating students respectfully and using positive language, as well as promptly addressing student needs and not promoting gender or disability bias.** Teachers also display an understanding of how to set positive behavioural expectations with their students; this is exemplified by letting students know when they have behaved well, and effectively redirecting any misbehaviour.

Primary teachers in North Macedonia are less effective in the area of ‘socioemotional skills’. They do not give many opportunities for students to develop their autonomy by offering them choices and opportunities to take on meaningful roles in the classroom or to volunteer to participate in the lesson. Furthermore, teachers are weak in providing students with chances to develop their perseverance by acknowledging students’ hard work and effort; letting students know that failure and frustration are normal parts of the learning process, and by encouraging students to set academic goals for themselves. Moreover, primary teachers across the country show the weakest ability in developing students’ social and collaborative skills. Teachers offer few chances during their lessons for students to collaborate on classroom activities and to develop their interpersonal skills, such as empathising, social problem-solving, perspective-taking, and regulating their emotions. As highlighted in the 2018 PISA, 77% of students reported that their schoolmates cooperate with each other (OECD average: 62%) and 59% reported that they compete with each other (OECD average: 50%) (OECD, 2019b).

Earlier, TIMSS 2019 study results showed that higher student achievement in TIMSS was associated with greater clarity of instruction.⁴⁰ Internationally, about three quarters of fourth grade students reported that their teachers were clear when teaching and presenting. In North Macedonia, 80% of the students declared that they were very satisfied with the work of their teachers, and the remaining 20% declared themselves satisfied. Students taught by teachers who declared themselves satisfied show a 7-point higher average achievement in natural sciences than those taught by highly satisfied teachers. At international level, the difference in achievements in these two categories in natural sciences is four points in favour of the very satisfied. The principles of engaging teaching were reflected in the fact that students know what is expected of them: to have clear answers from teachers, teachers to help them in learning, to explain again what they do not understand, etc. These are all factors that affect success in learning.

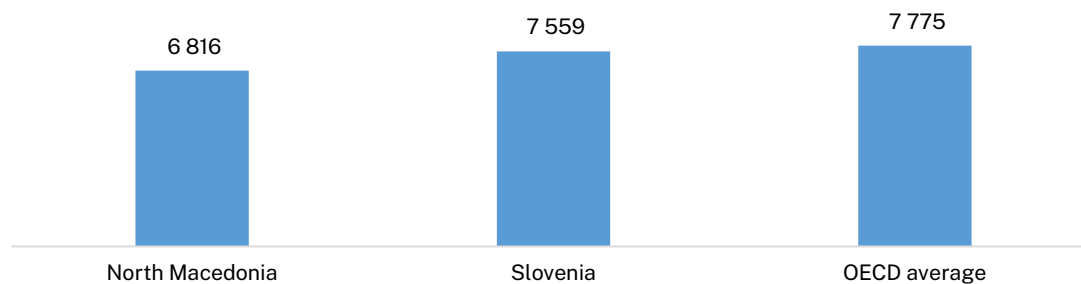
3.4.5. Instruction time

Macedonian students experience a major shortfall of instructional hours starting from early grades. At the age of six, Grade 1 students in North Macedonia have had among the lowest levels of intended instruction time (552 hours) among the 79 PISA-participating countries, and by the time students are 14 years old, they will have had nearly 900 hours less instruction than students on average across OECD countries (OECD, 2019a). Additional evidence from Eurydice points to

⁴⁰ Regarding the work of teachers, the students were asked to state how satisfied they were with the teaching, i.e. the clarity of the teaching presented by their teachers, whether their teacher is easy to understand, whether they give clear answers to their questions and whether they are good at explaining the contents of natural sciences and mathematics and how much the teacher presents additional things to help students learn. Teacher job satisfaction in TIMSS 2019 was measured through a score expressed on the Teachers’ Job Satisfaction scale (Mullis, et al, 2020).

relatively low instructional time in North Macedonia for mathematics and science subjects (European Commission 2022a, 2022b). While most countries surveyed (39 of them) had between 100 till 120 hours of maths instruction in primary, only North Macedonia and Bulgaria recorded lower levels, at 76 and 80 hours respectively. In North Macedonia, the low value resulted from the COVID-19 pandemic, when the number of instruction days was reduced from 180 to 159 due to later start of the school year, and a shortened length of lessons by 10 minutes (because of online teaching).

Figure 3.16. Total hours of instruction received by students between the ages of 6 and 14, 2019



Source: UNICEF 2022b; OECD, 2019a.

Instruction time is recognised today as a major factor influencing the success and achievement of students, as short learning time in schools limits the breadth and depth of study and the scope to pursue additional subjects or remedial classes. However, while research evidence points towards the positive effects of increased instruction time, most studies argue that instruction time alone cannot account for students' academic achievement. What happens during lessons also matters: scholars investigating the relationships between instruction time and students' academic achievement emphasise the quality of teaching as a key factor in students' successful learning (European Commission, 2022c).

When considering teachers at different grade levels, teaching time and curriculum size⁴¹ are important points. In upper primary classes, teachers have less time in class (40 minutes) to teach the required content and less time to interact with students. Upper primary teachers may feel more pressure to simply cover the required curriculum content at a basic level and therefore less time to include, for example, critical thinking activities and collaborative work. On the other hand, teachers in lower primary classes have a less restrictive curriculum, allowing them to extend the time allotted for a lesson, if they feel more work is needed on a particular topic. Having fewer constraints on lesson length could allow teachers to offer activities incorporating higher-level thinking skills, group work and interpersonal skills, for example. Another important difference is that lower primary teachers are with their students for the entire teaching day, whereas upper primary teachers only interact with most of their students for approximately three quarters of an hour each day.

Support to students with learning difficulties is not the norm in North Macedonia. The involvement of different professionals in helping students with learning difficulties, as envisaged by top-level regulations, guidelines and recommendations, is another factor affecting student skills development and achievement. Several studies emphasise the importance of adequate human resources and teacher training to ensure effective support within the classroom (European Commission, 2022c). Motiejunaite, Noorani and Monseur (2014) highlight the significant role of teachers specialised in supporting low-achieving students in reading literacy. Whereas class teachers are intended to participate in learning support provision in all education systems with regulations or recommendations in this area, the involvement of remedial teachers is less

⁴¹ Results of the Teach Primary Classroom Observation Study (Baseline Survey 2022).

commonly required. Nevertheless, education systems in which remedial teachers are intended to provide learning support have, on average, lower percentages of low achievers. Thus, including such professionals in learning support provision in mathematics could increase its effectiveness. Unfortunately, there are no remedial teachers trained to support underachieving students in North Macedonia.

3.4.6. National examinations

As part of ongoing reforms within the implementation of the 2018-2025 Comprehensive Strategy for Education, the government has recently introduced the National testing for primary to make national assessment more relevant, regulated through the Concept on National Assessment (NEC, 2020). Its purpose is to use standardised testing procedures and instruments, to provide objective and reliable data on students' attainment of the standards; to provide data about achievements in teaching subjects of particular importance in primary education. Such data should provide evidence for the development and promotion of educational policies in North Macedonia towards reaching international educational standards (NEC, 2020). The implementation of testing started in 2022 with third graders, when the new curricula was not yet introduced as part of the implementation of the Concept for Primary Education (2019). **This might cause inconsistencies with the introduced curricula change for 3rd grade by BDE and the tests for assessment**, because levels of achievement used for reporting should reflect both the learning objectives contained within national curricula and provide the basis for curricula changes if needed and modifications to the content, learning objectives and learning materials.

The Concept of the Matura exam⁴² also witnessed some changes in 2023, following the new decision adopted by the Minister of Education and Science. Under this new decision, the examination follows various models: the state Matura for general (gymnasia) high schools; the school Matura exam for general (gymnasia) schools; the state Matura exam for vocational schools; the final exam for vocational schools; the state Matura exams for art schools and school Matura for art schools. All models consist of three parts:

- A compulsory part consisting of one subject: language (Macedonian language and literature or Albanian language and literature or Turkish language and literature, depending on the language of instruction the student follows).
- An elective part, made of a first elective subject which the student chooses from mathematics or a foreign language (English, German, French, Russian), and from two optional elective subjects the student chooses from the offered list of teaching subjects (these differ depending on the type of school: general, VET or art school).
- A project work study of a problem that the student chooses from the teaching subjects or,
- more broadly, the educational areas.

The compulsory part and the first elective subject are prepared, organised and conducted by the National Examinations Centre, and the other two elective subjects as well as project work are organised and conducted by the school internally. The state Matura is taken in two exam periods: June and August. Candidates who did not pass part or all of the state Matura exams in the June period, or for justified reasons did not participate in the exam the first time in the academic year, have the right to take the state Matura exam in the August exam period. The exam programmes and tests are based on the curricula for the corresponding teaching subjects. The diploma obtained from the state Matura exam is intended to serve for the selection of candidates for admission to university studies.

The state Matura has a dual role: a selective role more emphasised in the state Matura exam, and a certification role. The school Matura and the final exam have only a certification role. However,

⁴² The concept of the Matura as the final exam in secondary education in the country started to be implemented in the 2007/08 school year, adopted by the decision of the Minister of Education and Science no. 11-6099/2 of 10.10. 2005. By decision of the Minister of Education, the Concept for the state Matura exam, school Matura and final exam for VET was adopted in 2023.

it must be emphasised that the Concept envisages a sufficiently good connection between the state and school Matura as well as the final exam, meaning that candidates who primarily take the school Matura graduation or final exam are given the opportunity to take the state Matura exam in one of the following years. At the end of a 3-year vocational education course, the students take a final exam. Students in 3-year VET programmes that are ISCED level 3 vocational educational programmes have access to the four-year qualifications (after taking five exams) or to post-secondary education programmes at ISCED level 5B if certain pre-conditions are met.

Each year, the NEC publishes a state Matura report with main conclusions and recommendations. The new draft Law on Secondary Education is proposing a new model/concept for the Matura exam that was prepared under the World Bank-supported Project SKILLS.

The MoLSP, in close collaboration with the World Bank, is initiating a process of adapting an instrument for measuring early childhood development through analysis of early learning quality and results called MELQO. This would allow for proper assessment of children's level of skills and abilities upon primary school entry, further ensuring that all children arrive ready for primary school.

National examinations should clearly serve the purpose of its implementation and inform policy-making by developing different reports for individual schools and teachers, as well as a national public report. Each report should contain information to help the specific audience use the information to understand current performance and make improvements in the future. Reports for teachers can include item-level analysis to help them improve the teaching and assessment of similar content in the future. **The national report should disaggregate results by demographic factors (e.g. gender, language of instruction, school type, municipality, student socioeconomic status), to enable specific policy measures to be planned.**

3.4.7. Quality assurance mechanisms

Strong, resourced and independent professional evaluation and assessment agencies are vital for quality in education. North Macedonia has technical expertise in its evaluation and assessment agencies – the State Education Inspectorate (SEI), the National Examinations Centre (NEC) and the BDE. However, these institutions are not able to contribute effectively to policy-making and implementation because they lack an independent voice and vital resources. Many of the institutions have several key functions that are empty, and lack sufficient funds – for example, the BDE's budget is not adequate to provide the necessary hours of professional development for teachers that it is expected to offer. The absence of dedicated research staff and limited support for data management and analysis – the Education Management Information System (EMIS) – limits the ministry's capacity for evidence-based policy making.

At a school level, there is a need for improved central support through the school evaluation framework and data, to critically reflect on their performance and set their own objectives for teaching and learning. Raising educational outcomes in North Macedonia depends significantly on strengthening schools' capacity to design and lead.

3.5. Focus on teacher management

Teachers are a vital driving force for the learning process of students in every education system. The Council conclusions on European teachers and trainers for the future highlight that teachers substantially influence learners' achievements (European Union, 2020). They have a crucial role to play in supporting young people to develop knowledge, skills and values and reach their full potential both as students and as future citizens. Having quality teachers is one of the cornerstones of a successful education system in which students from different backgrounds can feel inspired and motivated and can adapt to a rapidly changing world. When analysing the results that students from North Macedonia achieve against international measurements, it is inevitably necessary to look at the teachers in terms of their qualifications, competences and status, to find

possible interdependence. North Macedonia will also participate in the OECD Teaching and Learning International Survey – TALIS 2024 – and this will provide a voice to teachers and school principals who complete questionnaires about issues such as the professional development they have received; their teaching beliefs and practices; the assessment of their work and the feedback and recognition they receive; and various other school leadership, management and workplace issues.

Teachers' qualification level has increased over the past decade, with most primary and secondary education teachers holding the required qualifications, a university degree equivalent to a BA.^{43 44} In primary education, the share of university graduates among teaching staff has increased from 61% in 2010 to 72% in 2020 (World Bank, 2023b). Over the same period, the share of teachers holding a master's degree or a PhD has also increased from 1% to 3%, while the share of teachers with a college ('Visa skola') or lower-level degree has declined from 38% to 26%. In secondary education, the share of teachers holding a university diploma has declined from 80% to 77% but the share of teachers with a master's degree or PhD has increased from 2% to 6%. As in primary education, the share of teachers with a college ('Visa skola') or lower-level degree has declined.

3.5.1. Pre-service training

Pre-service study programmes for teachers in pre-school, primary and secondary education are regulated by the Law on Teachers (2019), which envisages '... providing students with the acquisition of necessary knowledge, abilities and skills with which they will be enabled to perform educational activity...' and should be aimed at the adoption and development of teaching competencies'. Furthermore, the study programme should be prepared in accordance with the Law on Higher Education and contain at least:

- Organised academic training, which contains basic, advanced, and professional courses in the scientific field of pedagogy, psychology and teaching methodology and in the scientific field of education.
- Lectures and other communication activities.
- Practical classes lasting at least 40 days per year in the first two years, and at least 60 days per year in the last two years, performed appropriately in public institutions for pre-school education and schools.

As is the case in most OECD countries, universities in North Macedonia are responsible for teachers' initial certification (OECD and SIGMA, 2014). Students that validate 240 credits ECTS (four years) during their initial teacher education training become initially certified teachers and can be recruited by schools to begin their probation period.

The preparation of teachers for pre-school and primary education in North Macedonia is realised in education faculties within four state universities: 'St. Cyril and Methodius' in Skopje, 'St. Kliment Ohridski' in Bitola, the State University in Tetovo and 'Goce Delchev' in Stip. Five faculties from the four universities prepare teachers to work with students in pre-school and from first to fifth grade in primary schools (Faculty of Pedagogy in Skopje, Bitola and Tetovo, Faculty of Education in Stip and Faculty of Philosophy in Skopje), and others train subject teachers (UKIM - Skopje: Philosophical, Philological, Natural-Mathematical, Faculty of Fine Arts, Faculty of Music, Faculty of Physical Education, Sports and Health; Bitola: Faculty of Pedagogy; Stip: Faculty of Educational Sciences, Faculty of Philology, Faculty of Natural Sciences and Faculty of Technology sciences, Faculty of Informatics, Academy of Music, Academy of Fine Arts; Tetovo: Faculty of

⁴³ According to the law on teachers, all teachers from ECE, primary and secondary education are required to hold a BA. School principals are also teachers by profession and must have five years of experience as teachers before applying for licence and being appointed as principal.

⁴⁴ By completing pre-school, primary and secondary education study programmes, future teachers acquire qualifications belonging to VI A level from the National Framework of Higher Education Qualifications, which corresponds to level VI of the European Framework of Higher Education Qualifications.

Natural Sciences and Mathematics, Faculty of Philology, Faculty of Philosophy, Faculty of Physical Education, Faculty of Arts). Initial teacher education for secondary schools is implemented at faculties that prepare subject teaching teachers. In addition, if faculty does not have accreditation for study programmes for teaching, students can obtain teacher qualifications through the Programme for pedagogical qualification that is organised for a period of one semester. This programme grants 30 ECTS credits, after which the person obtains a certificate. This consists of: three compulsory courses (pedagogy, psychology and methodology); two elective courses (from the offered courses: school docimology, school organisation, ethics in education, methodology of educational work, pedagogical communication and intercultural and multicultural education) and 45 days of compulsory practical classes (with a total of 45 teaching hours), which the candidate conducts in primary or high schools.

The number of students in study programmes usually follows historical trends and is not based on the analysis of the need for certain teacher profiles. The decision on the number of students who can enrol in public higher education institutions' study programmes for teachers in pre-school, primary and secondary education is adopted by the government at the proposal of the ministry responsible for higher education. Public competition for enrolment is announced by the university of which the higher education institution is a member, at least five months before the beginning of the semester. All persons who have passed the state Matura exam have the right to enrol in studies for the teaching profession, as in other higher education institutions. The adequacy of the candidate's secondary education is decided by each institution separately, which is defined by the procedure and criteria for selection of candidates by the universities. However, the number of students in study programmes usually follows historical trends, and is not based on the analysis of the need for certain teacher profiles, for example in physics, mathematics, informatics, etc. The ranking of the candidates for admission is based on success in secondary education and the examination of knowledge and skills (for art faculties with teaching and study programmes which are taught in a foreign language). In addition to the criterion for ranking according to success in secondary education, pre-selections are provided in the form of non-scoring interviews at some faculties.

Pre-service teacher programmes have difficulties in keeping up with education curriculum reforms. The content of initial teacher education has not kept pace with reforms in the education system due to the non-existent systemic policy for engaging at institutional level. Participation remains ad hoc, at an individual level, when professors are invited to related working groups. Almost all education reforms introduced have lacked coordination between universities and the ministry, as reported during an interview with staff from one of the pedagogical faculties visited.

Interest in studying to become a teacher is declining each year, as illustrated by the Pedagogical Faculty of St. Kliment Ohridski in Skopje. The country is expected to face challenges in recruiting teachers even for elementary teaching, and the situation is even worse with subject teaching teachers. While recognising that teacher demand is decreasing following the drop in enrolment, it is important to remember that the number of students per faculty is not regulated and planned according to demand and analysis of education sector needs. Declining interest in teaching faculties would need to be adequately monitored; all the more so since the teacher population is ageing and demand for specific subjects could arise.

Table 3.15. Number of enrolled students at the Pedagogical Faculty of St. Kliment Ohridski, Skopje

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------------------|------|------|------|------|------|
| Class teachers/Macedonian language | 60 | 43 | 36 | 35 | 19 |
| Class teachers/Albanian language | 71 | 85 | 60 | 76 | 85 |
| Class teachers/Turkish language | 11 | 8 | 10 | 10 | 11 |
| ECE teachers/Macedonian language | 48 | 38 | 31 | 37 | 22 |
| ECE teachers/Albanian language | 37 | 26 | 19 | 24 | 22 |

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------------|------------|------------|------------|------------|------------|
| ECE teachers/Turkish language | 1 | 1 | / | 2 | 1 |
| Librarians | 8 | 4 | 4 | 3 | 6 |
| Total | 236 | 205 | 160 | 187 | 166 |

Source: Pedagogical Faculty of St. Kliment Ohridski Skopje, internal data collection.

Pre-service education also provides teaching candidates with limited practical learning opportunities. Teaching candidates at faculties of education complete a 15-week practicum, only slightly less than in most OECD countries. However, for teaching candidates in non-education faculties, the teaching practicum varies between 10 hours to 100 hours – the lower end is significantly less than in most OECD countries. A broader challenge is the quality of the practicum. In order for the practicum to provide a meaningful learning experience, it should be integrated with the rest of teacher education programme content and provide candidates with experienced mentors in school. Another challenge reported by education faculties in North Macedonia is the difficulty in finding placements, as schools receive no financial support or incentives to accommodate the trainee.

Weak quality assurance and certification requirements mean that there are few mechanisms to ensure that students graduating from initial teacher education are competent to teach. In most OECD countries, teacher standards provide the reference for developing quality assurance mechanisms for initial teacher education programmes and determining the criteria for initial certification. In North Macedonia, the absence of specific criteria for the accreditation of teacher education programmes and adequate guidance for probation appraisal, leads to new teachers not always meeting the minimum competence requirements to teach. It also means that schools lack transparent and reliable information when selecting candidates, making them more vulnerable to being influenced by clientelism.

A probation period aims to provide important mentorship and feedback but is rarely implemented in practice. The probation period in North Macedonia lasts a year, at the end of which novice teachers are appraised and take a confirmation examination as part of the probation appraisal to become fully certified teachers. During their probation period, novice teachers are supposed to be mentored by an experienced teacher in their subject or field. In 2016, the BDE, with the help of USAID, developed guidelines detailing the mentoring process. According to these guidelines, mentors should develop a plan with their mentee, which includes regular observations of the mentee's teaching, feedback, and professional development activities (USAID, 2016). Mentors are chosen by school principals from among available teaching staff who have been promoted to teacher mentors according to the Law on Teachers.

3.5.2. In-service and continuous professional development

The BDE is the responsible institution for the provision of in-service training to teachers at primary and secondary education level. By law, teachers are required to participate in 60 hours of continuous professional development over three years. This includes 10 mandatory hours in priority areas⁴⁵ provided by the BDE, 40 hours chosen from programmes subsidised by the BDE and/or subsidised by the local self-government, or projects which are approved by the Ministry of Education, and a further 10 hours that are undertaken at a teacher's own cost.

Primary and secondary schools are required to include a professional development plan for teaching staff in their school plan every four years. This kind of in-school professional

⁴⁵ Priority areas are announced by the MoES at the beginning of the year and may differ from year to year. For example for 2022 some of these areas were: Distance learning; Internet applications and learning platforms; Education in a contemporary context; developing socio-emotional skills in students; Multiculturalism in monolingual and multilingual schools; Self-evaluation of the quality of the educational process at the school level; Gender equality and gender sensitivity in school; Inclusion and approaches in teaching students with special educational needs/disabilities; Application of innovative interactive approaches in teaching; Teaching based on a problem-based approach; Learning through research, project work and problem solving; Teaching for developing critical thinking among students, etc.

development can be very effective, since it is often collaborative and focuses directly on a teacher's daily practices. However, in North Macedonia, these activities need more external support to ensure that they are sustainable and present in all schools. For example, it is unclear if all schools implement their professional development, plans as their financial resources are limited and they do not receive additional funding for professional development.

In 2022, a total of 14,884 (or around 73%) teachers and professional staff from primary schools participated in professional development training organised by the BDE, with the support from the World Bank.⁴⁶ Training was carried out in the Macedonian, Albanian and Turkish languages, with a duration of 8 hours. Very positive results and evaluations were received for the training, in relation to various criteria such as the usefulness of the topics, the suitability of the methods used, the sharing of practical examples, the application of the acquired knowledge, the clarity of conveying the content, as well as the evaluation of the trainer and the established communication with the participants. All teachers received certificates following these training sessions and these are part of the appraisal process and count towards teacher's future career development. In addition, between 2020 and 2022, UNICEF North Macedonia and BDE led 33 capacity-building webinars on EDUINO, which focused on innovative teaching methods and digital learning. More than 23,000 participants attended the sessions, delivered through the EDUINO learning platform. Teachers who participated in these webinars received certificates with the number of hours that counts as professional development.

In general, opportunities for training are sporadic, and too short to have a strong impact. Evidence from international assessments show a low level of teacher participation in training in North Macedonia compared to OECD countries and other Western Balkans countries. According to the 2015 PISA, about 15% of teachers from North Macedonia participated in professional development activities in 2015 in the three months prior to the PISA test, compared to almost half of teachers from OECD countries (OECD, 2016). The 2019 TIMSS study⁴⁷ identified that 41% of primary teachers did not benefit from any professional development training in mathematics in the past two years. The percentage was even higher in natural sciences, with 59% of surveyed teachers reporting having attended no training. At the same time, 14% of the surveyed teachers spent 15 hours or more in professional development in mathematics (over the last two years), against 10% in natural sciences.

Table 3.16. Primary teachers' attendance at training for the last two years, TIMSS, 2019

| | Mathematics | Science |
|---------------------|-------------|---------|
| Did not participate | 41% | 59% |
| Less than 6 hours | 21% | 16% |
| From 6 to 15 hours | 24% | 15% |
| From 15 to 35 hours | 9% | 5% |
| More than 35 hours | 5% | 5% |
| Total | 100% | 100% |

Source: National Examinations Centre, 2019.

In addition, professional development may not always focus on the areas that are most important for raising achievement in North Macedonia. If students are to be expected to improve their achievement in language, mathematics and science, there is a need to increase the percentage of teachers participating in this type of training and to increase the number of

⁴⁶ The World Bank's support also included the setup of an accreditation system of Training providers for Teachers' professional development. The number of trainers amounted to 261 trainers in 2023.

⁴⁷ In the Teacher Questionnaire, teachers answer questions about the duration of their professional development in mathematics and natural sciences, that is, how many hours in total they spent on professional development in mathematics/natural sciences in the past two years.

teachers participating, as well as the length of the training and support for teaching. For instance, for the year 2022, areas announced for the training of teachers in primary and secondary schools were:

- distance learning: online learning applications and platforms,
- democratic culture in school,
- multiculturalism in monolingual and multilingual schools,
- self-evaluation of the quality of the educational process at school level,
- breaking down barriers: building an inclusive school culture,
- gender equality and gender sensitivity in school,
- lesson planning using electronic didactic materials in teaching and use of information-computer resources,
- modern lesson planning: creating lesson scenarios and teaching materials tailored to students,
- application of innovative interactive approaches in teaching,
- teaching based on a problem-based approach,
- learning through research,
- project work and problem solving,
- teaching for developing critical opinion among students,
- teaching aimed at achieving higher-level learning outcomes,
- designing objective knowledge tests,
- formative assessment,
- special aspects for evaluation according to an individual educational plan.

According to the BDE, the proposed areas are based on the needs assessment analysis with teachers and the introduction of priorities within strategy documents, for example the Concept on primary education. Once these areas are approved and announced by the Minister of Education, the BDE is responsible for opening the call for service providers with criteria for the selection and accreditation of providers to implement the training. After the selection of training providers, the BDE creates a Catalogue for training distributed to all schools and teachers choose from the offered areas.

The current teacher training system is unable to properly support teachers' professional development, following many constraints including lack of funding. Available resources to support the training of all teachers at primary and secondary level are not sufficient, with only 10% of the required budget being allocated for this purpose annually. The BDE is relying on external financial and technical support (from the World Bank) to support the development of the in-service professional training system and accreditation of training providers.

Regular teacher appraisal is failing to effectively support teachers' development. Teacher appraisal is part of the BDE mandate and should provide feedback for improvement. The BDE's advisers may visit teachers to observe their teaching practices and provide feedback. Within schools, the school principal and senior teachers also appraise teachers at least once a year. Evidence from OECD (2019a) suggested that regular appraisals in North Macedonia fail to effectively support teachers' development for a series of reasons including: i) the improvement of student learning outcomes is not a central component of the State Educational Inspectorate's (SEI) guidelines, the BDE's protocol or the school principal's practices; and ii) the externality of SEI and BDE evaluators means that they are not familiar with individual teacher's work and struggle to create the open, informal atmosphere that is important for regular appraisals. SEI inspectors involved in external evaluation (the so-called Integral Evaluation) have a detailed manual with all the templates and information they need. New inspectors get support from more experienced inspectors at the start of their careers, primarily focused on the legal framework and regulations. In the law on primary education in 2019, the mandate of the SEI for teachers' appraisal changed. The BDE has developed a classroom observation protocol which provides directions to the advisers on how to undertake such observations, but it is not sufficiently detailed to ensure quality and

consistency across advisers. Due to the lack of advisers in the BDE, their responsibility in teachers' appraisal is ill suited.

School principals lack adequate preparation or guidance on how to make an educated judgement about teaching quality. The appointment and service of principals⁴⁸ in primary and secondary schools are regulated by the law on primary education and law on secondary education, as well as bylaws on the competencies for the school principals. The professional competences of school principals in North Macedonia include the following areas: leadership, managing human resources, pedagogical leadership of the school, financial management of the school and laws and administrative work. The National Examinations Centre (NEC) is the responsible institution for the training and certification of school principals according to the law enacted in 2016 (North Macedonia, 2017). The training is delivered according to the Programme through six modules: application of information and computer technology in management in education; organisation theory; people in an organisation; the director as a pedagogical leader; legislation; finances. The proposed training generally does not address areas related to teachers' appraisals. The NEC is also responsible for the advanced training of directors implemented through a programme for continuing training of directors, which they are obliged to take during their mandate, and one of the modules is related to teacher appraisals.

3.5.3. Teachers' recruitment and posting

Entry to the profession is regulated by the Law on Teachers and Professional Support Staff in Primary and Secondary Schools (2019).

- A teacher enters the profession as a *teacher apprentice*. S/he needs to have a teaching degree or a degree in their respective scientific area and a Pedagogical, Psychological and Methodological qualification from an accredited higher educational institution. S/he enters with a minimum of 240 ECTS.
- In certain cases, in Vocational Upper Secondary schools (for specific vocational subjects) teachers can enter the profession with five ISCED qualifications or 180 ECTS and a Pedagogical, Psychological and Methodological qualification from a certified institution (consecutive model).
- The apprenticeship lasts one year. At the end of the probation period, a probation appraisal based on the mentor's report on the trainee teacher's competencies is granted, along with a confirmation examination. However, since the mentorship is not fully implemented in all schools, for many trainee teachers the confirmation examination currently serves as the main form of probation appraisal.
- For the examination, teachers prepare a research project and teach a lesson plan to a panel of examiners. The examination is designed to assess critical pedagogical knowledge and practice, as well as subject knowledge and motivation to teach. However, it is not sufficient on its own for assessing other teaching competencies, which are better captured by observing the teachers' interactions in the classroom. In addition, the vast majority of trainees pass, which given the lack of selection into initial teacher education may suggest that it is not rigorously controlling the quality of new entrants into teaching. Note that examinations are rarely used in probation appraisals in OECD countries (OECD, 2013).

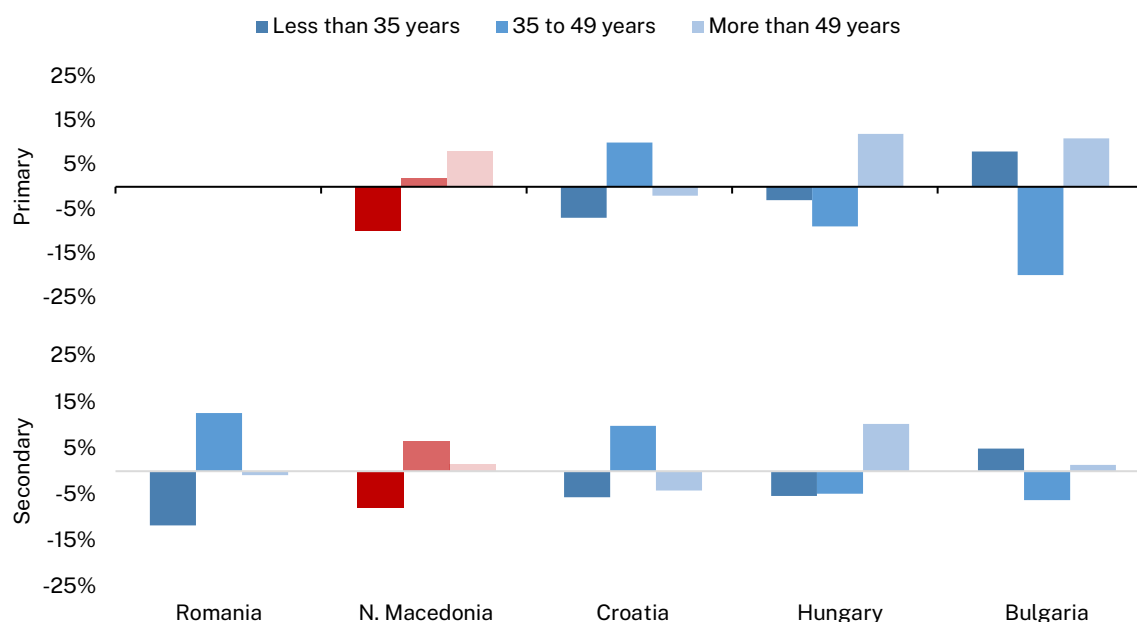
Decisions on hiring teachers have not followed a consistent economic rationale and have often been politically motivated (World Bank, 2023b; see *Chapter 6* for further details). The continuous increase in the number of teachers despite declining student numbers is not due to changes in the curriculum, but the causes that appear structural. As shown in *Section 3.3* above, while most municipalities saw a decrease in students, all municipalities increased teaching staff in the absence of rigorous control mechanisms for hiring teachers at national level.

⁴⁸ School principals are the main actor in regular appraisal in North Macedonia as in most OECD countries.

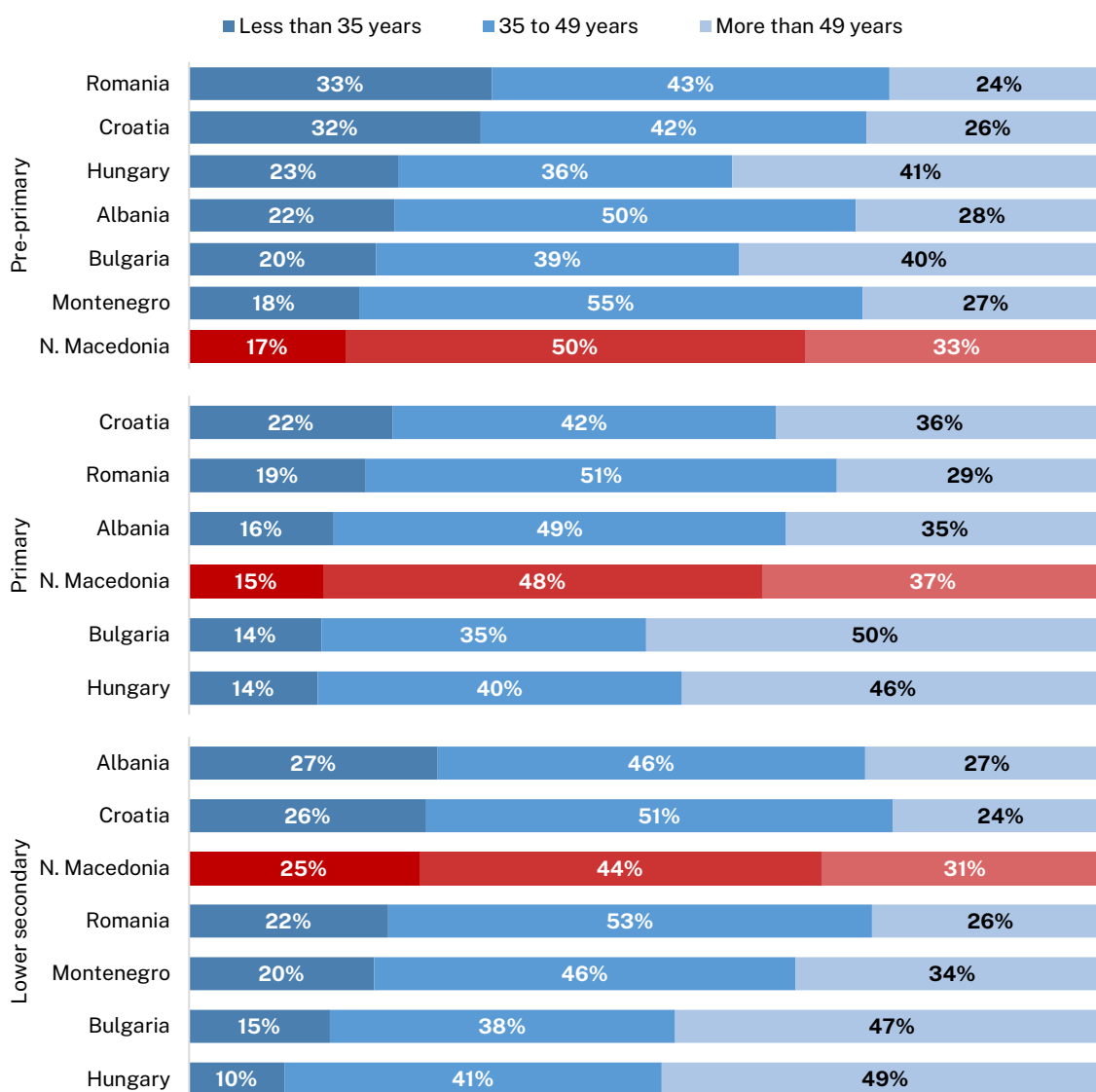
Teachers in North Macedonia can progress in their career from trainee level (teacher-trainee, teacher-trainee in schools with students with disabilities, trainee teacher in art education schools who perform individual and group teaching, then teacher (teacher, teacher in schools with students with disabilities, teacher in art education schools who perform individual and group classes teaching), through to mentor (teacher-mentor, teacher-mentor in schools with students with disabilities and teacher-mentor in performing arts education schools; individual and group teaching), up to the highest level of career development level: adviser (teacher-adviser, teacher-adviser in schools with students with disabilities and a teacher-adviser in art education schools performing individual and group teaching). The career development for teachers was envisaged in the 2019 law but started being implementing in 2021 when a total of 188 teachers were promoted as mentors, followed by 46 new teachers promoted in 2023, or a total of 224 teachers in primary schools having been promoted to mentors. The career development process is not present for teachers in secondary schools, due to needed changes that need to be introduced in the Law on Secondary Education.

The teaching force is ageing, although the age structure of the teaching staff is on a par with regional peers. Around half of teachers in all pre-university levels of education in North Macedonia are between 35 and 49 years of age. Relatively older teachers (aged 50 or over) account for 31% to 37% of all teaching staff, depending on the level of education. Young teachers (ages 25 to 34) account for the smallest portion of teaching staff. Nevertheless, ageing is a significant characteristic in the distribution of teacher staff in North Macedonia. The share of young teachers (ages 25 to 34) in primary education had declined by 10 percentage points in 2013-2021 (Figure 3.18). This is the highest decline among regional peers, except for Croatia. The same dynamic is observed in lower secondary education where the decline in the share of young teachers is 8 percentage points in the same period.

Figure 3.17. Percentage change in the share of teachers by age group and level, 2013–2021



Source: Authors' calculations based on Eurostat, 2023d.

Figure 3.18. Proportion of teachers by age group and level, 2021

Source: Authors' calculations based on Eurostat, 2023d.

Note: Data for North Macedonia is from 2020 for pre-primary and primary.

3.6. Parents' level of participation in the schooling of their children and home learning environment

The home learning environment and parental support in children's learning are important dimensions to consider, as favourable conditions can positively stimulate children's learning and foster higher learning outcomes, while poor conditions can be detrimental, starting already during the early years. In this last section, we will assess the quality of students' home environment, including parental involvement in their education – both at home and at school – and assess whether it fosters a conducive learning environment. We will also review what the Government is doing in enhancing parents' participation in the schooling of their children and in promoting positive home learning activities.

3.6.1. Support for children's learning at home

Pre-school children's home learning environments look somewhat favourable. Stimulation practices are essential determinants of a child's development during childhood. The home learning

environment of pre-schoolers was assessed in terms of the number of books and toys present at home and the number of stimulation activities carried out by adults (distinguishing mothers from fathers) in children's homes, using the 2018–2019 MICS results. Consolidated results in *Table 3.19* below show that the vast majority of children have at least two types of different toys at home (61.7%). Stimulation activities at home with adults were quite prevalent, with close to 9 in 10 children (88.4%) were engaged with at least four stimulation activities:⁴⁹ in most cases with mothers (73%), while fathers' engagement was more limited, only engaged in such activities in 32% of the cases. Note that reading activities can be very much hampered by the lack of children's books at home: 54.6% of children were in households where there were at least three children's books, and 32% had at least 10 books.

Table 3.19. Percentage of children aged 2–4 years with whom adult household members engaged in activities that promote learning and school readiness over the last three days, 2018–2019

| | With whom adult household members have engaged in four or more activities | With whom fathers have engaged in four or more activities | % of children... With whom mothers have engaged in four or more activities | Living in households that have 10 or more children's books | Who play with two or more types of playthings |
|---------------------------|---|---|---|--|---|
| Total | 88.4 | 32.0 | 73.3 | 32.8 | 61.7 |
| Sex | | | | | |
| Male | 86.3 | 34.0 | 68.8 | 28.4 | 60.4 |
| Female | 90.8 | 29.6 | 78.5 | 37.9 | 63.3 |
| Location | | | | | |
| Urban | 91.4 | 36.9 | 78.5 | 39.5 | 67.3 |
| Rural | 83.4 | 23.8 | 64.6 | 21.9 | 52.7 |
| Mother's education | | | | | |
| Primary or none | 69.1 | 6.8 | 31.7 | 1.8 | 44.7 |
| Secondary | 91.1 | 27.8 | 80.6 | 27.7 | 64.5 |
| Higher | 97.7 | 50.4 | 92.3 | 53.6 | 68.9 |
| SES | | | | | |
| Poorest | 69.7 | 9.0 | 44.2 | 6.9 | 48.2 |
| Second | 88.3 | 20.2 | 68.1 | 16.0 | 55.2 |
| Middle | 94.5 | 33.9 | 79.0 | 27.4 | 62.9 |
| Fourth | 94.3 | 41.0 | 85.5 | 46.6 | 68.8 |
| Richest | 99.4 | 58.7 | 95.5 | 68.1 | 75.3 |
| Ethnicity | | | | | |
| Macedonian | 97.1 | 49.6 | 89.5 | 53.3 | 71.6 |
| Albanian | 80.5 | 10.6 | 54.6 | 9.4 | 39.9 |
| Other | 73.8 | 11.2 | 52.5 | 8.7 | 67.8 |
| Roma | 55.3 | 13.5 | 40.3 | 6.9 | 49.8 |

Source: State Statistical Office and UNICEF, 2020.

The home learning conditions of basic school-age students are overall satisfactory, but could be further improved, especially for children belonging to disadvantaged groups and areas. Access

⁴⁹ Stimulation activities reviewed consisted of reading books or looking at picture books, telling stories, singing songs, taking children outside the home/compound/yard, playing with children and spending time with children naming, counting or drawing items of interest.

to books remains particularly dire for poor children and the Roma community, with 18% of children belonging to the lowest SES and 12% of children from the Roma community having at least three books at home (Table 3.20). But the practice of reading and having homework is widespread, at 89% and 99.6% of children respectively.

Table 3.20. Learning environment at home of children aged 7–14 years, expressed in percentage, 2018–2019

| | With three or more books to read at home | % of children... Who read books or are read to at home | Who receive help with homework |
|---------------------------|--|---|--------------------------------|
| Total | 58.8 | 89.3 | 69.0 |
| Sex | | | |
| Male | 56.6 | 84.5 | 68.8 |
| Female | 61.0 | 94.0 | 69.1 |
| Location | | | |
| Urban | 69.6 | 90.5 | 73.5 |
| Rural | 43.3 | 87.6 | 62.4 |
| Mother's education | | | |
| Primary or none | 25.6 | 79.0 | 64.6 |
| Secondary | 68.8 | 96.2 | 69.5 |
| Higher | 91.9 | 95.1 | 74.4 |
| SES | | | |
| Poorest | 17.9 | 84.5 | 67.7 |
| Second | 47.8 | 87.0 | 70.0 |
| Middle | 71.4 | 93.7 | 66.6 |
| Fourth | 82.0 | 93.2 | 70.2 |
| Richest | 96.0 | 91.2 | 70.6 |
| Ethnicity | | | |
| Macedonian | 74.2 | 93.2 | 68.5 |
| Albanian | 39.9 | 83.4 | 69.7 |
| Other | 37.3 | 86.8 | 69.5 |
| Roma | 12.4 | 72.7 | 61.5 |

Source: State Statistical Office and UNICEF, 2020.

Data from the 2015 EGRA provide additional insights. Only 5% of parents said they had no books at home, and more than half of parents (53%) reported reading with their child every day and 26% reading on a weekly basis. Only 2% of parents reported never reading with their child. While reading on its own has huge benefits, it is also vitally important to discuss with children what they have read. 97% of the surveyed parents said they discussed the content after reading with their children, of which 75% discussed it always and 22% discussed it sometimes. Apart from reading together with their parents, 75% of parents reported that their children also read independently every day, while an additional 12% read once a week.

While all children get homework, not all get support. The 2015 EGRA reported that around one third of parents (35%) said they were always involved in their child's home assignments, 23% were sometimes involved, while 33% were involved only if the child was unable to complete the homework alone (USAID and Step by Step Foundation, 2016). Only 9% of parents never helped their children with the homework. The latest 2018-2019 MICS results reported that 69% of children did get some sort of support during their homework.

3.6.2. Support for children's learning at school

Beyond learning activities at home, parental involvement in school activities can play a significant role in enhancing the learning outcomes of children, regardless of social and technical background. The effect is assessed to be particularly important for children of primary school age (State Statistical Office and UNICEF, 2020).

Participation by parents/caregivers in the educational institutions is regulated by laws (North Macedonia, 2017b, 2020c, 2020d). At ECE level parents are represented by up to two members, while at primary and secondary education level parents are represented with up to three members in the school board (SB) which is a governing body. The mandate of the members of the school board lasts for three years, and the mandate of the parents' representatives lasts until their child's completion of primary education, but not more than three years. Together with all other members of the SB, they are responsible for:

- the adoption of the statute of the primary school,
- proposing an annual programme of work and a report on the work of the primary school to the council of the municipality, and the state primary schools to the ministry,
- adopting the school's Development Programme,
- proposing a financial plan to the founder,
- proposing a final account to the founder,
- publishing a public announcement for the election of a director,
- conducting interviews of the candidates for director,
- proposing to the mayor of the municipality, i.e. to the minister, one candidate from the registered candidates of the public announcement for the election of a director,
- making a proposal to the director for the selection of teachers and professional associates,
- deciding on objections and complaints by the employees at the primary school,
- deciding on complaints by students and parents.

Parents' involvement in school activities is quite prevalent, with more than 91% of parents meeting with the teacher to discuss their child's progress and 54% of them attending a school celebration. The involvement in school management is also active, with 26% of parents attending school governing body meetings, and 18% discussing matters related to education and finance issues (Table 3.21).

Yet disparities are significant across the various equity dimensions, with less strong participation observed from parents from the most disadvantaged groups. This is unfortunate, given that they often have a limited voice, and their children are facing far more difficulties in schools (Table 3.21).

The 2015 EGRA study provides additional insights, with 48% reporting participation in school activities once or twice a school year, 23% once a month, and 13% several times a month, while 11% said never. In regard to the type of activities in which they were involved, most of the parents (36%) said they helped with decorating the classrooms, 27% in organising visits, 25 in providing financial assistance for supplying school materials and 12% provide expert assistance for implementation of the curriculum. To the question of whether parents requested involvement in school activities, 61% of the teachers said yes, but seldom, and 26% said no. Only 13% of parents wanted to be engaged often. To the same question, 47% of the parents said they seldom asked to be involved in school activities, while 14% said often. One third of parents (34%) admitted never asking to get involved in school activities. 29% of parents said the meetings of the Parents' Council were mainly initiated by, and the agenda drafted by, the President of the Parents' Council. 26% said this was by the school directors, while a total of 43% either admitted that they did not know (33%) or gave no response (10%).

Table 3.21. Support for children's learning at school for school-age children aged 6–14 years, 2018–2019

| | % of children For whom an adult household member in the last year received a report card for the child | Involvement by adult in school management last year (%) | | Involvement by adult in school activities last year (%) | |
|---------------------------|---|---|--|---|---|
| | | Attended a meeting called by governing body | Attended a meeting to discuss key education/financial issues | Attended school celebration or a sport event | Met with teachers to discuss child's progress |
| Total | 91.7 | 25.7 | 18.4 | 54.2 | 90.6 |
| Sex | | | | | |
| Male | 91.9 | 28.7 | 18.8 | 52.2 | 91.6 |
| Female | 91.4 | 22.8 | 18.1 | 56.1 | 89.7 |
| Location | | | | | |
| Urban | 93.6 | 22.9 | 17.7 | 63.4 | 93.3 |
| Rural | 88.8 | 29.7 | 19.5 | 40.9 | 86.8 |
| Mother's education | | | | | |
| Primary or none | 87.0 | 22.8 | 11.0 | 33.1 | 86.9 |
| Secondary | 93.6 | 24.9 | 21.6 | 57.4 | 93.4 |
| Higher | 95.5 | 31.0 | 24.4 | 79.6 | 92.0 |
| SES | | | | | |
| Poorest | 86.9 | 20.4 | 10.0 | 36.2 | 82.4 |
| Second | 93.5 | 25.7 | 17.6 | 40.3 | 95.3 |
| Middle | 96.3 | 28.7 | 26.0 | 59.4 | 94.6 |
| Fourth | 89.6 | 31.7 | 23.3 | 62.3 | 89.5 |
| Richest | 95.5 | 23.2 | 19.1 | 85.4 | 95.7 |
| Ethnicity | | | | | |
| Macedonian | 95.6 | 25.6 | 21.1 | 65.5 | 93.5 |
| Albanian | 87.7 | 32.0 | 18.4 | 35.9 | 82.2 |
| Other | 84.2 | 12.5 | 7.6 | 47.6 | 96.8 |
| Roma | 83.4 | 11.8 | 7.6 | 32.8 | 91.5 |

Source: State Statistical Office and UNICEF, 2020.

Government action

The National Parenting Strategy 2022–2030, developed for the first time in North Macedonia, seeks to recognise the importance of parenting by strengthening support to parents and by making it easier for families to access that support. It builds on positive parenting principles – a method of positive, empowering, and consistent practices – to develop a strong, deeply committed relationship between parent and child based on communication, realistic expectations, non-violent discipline, and mutual respect. Together with practical tips and guidance on positive parenting and nurturing caregiving, the strategy looks at providing mental health and well-being support to parents and caregivers. Being the single biggest influence on a child's life – as caregiver, role model and teacher – every parent needs to feel confident but also reassured to know that help is available when needed.

3.7. Key takeaway points

Key results at pre-school level show that, **as children grow older, their progression in learning increases**, with more and more children moving away from ‘emerging readiness’ and towards ‘demonstrating readiness’.

However, children’s learning experiences across key domains are inconsistent and of insufficient quality to promote the development of key readiness for school skills and abilities. Learning approaches to language, literacy and communication, numeracy and motor skills are not sufficiently child-centred, of sufficient substance (e.g. not rich in opportunities to develop language and numeracy skills), and also miss key opportunities to strengthen children’s holistic development and learning.

North Macedonia’s results in international student assessments reveal **comparatively weak levels of student achievement in primary grades**, suggesting that learning deficiencies start early. The performance of students in Grade 4 in both the TIMSS 2019 survey and International Reading Study (PIRLS 2021) indicates that **Macedonian students fare also well below their peers internationally**. North Macedonia’s results in PISA international student assessments reveal comparatively weak levels of student achievement among those aged 15 (mainly enrolled at the first year of upper secondary): 413 in science, 393 reading and 394 mathematics (compared with an OECD average of 493), suggesting that **learning deficiencies that start in primary education persist through to later grades**.

The education system fails to provide students with the skills they need to successfully complete each stage and move confidently to the next. These challenges persist from pre-school education to graduate university degrees, including non-formal education.

There are disparities in children’s learning and development outcomes across ethnic and linguistic groups, with some differences between groups and inconsistencies across the development domains of language, literacy and communication as well as cognitive development, mathematics and science. These outcomes interface with socioeconomic circumstances and the geographic location of the school (urban-rural) and the educational background of the parents.

The gap between ethnic groups becomes more pronounced as students advance through the system. Gaps that begin in the early years can be hard to close, especially for children who are vulnerable and/or from poorer communities.

In North Macedonia, low- and high-performing students are clustered in the same schools more often than the OECD average.

The readiness of children for primary school and their school performance later on can be improved through attendance on ECE programmes. Also, students who attend schools with many resources have higher achievements than those who attend schools with fewer resources. In the TIMSS study, this difference in achievement in natural sciences is statistically significant. Results from the PISA 2018 national report for North Macedonia indicate that the economic, social and cultural status (ESCS-index) of the school is strongly related to the achievement of students in the three cognitive domains, which means that the higher the school’s ESCS index, the higher the students’ achievements. Only students who attend schools with the highest ESCS, on average, reach level 3 in Science and Reading, and level 2 in Mathematics, while the students from the schools with low and medium ESCS have achievements one level below in all areas.

There are gaps and challenges in schooling conditions. Large differences are noted in infrastructure and other working conditions in small rural primary schools and those located in larger cities. Small rural schools, especially district schools, have less access to resources, fewer teachers available, and are often forced to conduct joint classes with students from different grades (combined classes) and/or hire teachers who do not meet the teaching staff standard.

The current school network is not keeping pace with demographic and enrolment trends, as the significant drop in students is accompanied by a rise in the number of teachers and classes. Over

the past two decades, the student-to-teacher ratio has decreased, from over 18 students per teacher in 2009/10, to 10 students per teacher in 2020/21. Part of the disparities observed in the ratios can be attributed to the fact that some schools have a higher number of teachers because of different languages of instruction (since there are five languages of instruction in primary education), especially in schools that have satellite schools under their jurisdiction.

Historic underfunding and a lack of transparency in funding allocations means that many schools do not have adequate resources to cover their basic running costs, and certainly not to invest in improvements in the teaching and learning environment, although the MoEs is making important efforts to improve the situation.

Teachers' qualification level has increased over the past decade, with most teachers in primary and secondary education holding the required qualifications, a university degree. But interest in studying to become a teacher is declining each year and the country will face challenges in recruiting teachers, even at primary level, and the situation is even worse with subject teaching teachers.

Pre-service teacher programmes have difficulties keeping up with education curriculum reforms. The content of initial teacher education has not kept pace with reforms in the education system, due to a non-existent systemic policy for engaging at an institutional level, rather than participation at an individual level, meaning some professors are invited to working groups that structure certain policy measures. Almost all reforms to the system and different concepts that were introduced lacked coordination between the universities and the ministry.

North Macedonia lacks specific criteria for the accreditation of teacher education programmes and adequate guidance for probation appraisals and mentoring. The weak selection and quality assurance mechanisms for entry into teaching exacerbate the risk that new teachers will enter the profession without a sufficient level of knowledge and skills to be effective in the classroom.

Teacher recruitment has not followed a consistent economic rationale and has not been merit based throughout, resulting in significant pockets of teacher overstaffing in primary and secondary education. While the number of students has fallen over the last decade, this drop has not been accompanied by an equal drop in the number of teachers and classes, which again results in a significant loss in efficiency.

Professional development may not always focus on the areas that are most important for raising achievement in North Macedonia. If students can be expected to improve achievement in language, mathematics and science, there is a need to increase the percentage of the teachers participating in this type of training and to increase the number of teachers participating as well as the length of the training and support for teaching.

There is a need to strengthen the evaluation and assessment agencies (SEI, NEC, BDE) in order to contribute effectively to policy-making and implementation. To accomplish this, they need to be properly staffed and resourced (in terms of human, financial and material resources).

All evaluation and assessment agencies (SEI, NEC, BDE) need to have an independent voice and established system for institutional cooperation to serve as a backbone for quality in education.

At local, and more importantly at central government level, **there is a need for a functional and effective information system for collecting valuable data at all educational levels** (starting from ECE and continuing to higher education). The EMIS can be upgraded and, along with dedicated research staff for data management and analysis, should contribute to evidence-based policy making.

The home learning environment and parental support in children's learning both at home and school are overall creating and supporting a positive learning environment for children to thrive. Yet disparities exist across equity groups, with the household wealth dimension often being the most discriminating factor, followed by the ethnic dimension. The roll-out of the National Parenting Strategy 2022–2030 is timely, as a major instrument to help close this gap.

Chapter 4. The relevance of education for labour market inclusion

4.1. The value of education for labour market inclusion

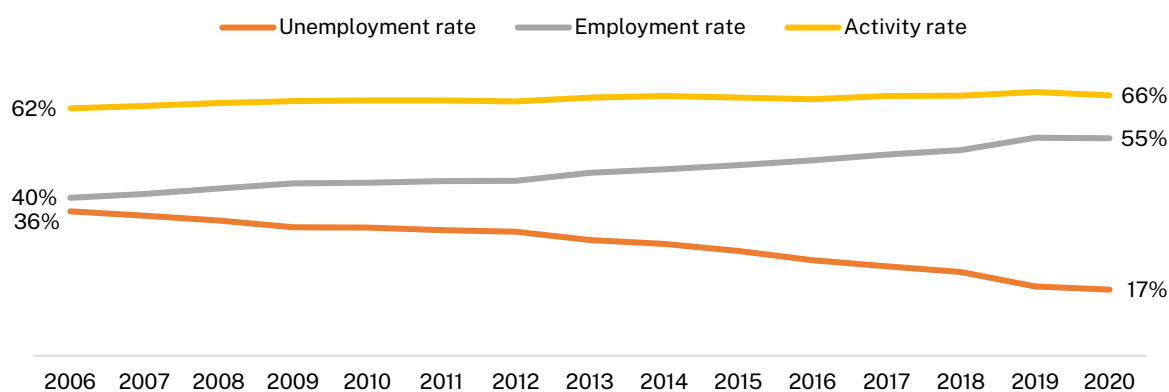
This chapter begins with a detailed analysis of the position of youth in the labour market in North Macedonia. Comparisons are made relative to the adult population, as well as youth in EU countries and some neighbouring countries mainly chosen depending on data availability. The time dimension allows for identifying trends and changes in the labour market position of youth. The section starts with a brief description of the overall labour market in North Macedonia and the trends of the main indicators in the last 15 years. The following sections then analyse in detail youth and NEET activity, employment and unemployment. The qualitative aspects of the labour market are then assessed through an analysis of the quality of jobs, returns to education and mismatches.

4.1.1. Labour market developments in North Macedonia: key features

The Macedonian labour market has undergone significant changes in the last 15 years. It has been changing gradually from a position of a slack labour market with excess labour supply to a tighter labour market where employers report a lack of workers.

Figure 4.1 shows that the labour market activity rate has been quite stable, standing at 65.5% in 2020. On the other hand, the employment rate increased from about 40% in 2006 to approximately 55% in 2020, whereas unemployment halved from 35% in 2006 to 16.6% in 2020 (and further down to 11.7% in Q1, 2023).

Figure 4.1. Main labour market indicators of adults aged 15–64 years, 2006–2020



Source: Eurostat, 2023a, 2023b, 2023c.

All age groups in the labour market recorded an improvement in their position in the last decade in terms of declining unemployment and increased employment rates (Table 4.1). Across genders, the labour market position of women has shown improvement relative to men, resulting in a decrease in the gender gap.

Box 4.1. Data availability and concerns

In 2021, North Macedonia implemented a census of the population, implemented 20 years after the last census, after a failed census in 2012. The census revealed about 9% decline in population and a smaller labour force. Hence the 2022 labour force data is not fully comparable to the data for previous years, in absolute terms, due to the change in the Labour Force Survey (LFS) sample based on the 2021 census. While the State Statistical Office (SSO) has been updating the database with 2022 data, this is not the case for the Eurostat and ILO databases, with the former publishing data as of 2020 and the latter as of 2021. Therefore, in this analysis, data for indicators and certain categories of indicators (e.g. age groups) that are not published by SSO are analysed using the Eurostat and ILO databases, hence some of the data presented in the report are for 2020 and some for 2021.

Table 4.1. Main labour market indicators of adults aged 15–64 years by gender and education level, 2010–2020

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Activity rate | | | | | | | | | | | |
| Total | 64.2 | 64.2 | 63.9 | 64.9 | 65.3 | 64.9 | 64.5 | 65.3 | 65.4 | 66.3 | 65.5 |
| By gender | | | | | | | | | | | |
| Males | 77.7 | 76.8 | 76.6 | 76.8 | 77.7 | 77.5 | 77.8 | 78.4 | 78.3 | 77.3 | 76.7 |
| Females | 50.4 | 51.2 | 50.8 | 52.7 | 52.5 | 52.0 | 50.8 | 51.7 | 52.2 | 54.8 | 54.0 |
| By education level | | | | | | | | | | | |
| Primary or lower | 44.2 | 44.3 | 41.9 | 43.5 | 44.4 | 41.8 | 39.0 | 39.0 | 38.8 | 40.1 | 37.7 |
| Secondary | 73.5 | 72.3 | 73.1 | 73.6 | 73.2 | 72.9 | 72.7 | 72.9 | 73.1 | 73.2 | 71.9 |
| Tertiary | 90.4 | 89.1 | 87.8 | 88.2 | 89.2 | 91.2 | 89.9 | 90.9 | 91.2 | 90.5 | 90.6 |
| Employment rate | | | | | | | | | | | |
| Total | 43.5 | 43.9 | 44.0 | 46.0 | 46.9 | 47.9 | 49.1 | 50.6 | 51.7 | 54.8 | 54.7 |
| By gender | | | | | | | | | | | |
| Males | 52.8 | 52.3 | 52.4 | 54.5 | 56.1 | 56.6 | 58.6 | 60.5 | 61.4 | 64.4 | 63.7 |
| Females | 34.1 | 35.4 | 35.4 | 37.3 | 37.4 | 38.9 | 39.2 | 40.3 | 41.7 | 44.7 | 45.4 |
| By education level | | | | | | | | | | | |
| Primary or lower | 26.6 | 27.4 | 25.8 | 28.4 | 29.9 | 29.0 | 27.3 | 28.4 | 29.2 | 30.4 | 29.3 |
| Secondary | 50.0 | 49.5 | 50.2 | 52.4 | 52.5 | 53.5 | 55.4 | 56.4 | 57.7 | 61.1 | 60.3 |
| Tertiary | 70.8 | 68.6 | 68.1 | 67.6 | 69.1 | 72.0 | 72.5 | 73.9 | 74.9 | 77.7 | 78.2 |
| Unemployment rate | | | | | | | | | | | |
| Total | 32.2 | 31.6 | 31.2 | 29.1 | 28.1 | 26.3 | 24.0 | 22.5 | 21.0 | 17.4 | 16.6 |
| By gender | | | | | | | | | | | |
| Males | 32.1 | 31.9 | 31.6 | 29.1 | 27.8 | 27.0 | 24.6 | 22.9 | 21.5 | 16.6 | 16.9 |
| Females | 32.5 | 31.0 | 30.5 | 29.2 | 28.7 | 25.3 | 22.9 | 22.0 | 20.1 | 18.6 | 16.1 |
| By education level | | | | | | | | | | | |
| Primary or lower | 39.8 | 38.2 | 38.6 | 34.8 | 32.7 | 30.7 | 30.1 | 27.1 | 24.6 | 24.0 | 22.3 |
| Secondary | 32.1 | 31.6 | 31.4 | 28.8 | 28.3 | 26.7 | 23.8 | 22.6 | 21.1 | 16.6 | 16.2 |
| Tertiary | 21.8 | 23.0 | 22.4 | 23.5 | 22.5 | 21.1 | 19.4 | 18.8 | 17.9 | 14.3 | 13.8 |

Source: Eurostat, 2022d, 2022e, 2022f.

The participation rate in the country is comparatively low, at 65.5% in 2020 (standing at 66.5% in the first three quarters of 2022). Low participation is mainly due to: (i) the very low number of employed people, which is only partially compensated by a high incidence of unemployment, (ii) the effect of sizeable remittances (private transfers from abroad), by increasing the reservation wage of recipient households/individuals, and (iii) low participation of females, which is by around 24 percentage points lower than that of males, and of youth (addressed in detail below).

Eurostat data on the reasons for inactivity, as well as several research studies, show that the main reason for high inactivity in North Macedonia (data for 2020) was the belief that jobs were not available (discouraged jobseekers), whereas the main reason for female inactivity were family reasons. The latter include care of adults with disabilities or children, and other family or personal reasons. The most comprehensive study on female inactivity in North Macedonia (Mojsoska-Blazevski et al., 2017) found that the main explanation behind the inactivity of women are household duties and the stereotypes related to their gender role within the family and society (stereotypes also held by women themselves), followed by a lack of childcare and elderly care.

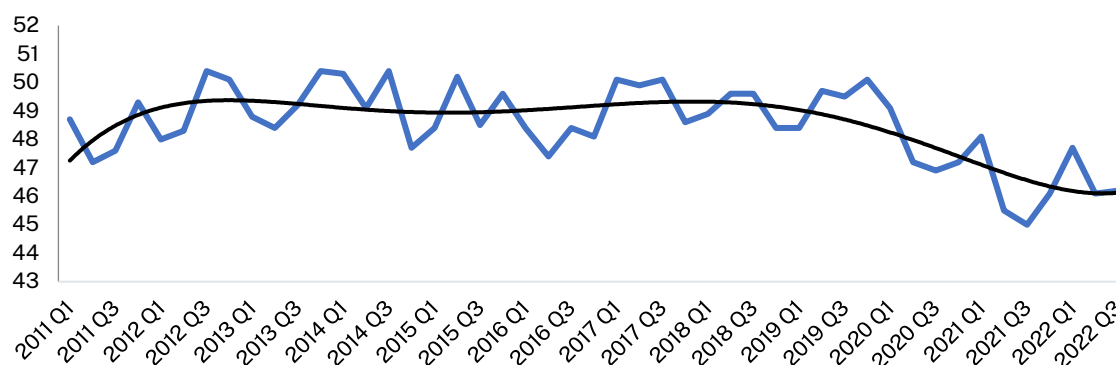
Those with primary education or lower levels of education experienced a significant decrease in their participation in the labour market, followed by individuals who completed secondary education. Workers who had completed tertiary education witnessed a substantial reduction in unemployment rate, coupled with a significant rise in the employment rate.

The employment rate increased for all groups of workers, with women being the primary beneficiaries, as they experienced a substantial 33% increase in employment rate (Table 4.1). Over the past decade, unemployment has declined for all workers. As of 2020, men are slightly more susceptible to unemployment than women, and workers with primary education face the highest likelihood of unemployment.

4.1.2. Labour market activity of young individuals

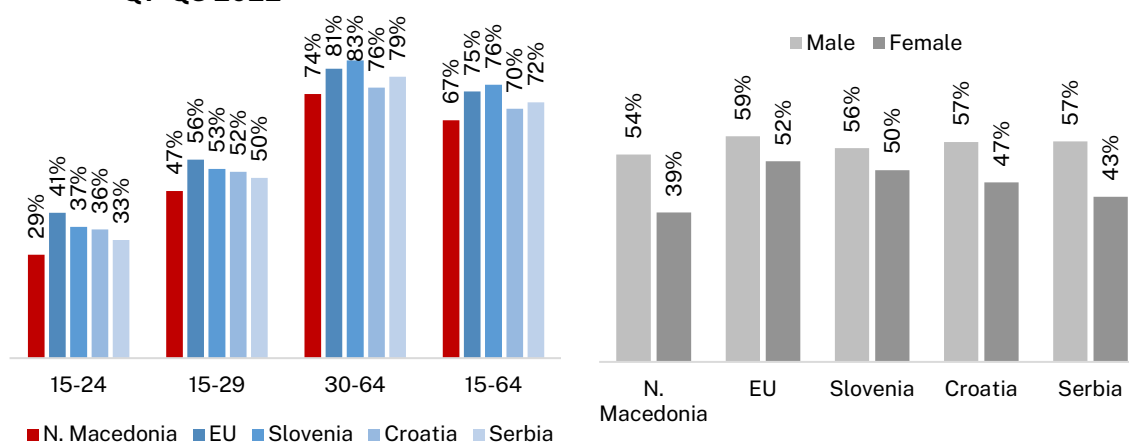
The activity of youth in the labour market of North Macedonia is relatively low (46.7% in the first three quarters of 2022), compared to adults and to their peers from EU countries. As Figure 4.2 shows, the participation rate for young individuals was somewhat stable in the period prior to the COVID-19 pandemic, hovering around 49% on average between 2011 and 2019, before reaching the bottom in the third quarter of 2021, after which some improvement has been observed, though remaining below the pre-pandemic level. Less than half (46.7%) of young individuals aged 15-29⁵⁰ in North Macedonia were active in the labour market in the first three quarters of 2022, which is much lower than the national average, which stood at 66.5%, and a 73.8% participation rate recorded for adults (aged 30-64). The labour market participation of Macedonian young people is almost 9 percentage points (pp) below the EU-27 average.

⁵⁰ Participation rate for the age group 15-24 was 28.9%, while for the age group 25-29, it was about 71% in the first three quarters of 2022, compared to the EU-27 average of 40.6% and 83.3%, respectively.

Figure 4.2. Participation rate of youth (15–29) by quarter, expressed in percentage, 2011–2022

Source: State Statistical Office, 2022ab.

The situation of youth tends to mirror that recorded by adults. Low activity among youth illustrates generally low employment prospects in the country, and the difficulty of the school-to-work transition. This can be attributed to (i) an unwillingness of employers to bear the costs of on-the-job training of inexperienced youth (ii) a skills mismatch between employers' needs and the skills produced by the education system, as well as (iii) the increasing tendency of youth to stay longer in formal education.⁵¹ Young women are more prone to inactivity, which is related to their educational choices, but also to the traditional division of family duties within households (Section 4.1.1).

Figure 4.3. Participation rate by age group (left) and by gender (right), regional comparison, Q1–Q3 2022

Source: Authors' calculations based on State Statistical Office, 2022ab (for North Macedonia) and Eurostat, 2022d (other countries).

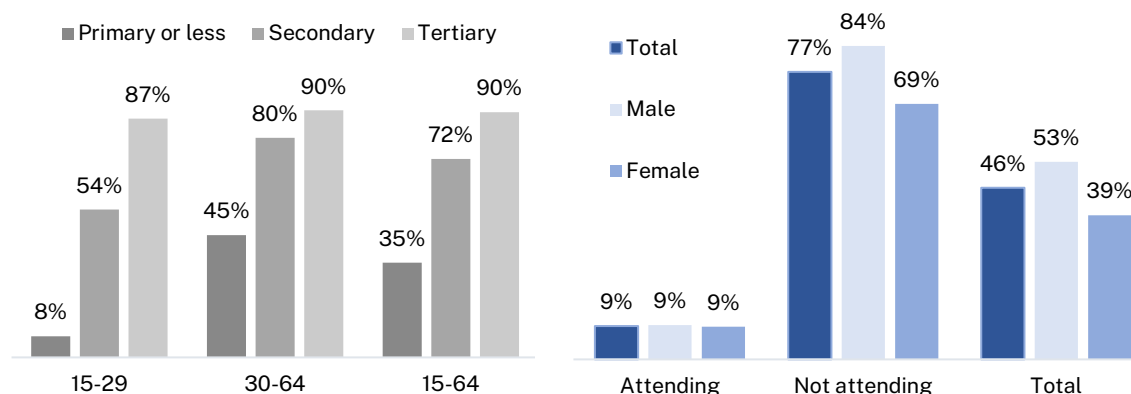
Note: The comparator countries are chosen based on their similarity and closeness to North Macedonia, but also the availability of data on the Eurostat database.

Education is a key predictor of labour market activity overall, and for youth. As shown already in the previous section, educational background is a key determinant of labour market activity overall (Figure 4.4 left). In 2021, the participation rate of those with tertiary education was 2.6 times higher than the participation rate of workers with primary education or lower. This ratio is significantly higher for youth, at 11.2.

⁵¹ This is also further elevated by the legislative requirements, given that secondary education in North Macedonia is compulsory.

Young people tend to enrol and stay in education longer than adults, which partly explains their low activity. In 2021, the share of youth aged 15-24 attending school was close to 67%,⁵² whereas for the age group 15-29 it was close to 46%, with females displaying much greater shares (Figure 4.4, left). Furthermore, the labour participation rate of youth aged 15-29 attending school was 9%, while for those not attending school it was 77.3% in 2021 (Figure 4.4, right).

Figure 4.4. Participation rate by educational attainment by age groups (left) and by school attendance status of youth, 15-29 (right), 2021

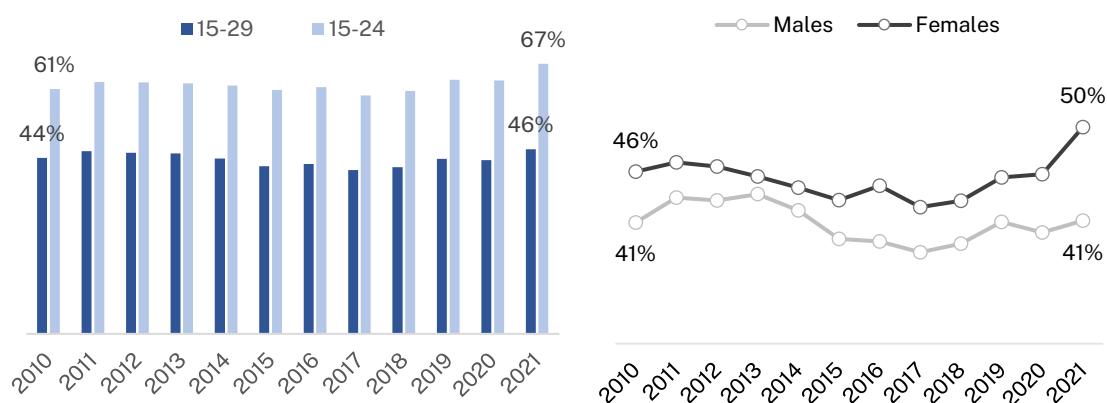


Source: Authors' calculations based on State Statistical Office, 2022ab.

Source: ILO, 2023a

There is a continuous upwards trend in the share of youth attending education for the age groups 15-24 and 15-29 (Figure 4.5, left). This improvement has been largely led by a rapid increase in the school enrolment of women, which has led to a widening of the gender gap in school enrolment recent years (since 2015) from 3.6 pp in 2015 to 8.7 pp in 2021. Higher and longer participation in education leads to lower participation by young women in the labour market, in addition to other factors which were discussed in Section 4.1.1.

Figure 4.5. Trend in the share of youth working-age population attending school (left) and in the share of males and females attending school for the age group 15-29 (right), 2010-2021



Source: Authors' calculations based on ILO, 2023a.

⁵² This share for males is close to 61%, while for females it is about 73%.

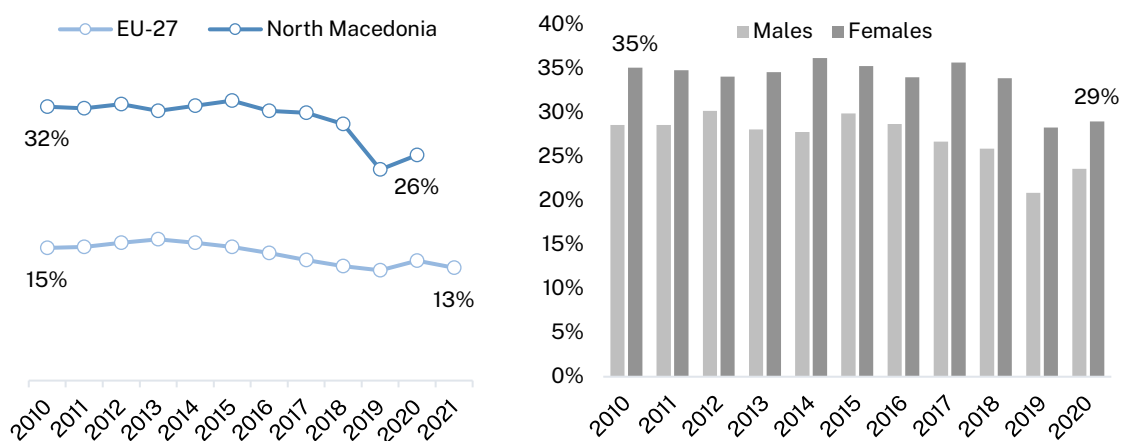
Youth not in education, employment or training (NEETs)

A considerably high share of youth in North Macedonia are in the NEET category (not in employment, education or training), which is of great concern for both education and employment policy-makers. These youth are neither contributing to economic activity nor investing in their own human capital through engagement in education or training. According to the latest Eurostat data, in 2020 the share of youth NEET to the total population (age group 15-29) in North Macedonia was 26.2%, which is almost double the EU-27 average of 13.9% (Figure 4.6, left). Moreover, after a period of continuous decline in the NEETs rate, there was a deterioration in the trend in 2020.

More recent data (for 2022) on NEETs are provided by the ILO, though these data are for the 15-24 age group. According to the ILO data, the NEET rate in North Macedonia (15-24 age group) was 18.4% in 2022, the same as in 2021. The NEET rate in North Macedonia is very high compared to the EU-27 average of 10.8%.⁵³ Although still high, the incidence of NEETs is at an historic low. ILO data show that the significant improvement of the indicator is mainly driven by improvements recorded in females.

Young women aged 15-29 are more likely than men to be NEETs (Figure 4.6, right). The gender gap somewhat declined in 2020 (to 1.2 of the female NEETs rate vs the male NEETs rate) from its peak of 1.4 in 2018. From a gender perspective, the NEETs rate shows that while young females are participating in education as equally as young males, they become passive after the age of 24, i.e. they complete the education but do not enter the labour market and are more likely to become NEETs. This is in line with the findings of the ILO report on the school-to-work transition, that female NEETs are mainly inactive non-students (see below).

Figure 4.6. Youth NEET rate (15-29) in North Macedonia and EU-27 (left) and NEET rate by gender in North Macedonia (right), 2010–2021



Source: Eurostat, 2022g (data for 2021 is not available for North Macedonia).

The category of unemployed non-students (i.e. inactive young individuals) dominates among the NEETs in North Macedonia. The ILO report on the school-to-work transition of young individuals in North Macedonia (Mojsoska-Blazevski and State Statistical Office, 2016) provided a breakdown of subcategories within the NEET classification. It showed that the majority within the NEET category are unemployed non-students (62.6%), while approximately one third (37.4%) are inactive non-students. This latter category of young people is likely to experience a loss of their human capital (accumulated during their education), which has negative

⁵³ Data on NEETs from Eurostat and ILO may not be directly comparable due to potential methodological differences. Though differences are relatively small.

consequences and large costs both for the individuals and for society as a whole. The study found a large gender difference in the composition of NEETs: while as many as 80.7% of male NEETs fall within the category due to unemployment, only 46.0% of female NEETs are unemployed, whereas 54% fall within the subcategory of inactive non-students. Young women make up as much as 75% of inactive, non-student youth. The majority of young people who were NEETs in 2021 reported that they were in that status due to family reasons and care (22%), and 16% due to discouragement.⁵⁴ Very few of the NEETs (3.7% in 2021) were away from the education and labour market due to sickness or disability. Family reasons and care are dominant reasons for women NEETs (for 96.7% of women NEETs).

Youth with a low educational level (less than basic) are most likely to fall into the NEETS group. Around 41% of youth with less than basic education are NEETs. The education level is a more powerful predictor of NEETs among women than man: more than half of young women with less than basic education are out of the labour market and not in education or training, compared to 36% for their male peers (Table 4.2).

Table 4.2. Youth NEET rate (15–24) by education level and gender, 2021

| | Total | Males | Females |
|-----------------|--------------|--------------|--------------|
| Total | 18.4% | 18.8% | 17.9% |
| Less than basic | 41.1% | 35.7% | 51.1% |
| Basic | 6.6% | 5.8% | 7.5% |
| Intermediate | 25.4% | 26.4% | 24.1% |
| Advanced | 30.7% | 29.9% | 31.0% |

Source: ILO, 2023a.

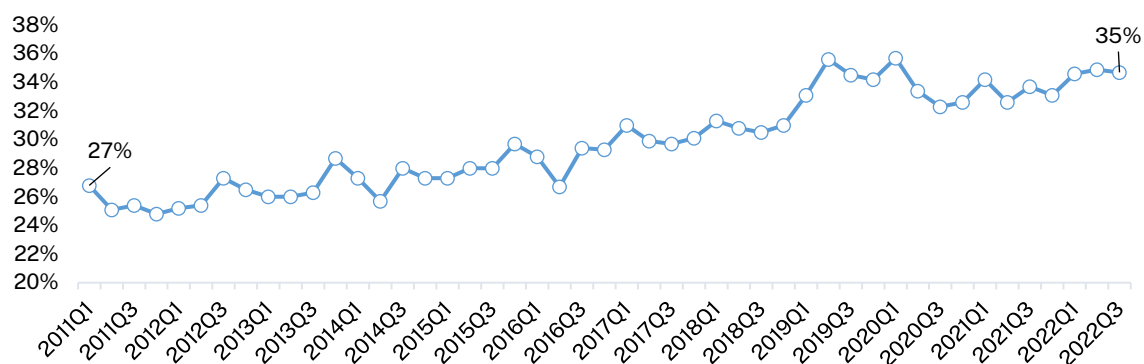
Acknowledging the challenge with NEETs, the Government of North Macedonia has so far implemented a few programmes aimed at identifying inactive young individuals and measures to bring them back either to education or the labour market. However, those initiatives did not bring results due to some gaps (failures) of the education system (for instance, lack of flexibility to integrate the NEETs back to school) and of the active labour market programmes (limited, one-time interventions which were not sufficient to bring NEETs into the labour market). Hence in 2019 the government initiated a programme called Youth Guarantees (YG) which, *inter alia*, addresses the NEETs. Section 4.4.1 explores in detail the YG programme and its effectiveness.

4.1.3. Employment outcomes

Young workers (aged 15-29) experienced a very low employment rate of 34.7% in the first three quarters of 2022,⁵⁵ which is 61% of the national average recorded for all age groups (Figure 4.7). Although this rate increased compared to last year, it remained below the pre-pandemic peak (35.7% in Q1, 2020). Similar to the participation rate, the very low employment rate among youth in North Macedonia can be attributed to the delayed entry into employment due to difficulties in finding a first job, but also the common inactivity of young workers in the country, especially among those studying (see Figure 4.7).

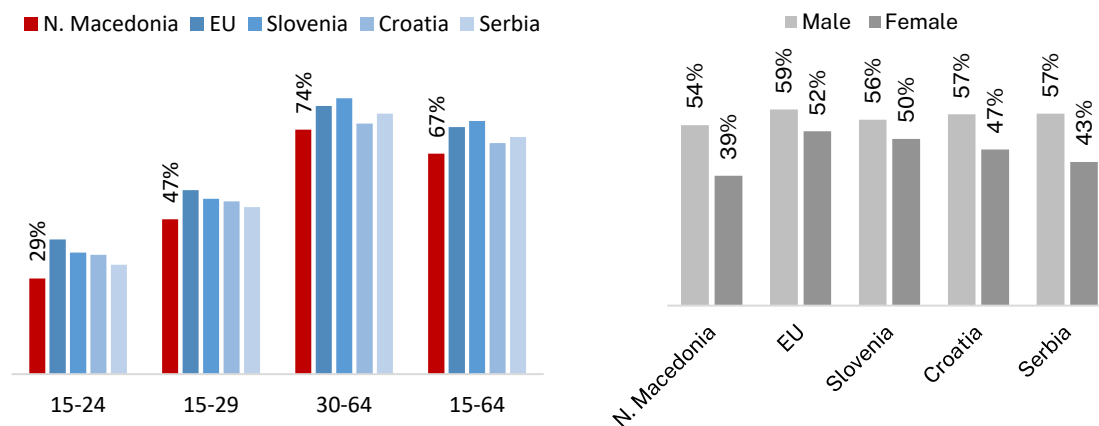
⁵⁴ Plan for Implementation of the Youth Guarantee in North Macedonia, January 2023 (internal government document).

⁵⁵ The employment rate for the 15-24 age group was 19.5%, while for the 25-29 age group it was 62.8% in the first three quarters of 2022, compared to the EU-27 average of 34.7% and 76.4% respectively.

Figure 4.7. Youth employment rate (15–29) by quarter, 2010–2022

Source: State Statistical Office, 2022ab.

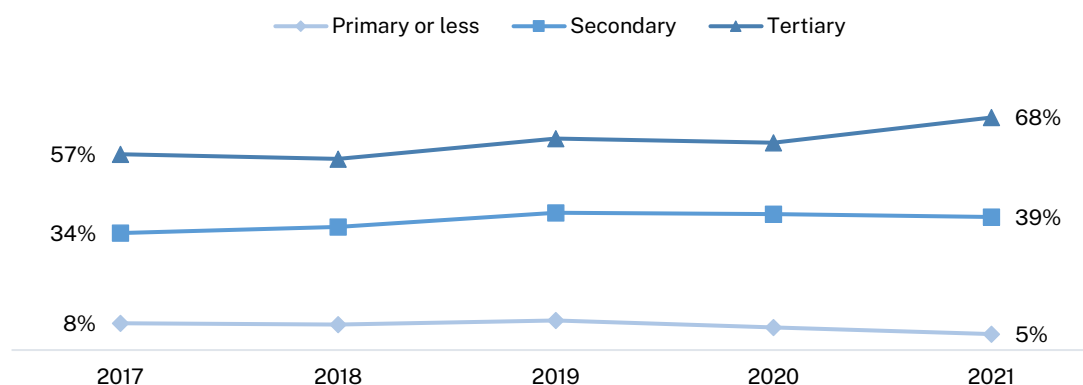
In spite of some improvements, youth employment rate in North Macedonia remains fairly low compared to other countries in the region and in Europe. The rate is 14.5 pp lower than the EU-27 average and applies for both male and female (Figure 4.8, left). The gender employment gap for young workers in the first three quarters of 2022 was 11.6 pp in North Macedonia, about two times higher than the gender gap recorded among youth in the EU-27.

Figure 4.8. Employment rate by age group (left) and gender (right) in MK, EU-27 and some Balkan countries, Q1–Q3, 2022

Source: Authors' calculations based on State Statistical Office, 2022ab (North Macedonia) and Eurostat, 2022e (other countries).

Note: The comparator countries are chosen based on their similarity and closeness to North Macedonia but also availability of data on Eurostat database.

Youth employment rates of increase with education level, a pattern that is found in the overall population, though at a significantly lower level. In 2021, the employment rate of youth ranged from 26.8% for persons having completed primary education or lower, 61.1% for persons with secondary education, to as high as 79.7% for tertiary-educated workers. The related figures for youth were respectively 4.7%, 38.9% and 67.9% (Figure 4.9).

Figure 4.9. Employment rate of youth by educational attainment, 2021

Source: Authors' calculations based on State Statistical Office, 2022ab.

The newest trends in the labour market, such as the rise of non-standard forms of employment, challenge the official statistical data and show the changing nature of jobs and employment contracts. A recent phenomenon which can be expected to affect the overall labour market status of youth are non-standard forms of employment (NSE), mainly digital platform work, which is on the rise in North Macedonia. An ILO study on NSE in North Macedonia found that some employment relations in the country are not captured by labour legislation, nor do they show in LFS, but instead fall under the auspices of other legislation (commercial law, contractual law, etc.) (Mojsoska-Blazhevski et al., 2021). The study found the existence of informal contractual arrangements and confirmed the rise of online work through digital platforms. While there are no quality national data on the size of digital work in North Macedonia, in 2018 AnalyticsHelp (2018) placed Serbia and North Macedonia among the leading countries in Europe and the world by the percentage of digital workforce relative to the country's total population and total workforce. A more recent overview of digital work in the Western Balkans (January 2022) also shows that North Macedonia is among the leading countries in the region in terms of the number of freelancers and share of the population. In most cases, these freelancers are not registered either as employed or unemployed and are paid via foreign-based accounts. While the study by Mojsoska-Blazhevski et al. (2021) was intended to serve as a basis for drafting the new labour code (and sponsored by the ILO), the recommendations were not taken into account. More details are provided in Box 4.2.

Box 4.2. The rising complexity and flexibility of the labour market in North Macedonia challenges the official employment data

The Macedonian labour market is also changing, although at a slower pace. The last two decades are characterised by a relatively large decline in the unemployment rate (from 36.3% in 2006 to 16.6% in 2020), and a transition from an excess supply of workers to a tight labour market with a lack of workers as reported by employers. These changes have also triggered a change in the dynamics of the worker-employer relationship. While the world of work has changed in North Macedonia as elsewhere, labour legislation and collective bargaining has not. This has left many new types of workers' jobs (such as the gig economy) unregulated and out of the social protection system but has also led to lost tax revenues for the state. LFS data do not show a rise in non-standard forms of employment (NSE) in North Macedonia, which is the opposite of the global trends. However, that may be a result of the

failure of the LFS to capture the growing diversity of employment relationships (agreements). On the other hand, the study by Mojsoska Blazhevski et al. (2021) provided valuable evidence for the use of NSE and the rising forms such as digital platform work.

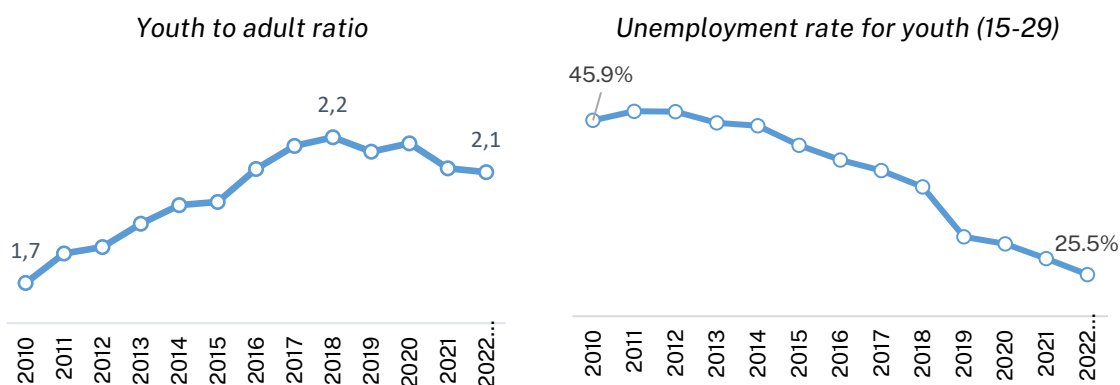
The analysis of digital work in the Western Balkan countries, based on the UpWork job market performed in January 2022, shows that North Macedonia is among the leaders in the region in terms of the size of digital work and share of the population. According to the numbers and activity of freelancers who are registered on the UpWork platform, there are in total 5,000 freelancers from North Macedonia (of the total of 23,000 in the Western Balkans), of which 3,200 freelancers in North Macedonia are active, i.e. 22% of all freelancers from the Western Balkans (whereas the share of Macedonians in the overall population in the region is 12%).

Source: Swiss Agency for Development and Cooperation (SDC) and UNDP (2022)

4.1.4. Youth unemployment

While North Macedonia is registering a continuous decline of the youth (aged 15-29) unemployment rate, levels are still high compared to the adult population, and compared to other countries in the region and the EU. Youth unemployment rates reached 25.5%⁵⁶ in the first three quarters of 2022⁵⁷, from 45.9% in 2010 (*Figure 4.10*, right). Despite this improvement, it is still at a high level compared to adults, with a 2.1 youth-to-adult unemployment ratio in 2021 compared to 1.7 in 2010. Youth unemployment is also affecting relatively more female than males (26% vs 25.2% respectively).

Figure 4.10. Youth-to-adult unemployment ratio (left) and unemployment rate for youth (15–29) (right), 2010 – (Q1-Q3) 2022

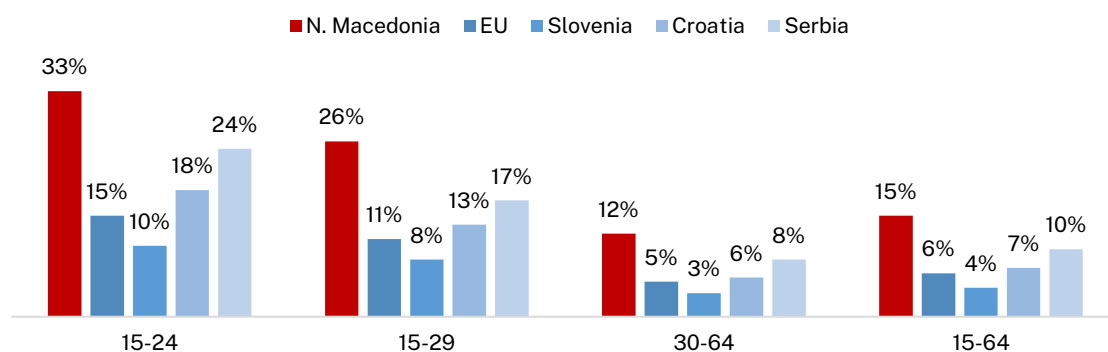


Source: Authors' calculations based on Eurostat, 2022h and State Statistical Office, 2022ab.

As *Figure 4.11* shows, youth in North Macedonia are much more likely to experience unemployment than their peers from EU countries: while 32.8% of youth in North Macedonia were unemployed in 2022, that was the case for only 14.7% of youth in the EU-27.

⁵⁶ This means that somewhat more than a quarter of active young individuals are unemployed.

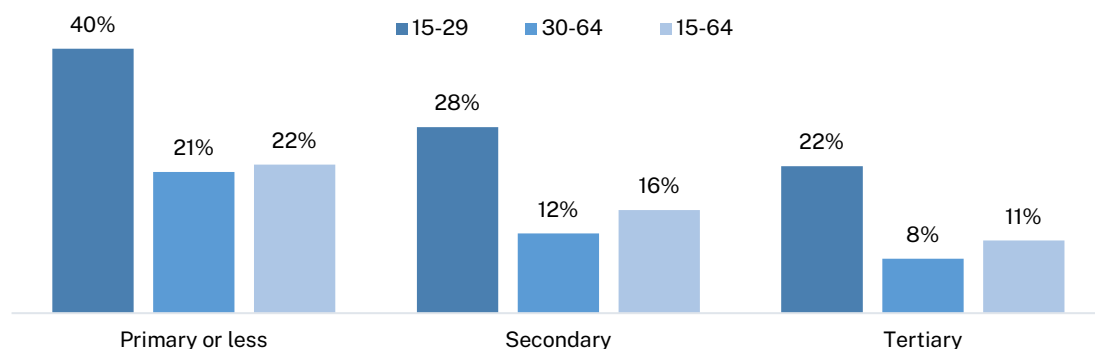
⁵⁷ The unemployment rate for the 15-24 age group was 32.8% and 20.7% for the 25-29 age group in the first three quarters of 2022, compared to the EU-27 average of 14.7% and 8.3%, respectively.

Figure 4.11. Unemployment rate by age group, regional comparison, Q1–Q3 2022

Source: Authors' calculations based on State Statistical Office, 2022ab (for North Macedonia) and Eurostat, 2022f (other countries).

The absence of a well-functioning labour market, quality issues within education, as well as the weak links between education and the labour market in North Macedonia give rise to high youth unemployment, low-quality employment of youth and a high rate of NEETs. It also leads to long unemployment spells for youth. Youth unemployment is predominantly of a long-term nature, as 89.7% of young people were without work for 12 months or more in 2021.⁵⁸ This indicator is worse still for adults (aged 30-64), with almost 94% being long-term unemployed. Young males are more likely to be long-term unemployed than females.

The relationship between education and unemployment reveals a decline in unemployment rates as individuals attain higher levels of education – this pattern is found for all age groups (Figure 4.12). In 2021, the unemployment rate of youth having completed primary education or lower was close to 40%, while for those with secondary education it was 28%, and about 22% of the tertiary-educated active youth population is unemployed.

Figure 4.12. Unemployment rate by age group and education level, 2021

Source: Authors' calculations based on State Statistical Office, 2022ab.

Young individuals with tertiary education face a relatively high unemployment rate compared to adults (28% and 12% respectively), which suggests that the economy is unable to adequately absorb the supply of new workers (labour market entrants) with tertiary education, due to its structure. The economy remains predominantly focused on low-skilled jobs in manufacturing and the low-productivity service sector, as we will discuss further below.

⁵⁸ State Statistical Office, Labour Force Survey data.

4.1.5. Quality of jobs

Education plays a crucial role in determining the types of job opportunities available to young workers, as well as the quality of the matches and jobs that young workers occupy. We have already established that young workers in North Macedonia face low employment rates, whereas this section explores the quality of their jobs/employment relationships.

The analysis in this section shows that there is a general trend of improvement in the quality of jobs for youth in terms of the structure of employment, professional status of the workers, skills composition of the jobs, etc. Still, youth are more likely to fall into vulnerable employment, working informally, on temporary contracts, etc. Education is a strong predictor of the quality of jobs.

Young workers are mainly employed in jobs in services at a medium level of skills, and as waged employees, and more than a quarter of them work on temporary work contracts. There is some improvement in the quality of youth employment of during the analysed period (2011 to 2021) in terms of the skills composition of their jobs, but temporary employment is still at a relatively high level. *Table 4.3* presents the structure of employed people by several characteristics for both youth and adults. It reveals that:

- Young workers in North Macedonia are mostly employed in the services sector (about two thirds), in particular wholesale and retail trade (35%),⁵⁹ whereas industry absorbed slightly more than a fifth of young workers in 2021, including construction at 6%. Few young individuals (about 6%) work in agriculture, as opposed to adults who are particularly more engaged in agricultural activities (11.3%), as well as the industrial sector (21% compared to 24.8% of adults).
- Youth are slightly more likely to be engaged in jobs that require a medium level of skills (58.8% in 2021 against 57% for adults). There is generally a positive trend in the occupational structure of youth employment over the last decade, with an increasing share of young people employed in jobs requiring medium-level skills (from 47.3% in 2011) and a diminishing share being employed in low-skilled jobs.
- The share of part-time jobs in North Macedonia is relatively low for both young people and adults and has decreased considerably for youth. In 2021, only 3.8% of the total number of jobs held by youth were on a part-time basis, as opposed to 9% in 2011.
- Waged employment is the main type of employment for youth, accounting for almost 92% in 2021. This share has been increasing over the years at the expense of own-account and contributing family workers; categories for which the share has dropped (particularly for the latter, from 17.7% in 2011 to 3.9% in 2021). This indicates that the 'vulnerable employment' of youth has decreased over the years, with males more likely to be in this type of employment. Adults are most engaged as wage earners too (82.1%), but the share of workers being self-employed is significantly higher than that of the youth, i.e. 14.7% versus 4.2% in 2021.
- Temporary employment is quite widespread among young workers, with 28.7% of them employed on a temporary basis in 2021; although both youth and adults experienced an increase in the share of temporary employment compared to 2016, amid increased economic uncertainty following the pandemic. This trend may reveal increased vulnerability and uncertainty for employees.

⁵⁹ Compared to 23% for all workers.

Table 4.3. Structure of employment in North Macedonia, 2011, 2016, and 2021

| | 2011 | | | 2016 | | | 2021 | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 15-29 | 30-64 | 15-64 | 15-29 | 30-64 | 15-64 | 15-29 | 30-64 | 15-64 |
| % by sector of activity⁶⁰ | | | | | | | | | |
| Agriculture | 18.5 | 17.2 | 17.5 | 11.8 | 16.4 | 15.6 | 6 | 11.3 | 10.4 |
| Industry | 19.5 | 25.3 | 24.2 | 20.2 | 24.1 | 23.4 | 20.9 | 24.8 | 24.2 |
| Construction | 5.4 | 6.3 | 6.1 | 8.1 | 7.1 | 7.3 | 6.3 | 7.1 | 6.9 |
| Services | 55.9 | 50.4 | 51.4 | 59.8 | 51.8 | 53.2 | 66.2 | 56.4 | 58 |
| % by employment status | | | | | | | | | |
| Employee | 73.7 | 72.6 | 72.8 | 82.9 | 75.6 | 76.8 | 91.9 | 82.1 | 83.7 |
| Employer | 1.9 | 6.5 | 5.6 | 1.8 | 5 | 4.5 | 1.5 | 4.8 | 4.2 |
| Own-account worker | 6.1 | 13.6 | 12.1 | 4.6 | 14.5 | 12.8 | 2.7 | 9.9 | 8.8 |
| Family worker | 17.7 | 7.1 | 9.1 | 10.7 | 4.9 | 5.9 | 3.9 | 3.2 | 3.3 |
| % by educational attainment⁶¹ | | | | | | | | | |
| Less than basic | 1.1 | 3.7 | 3.2 | 0.9 | 1.9 | 1.7 | 0.5 | 1.2 | 1.1 |
| Basic | 15.6 | 22 | 20.8 | 8.6 | 18.9 | 17.1 | 4.1 | 15 | 13.2 |
| Intermediate | 57.5 | 51.2 | 52.5 | 60.2 | 53.5 | 54.7 | 64.8 | 55 | 56.7 |
| Advanced | 25.9 | 23 | 23.6 | 30.4 | 25.7 | 26.5 | 30.6 | 28.8 | 29.1 |
| % by occupational group⁶² | | | | | | | | | |
| High skill | 27 | 29.9 | 29.4 | 27.4 | 29.5 | 29.1 | 30.3 | 31.5 | 31.3 |
| Medium skill | 47.3 | 46.4 | 46.6 | 56.8 | 53.5 | 54.1 | 58.8 | 57.1 | 57.4 |
| Low skill | 22.8 | 22.7 | 22.7 | 14.6 | 16.1 | 15.8 | 9.6 | 10.4 | 10.3 |
| % by working time arrangement | | | | | | | | | |
| Part-time | 9 | 6.3 | 6.8 | 8.3 | 5.1 | 5.6 | 3.8 | 3.3 | 3.4 |
| Full-time | 91 | 93.8 | 93.2 | 91.8 | 94.9 | 94.4 | 96.2 | 96.7 | 96.6 |
| % by type of contract* | | | | | | | | | |
| Permanent | 73.1 | 88.1 | 85.2 | 76.6 | 88.8 | 86.5 | 71.3 | 84.6 | 82.2 |
| Temporary | 26.9 | 11.9 | 14.8 | 23.3 | 11.3 | 13.5 | 28.7 | 15.4 | 17.8 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: Authors' calculations based on ILO, 2023a. *Refers to employees.

Informal employment is steadily decreasing but remains high among the young. According to ILO data, the size of informal employment⁶³ of youth (aged 15-24) was 15.2% of total youth

⁶⁰ Industry consists of the following activities: mining and quarrying, manufacturing, electricity, gas, steam, air conditioning and water supply, whereas the services sector comprises: wholesale, retail trade and repair of motor vehicles, transportation and storage, accommodation and food service activities, information and communication, financial and insurance activities, real estate activities, professional, scientific and technical activities, administrative and support service activities, public administration, defence and compulsory social security, education, human health and social work activities, arts, entertainment and recreation and other service activities.

⁶¹ The less than basic category covers employed people with no schooling (or uncompleted basic education) and early childhood education. The Basic category covers employed people with primary education and lower secondary education. The Intermediate category refers to employed people with upper secondary education and post-secondary non-tertiary education, while the Advanced category refers to short-cycle tertiary education, bachelor's or equivalent level, master's or equivalent level and Doctoral or equivalent level.

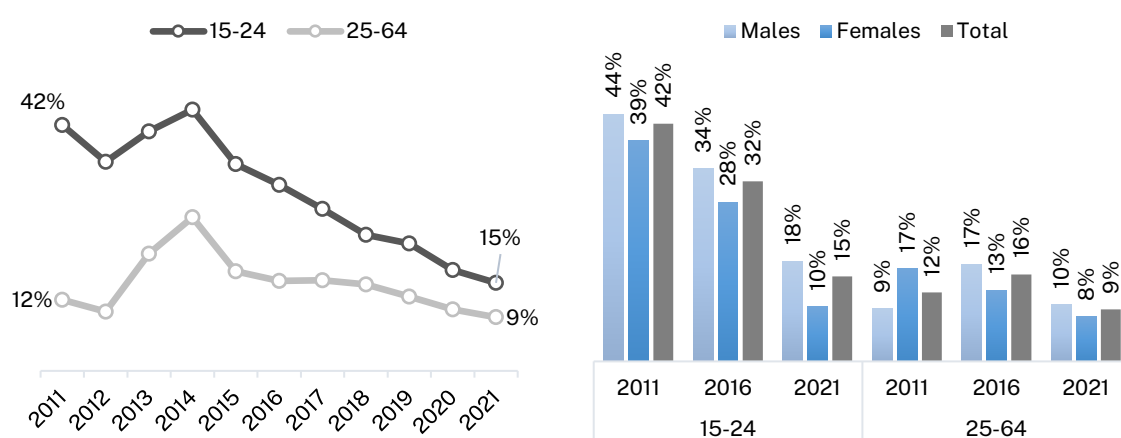
⁶² Highly skilled occupations refer to levels 1 to 3, i.e., managers, professionals and technicians and associate professionals. Medium skill occupations refer to levels 4 to 8, i.e., clerical support workers, service and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators and assemblers, whereas elementary occupations (level 9) are treated as a low skill occupation.

⁶³ Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.). The underpinning reasons may be the non-

employment in 2021, from a high of 45% in 2014. Males are more exposed to informal work than females: with 2 out of 10 young male workers working without a work contract, as opposed to one in ten female workers in 2021. The informal rate for adults (25-64) is also much lower than for youth (Figure 4.13).

Educational level is a good predictor of the probability of working informally, with the probability of being in the informal sector declining with education level. About 61% of workers with low levels of education (basic and below) were engaged in informal work in 2021. Moreover, low-skilled jobs tend to be mostly associated with informal jobs, with 31.6% of workers performing low-skilled jobs being informally employed. Analysed by activity, the agriculture (with over 40% informality) and construction sectors (close to 30%), in comparison to other sectors, tend to be the most linked with informal work.⁶⁴

Figure 4.13. Informal employment rate by age groups and gender, 2011-2021

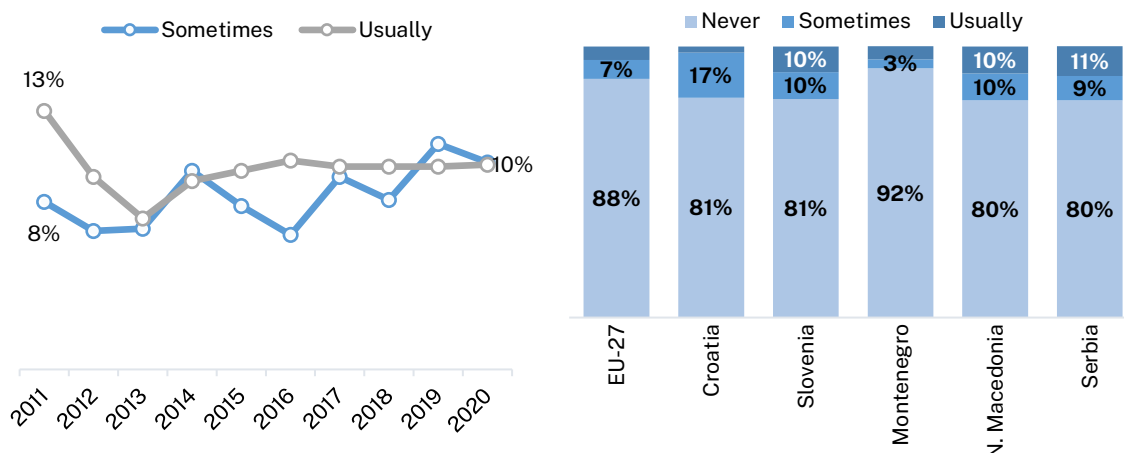


Source: Authors' calculations based on ILO, 2023a.

The occurrence of night work by young workers in North Macedonia, as another indicator of quality of work, is higher than in the EU average, but comparable to the region and some EU countries. The share of employed young persons that usually work at nights has remained constant during the 2016–2020 period, at about 10%, whereas the share of those that sometimes work at nights has been trending upwards over the same period (Figure 4.14, left). Overall, the share of young workers that usually or sometimes work at nights in North Macedonia is above the EU average, but similar to that of Slovenia and Serbia within the region (Figure 4.14, right). Males in North Macedonia tend to be more engaged in night shifts, irrespective of age.

declaration of the jobs or the employees; casual jobs or jobs of a short duration; jobs with hours of work or wages below a specified threshold (e.g. for social security contributions); or lack of application of law and regulation in practice.” (OECD and ILO, 2019).

⁶⁴ Calculations based on ILO data.

Figure 4.14 Young persons (15-29) employed working at night in North Macedonia, 2011-2020 (left) and comparison with other countries, 2020 (right)

Source: Eurostat, 2022i.

Fewer young workers fall into the category of working poor, whereas working poverty is closely related to the educational attainment of workers. The in-work at-risk-of-poverty rate (i.e. the working poverty rate)⁶⁵ in 2020 was lower for young workers (aged 18-24) compared to adults, whereby poverty is more widespread among males overall. The share of poor employed is lower for employees, for both males and females, compared to other forms of employment (self-employed and family workers), as it is shown in Table 4.4. Working poverty is highest for individuals with low levels of education (primary and below), standing at 21.7%, then declines for those with upper secondary, non-tertiary education (6.4%). It is 1.5% for individuals with tertiary education.

Table 4.4. In-work at-risk-of-poverty rate by age group, gender and employment status, 2020

| Age-group | Employed persons | | | Employees | | | Other than employees | | |
|-----------|------------------|-------|-------|-----------|-------|-----|----------------------|-------|-------|
| | 18-24 | 25-54 | 18+ | 18-24 | 25-54 | 18+ | 18-24 | 25-54 | 18+ |
| Total | 5.7% | 8.2% | 7.9% | 4.1% | 6.1% | 5.8 | 13.5% | 17.8% | 16.6% |
| Males | 6.0% | 10.8% | 10.2% | 3.3% | 8.2% | 7.5 | 17.2% | 21.0% | 19.3% |
| Females | 5.2% | 4.6% | 4.5% | 5.2% | 3.5% | 3.3 | 2.4%* | 11.2% | 10.8% |

Source: Eurostat, 2022i, based on the EU-SILC. * Refers to the 16-29 age group.

4.1.6. Returns to education

Education is an investment strategy that should bring individuals (and society) large payoffs. It equips individuals with knowledge, skills and qualifications that lead to improved career prospects, higher productivity and higher earning potential. The Mincer earning function is the most common way to assess how the labour market values education, by assessing the level of returns to education. The transition matrix by levels of education is another tool used. This section uses both these tools in order to assess the returns (payoffs) to education for workers in North Macedonia.

⁶⁵ In-work poverty is defined as employed people who live in households that are poor (their income falls behind the poverty threshold). While unemployment is the main reason for poverty, this indicator also aims to capture employed individuals who cannot meet the cost of living with their income.

Mincer salary equation analysis

Table 4.5 shows the results from the regression analysis of returns to education in North Macedonia, using micro data from the Labour Force Surveys (LFSs). We have explored several specifications of the regression model, starting with a basic one that only includes education variables (specification 1), then adding gender and experience (specification 2), sector of activity (specification 3), occupation (specification 4) and region (specification 5). As expected, adding more variables increases the explanatory power of the model, but also reduces the coefficient on returns to education. We ran the regression for two years, in 2018 (pre-COVID-19) and 2021 (post-COVID-19), to compare and see if the pandemic made changes in the rewards to education. The additional logic behind the comparison is that, in just a few years, the unemployment rate in North Macedonia has declined markedly, and from a state of ‘abundant’ labour, North Macedonia has switched to a situation of a tight labour market in which employers complain about insufficient labour supply.

Table 4.5. Estimated results of the returns to education relying on Mincer salary equation, 2018 and 2021

| | 2018 | | 2021 | |
|------------------------------|---------------------|---------------------|---------------------|----------------------|
| | (1) | (5) | (1) | (5) |
| Secondary, gymnasium | 0.139*** (0.012) | 0.118*** (0.012) | 0.123*** (0.011) | 0.0967*** (0.011) |
| Secondary, VET | 0.161*** (0.011) | 0.105*** (0.011) | 0.141*** (0.010) | 0.0815*** (0.009) |
| Post-secondary, non-tertiary | 0.350*** (0.025) | 0.209*** (0.022) | 0.249*** (0.023) | 0.120*** (0.022) |
| Tertiary (undergraduate) | 0.473*** (0.012) | 0.259*** (0.014) | 0.375*** (0.011) | 0.190*** (0.012) |
| Master's/PhD | 0.697*** (0.026) | 0.413*** (0.026) | 0.528*** (0.019) | 0.277*** (0.019) |
| Constant | 4.356*** (0.010) | 4.466*** (0.059) | 4.567*** (0.009) | 4.635*** (0.051) |
| Observations | 13,179 | 13,179 | 12,962 | 12,962 |
| R-squared | 0.221 | 0.411 | 0.192 | 0.405 |

Source: Authors' calculations based on micro data of LFS 2018 and 2021 (State Statistical Office and International Labour Organisation, 2018, 2021).

Note 1: (1) refers to a specification which includes only the level of education as a predictor of wage, whereas (5) stands for an equation that includes all relevant independent variables.

Note 2: *, ** and *** denote statistical significance at the 10, 5 and 1% level respectively.

The regression results clearly show that acquiring education ‘pays off’ in terms of higher wages for individuals. Here we present the main findings for the year 2021. In specification 1, independent variables (i.e. education) explain about 20% of the variability of the dependent variable (wage), which increases to 41% in specification 5 (see Table 4.5).

Equation (1) shows that, *all else being equal*:

- Individuals who have completed secondary general education (gymnasium) have 12.3% higher wages than individuals who have completed primary education or lower.
- Individuals with VET education earn 14.1% more than those with primary education or lower.
- Completing a master's or PhD brings high returns such that individuals with this level of education earn almost 53% higher wages than those with primary education or lower.

- While data for the two years show declining returns to education between 2018 and 2021, the analysis based on confidence intervals shows that the statistical difference is insignificant, i.e. there is no statistical proof of declining returns to education.⁶⁶

Transition matrix by education level

The labour market in North Macedonia shows some dynamics between different labour market statuses (employment, unemployment and inactivity), and data clearly show that higher education provides more chances of employment and of preserving employment. Another way to examine the value of education is to analyse the labour market flows between two time periods i.e. the transition matrix by levels of education. Table 4.6 below shows the transitions within different labour market statuses between Q2 2022 and Q3 2022 in the Macedonian labour market, by education. An employed person has a high chance of staying in employment in one year's time (94%), while 16% of unemployed manage to find a job (transition to employment) and 5% of the inactive transition to employment directly. The analysis by level and type of education shows that tertiary education provides some safeguards and eases the transition. Inactive individuals who have completed tertiary education have a relatively high probability of entering employment directly (finding a job immediately after completing education i.e. inactivity). Data also show some advantages of VET education compared to the gymnasium in particular, since the unemployed having completed VET education have a relatively high probability of transitioning to employment (24% vs the overall 16%), but they are also less likely to keep their job.

Table 4.6. Transition matrix between labour market statuses, all age groups, Q3 2022.

| | | Employed | Unemployed | Inactive |
|------------|------------------|------------|------------|------------|
| Employed | Total | 94% | 4% | 2% |
| | Primary or lower | 94% | 3% | 3% |
| | VET | 91% | 7% | 1% |
| | Gymnasium | 94% | 4% | 2% |
| | Tertiary | 96% | 3% | 2% |
| | Total | 16% | 77% | 6% |
| Unemployed | Primary or lower | 18% | 75% | 6% |
| | VET | 24% | 70% | 5% |
| | Gymnasium | 14% | 79% | 7% |
| | Tertiary | 18% | 78% | 4% |
| | Total | 5% | 9% | 85% |
| Inactive | Primary or lower | 2% | 6% | 92% |
| | VET | 6% | 12% | 81% |
| | Gymnasium | 8% | 14% | 78% |
| | Tertiary | 15% | 10% | 76% |
| | Total | 5% | 9% | 85% |

Source: State Statistical Office, 2023a.

4.2. Youth transition from school to work and job matching

The relevance of education for the labour market can be best assessed by the length of the school-to-work transition, as well as by the quality of the job matches, two phenomena that are analysed in this section.

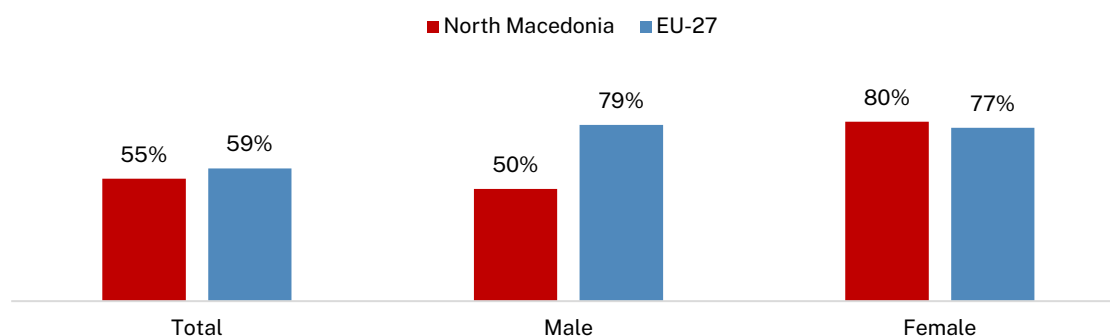
⁶⁶As the labour market becomes tighter (i.e. there are fewer and fewer workers available for jobs), it should be expected that the returns to education increase rather than decline.

4.2.1. School-to-work transitions of youth in North Macedonia

Young Macedonians face a lengthy and difficult transition from education to the labour market, which is an effect of the challenges present both in the education system and the labour market. There are several data sources which provide evidence of the difficulty with which young people in North Macedonia enter the labour market after completing their education. The most reliable study which aims specifically at measuring and explaining the transition of youth from education to the labour market is the ILO study called the school-to-work transitions study (SWTS), implemented as a special module of the LFS in 2014 and 2016 (Mojsoska-Blazevski and State Statistical Office, 2016).⁶⁷

Eurostat data for 2020 also confirm the difficult transition of young Macedonians from school to the labour market. 54.5% of graduates from North Macedonia managed to transition to a job (are employed) 1-3 years after graduation, compared to 78.5% of graduates of the EU-27.⁶⁸ Males are more likely to find employment after graduation than females.

Figure 4.15. Employment rate of recent graduates⁶⁹, North Macedonia and EU-27, 2020



Source: Eurostat, 2022k..

The SWTS study by the ILO provides evidence of the difficult transition experienced by young people when entering the labour market (Mojsoska-Blazevski, 2016). **In particular, only one fifth of youth aged 15-29 had completed their transition to stable and/or satisfactory employment.**⁷⁰ The majority of youth had not started their transition process because they were still in school (43.3%) or still in transition (35.2%), i.e. either still looking for work or employed in non-satisfactory temporary work or self-employment. For those who transitioned, **the average duration of transition from graduation (or school exit) to their first stable or satisfactory job is 31.2 months, or 2.5 years.** It takes more time for young men than young women to transition to a stable job, at 37 versus 23 months respectively. The combined finding of the SWTS and Eurostat data show that it takes longer for young women to transition from school to work (and many of them stay away from the labour market), but they are more likely to transition to stable employment.

⁶⁷ While these data are of high quality, they may be outdated by now, given the developments in the labour market in North Macedonia examined in *Section 4.1*.

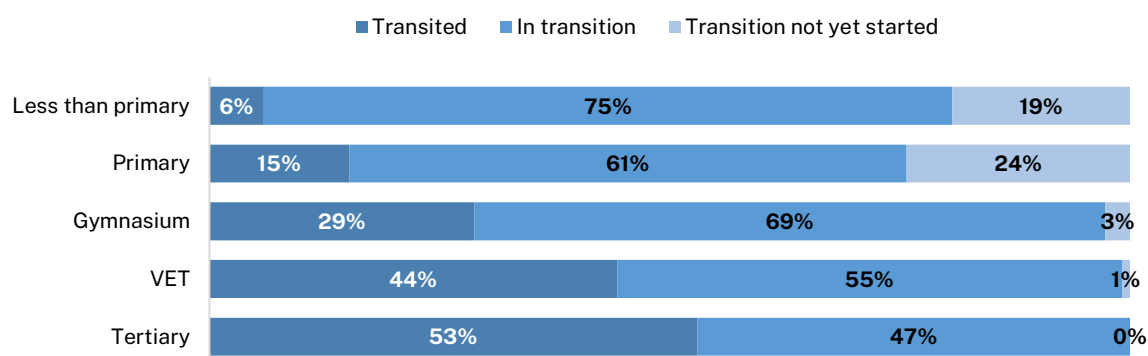
⁶⁸ The indicator covers the 20-34 age group and includes graduates from ISCED levels 3-8 (upper secondary, post-secondary non-tertiary and tertiary education).

⁶⁹ Recent graduates are defined here as persons aged 20-34 who, firstly, have attained at least upper secondary education as the highest level of education, and secondly have not received any (formal or non-formal) education or training in the four weeks preceding the survey, and thirdly have successfully completed their highest educational attainment 1, 2 or 3 years before the survey.

⁷⁰ A person is considered to have 'transitioned' when settled in a job that meets very basic criteria of 'decency', namely permanency that can provide the worker with a sense of security (e.g. a permanent contract), or a job that the worker feels personally satisfied with. The ILO is introducing a new quality element to the standard definition of labour market transition.

The ILO study further found that **education matters in a young person's labour market transition**, as evidenced in *Figure 4.16*. While 53% of tertiary education graduates transitioned to stable employment, that was the case for only 5.9% of youth having completed less than primary education. Youth with VET education were more likely than those with a gymnasium education to have transitioned, which is expected, given that VET education should lead to direct labour market entry.

Figure 4.16. Transition stages of young people by education, 2014



Source: Mojsoska-Blazevski, 2016.

Further analysis highlights:

- **Youth who remain in transition are likely to find themselves staying within this category for an extremely long period of time.** Data show that the youth remaining in transition have already spent, on average, six years (71.6 months) within the category (meaning they have been unemployed, in non-satisfactory self-employment or temporary employment, or an inactive non-student with plans to work or any combination of the three categories).
- **Youth in North Macedonia rarely accept a job offer as a steppingstone to a better job but** are waiting as unemployed people for the 'right' job. Indeed, the typical youth experienced only one spell of unemployment in their transition path, but the spell was long, averaging 37.1 months or slightly longer than three years.
- **Young people have very optimistic expectations about their occupation (profession) and wages**, which partly explains the long transition to a job. For instance, while the occupation group 'professionals' is the most sought after by unemployed youth in the country, far fewer young people are actually employed as professionals.⁷¹ Similarly, there is also a substantial gap between the share of youth seeking work as technicians and associate professionals and the share of youth currently working in the occupation.
- **The main obstacle to finding a job, in the view of the surveyed youth, was the lack of available jobs** (reported by 54.2% of them), whereas 14.4% thought that the main obstacle to finding a job was being underqualified for the job, followed by low wages and lack of work experience.

⁷¹ The occupational 'professionals' have the third highest rank of currently employed youth).

4.2.2. Job matching and skills imbalances

In addition to the length of the transition from school to work, the quality of job matches also serves as an indication of how relevant education is to the labour market. Countries experiencing a higher level of skills mismatch are expected to have lower productivity and growth compared to countries with a lower skills mismatch. This mismatch in skills has an impact on individuals' earnings, creating differences between those who have matched skills with their jobs and those who do not. While labour market imbalances generally refer to differences between the demand and supply of labour, skills mismatch specifically focuses on imbalances in the demand for or supply of particular skills or qualifications. A skills mismatch can occur even when the overall supply of labour is sufficient to meet the total demand in terms of numbers but falls short in terms of required skills or qualifications. Mismatches can take two forms: vertical and horizontal. A vertical mismatch occurs when the level of skill of a worker does not fit the level required for the specific occupation or task. Vertical mismatches can manifest as over- and under-education, or over- and under-skilling. A horizontal mismatch occurs when the type or field of qualification does not adequately match the job requirements.

Ironically, high unemployment in North Macedonia is accompanied by high skills mismatches. Mismatches restrict productivity growth and are costly for both society and individuals. Calculations based on available LFS data and previous studies show that horizontal mismatch is in a range between 30% and 45%, whereas vertical mismatch is in a range between 27% and 53% (Mojsoska-Blazevski, 2019).

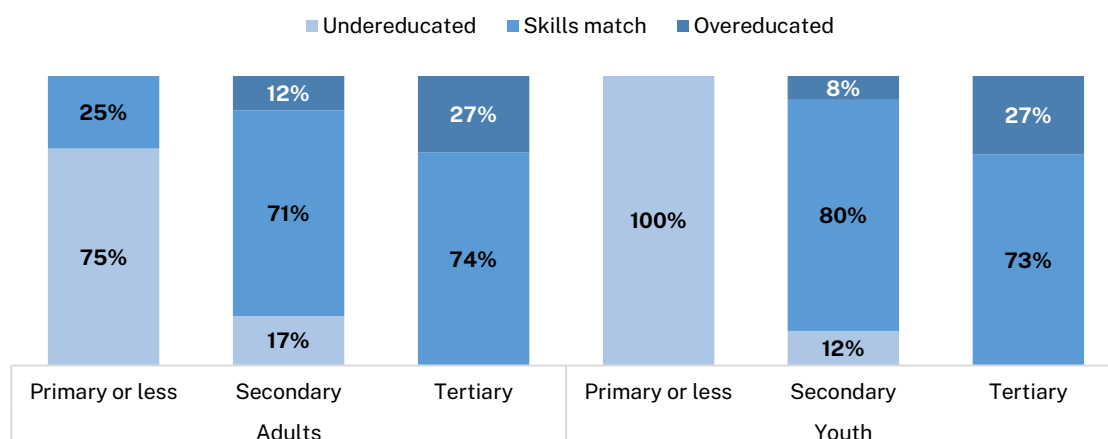
Vertical mismatches

Figure 4.17 presents the findings of the statistical calculation of vertical mismatches in the labour market of North Macedonia, the top panel being focused on young workers (aged 15-24) and the lower one on adults (25-64). **Seventy-six per cent of employed young workers in North Macedonia are well matched to their job, compared to 64.3% of well-matched employed adults.** In other words, young Macedonian workers manage to find a job whose requirements match their educational attainment. About 14% of employed youth are undereducated (working in jobs that require higher educational attainment) and about 10% are overeducated (holding higher skills but working at jobs that demand secondary or tertiary education). Relative to other countries, young Macedonians are more likely to work in a well-matched job than young workers in Germany and Slovenia, but less likely than young people in Bulgaria (91% well matched) and Hungary (78.5%).⁷²

The normative approach for the calculation of vertical skills mismatches shows that, in 2021, the vertical mismatches were slightly lower than in 2011. However, there is some deterioration compared to 2016 (Figure 4.18). Of those who are not well matched to their jobs, the phenomenon of under-education is generally more prevalent relative to over-education. There are differences in matching between employees and the self-employed. For employees, there is a decline in the share of those that are undereducated and an increase in the share of those that are overeducated (from 14.9% in 2011 to 18.2% in 2021). Comparatively, mismatches in North Macedonia are not that high, however, the difference is that over-education is a more prevalent phenomenon than under-education, a result which is the opposite of the statistical calculations presented above.⁷³

⁷² Several comparator countries are used: Bulgaria, Germany, Hungary and Slovenia. Calculations are available from the authors upon request. The choice of the comparator countries includes neighbouring countries, New Member States of the EU and Germany, and is partially affected by data availability.

⁷³ The difference between the two methods is that the statistical method compares one's level of education with the average actual level of education for a specific occupation, whereas the normative approach does the comparison with the normative requirement for education for the occupation. These different results indicate that workers are proportionally more overeducated for jobs (based on job requirements), but since the phenomenon of overeducation is prevalent it creates, in reality, a higher average actual level of education for occupation and hence more workers are statistically undereducated.

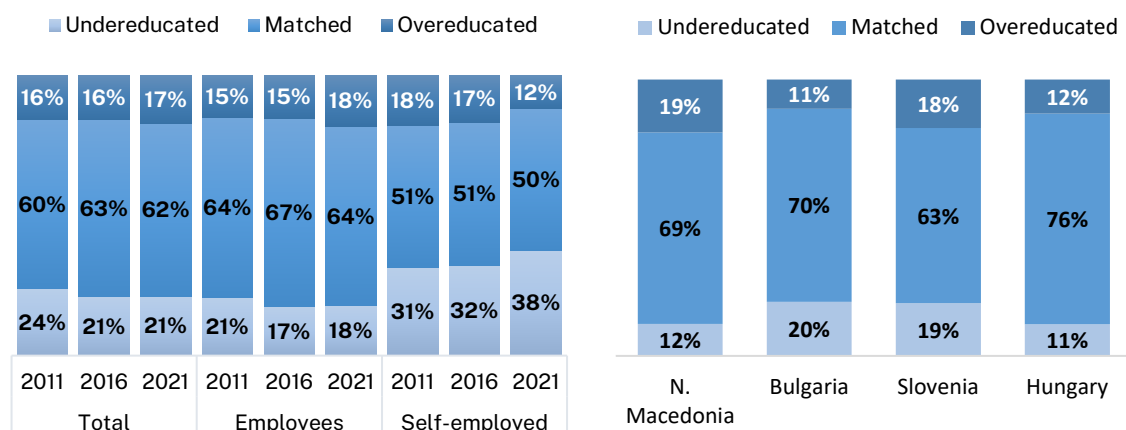
Figure 4.17. Vertical mismatch (education vs occupation⁷⁴), 2020

Source: Authors' calculations based on Eurostat, 2022I, 2023a.

Note: Calculations are made using the statistical approach. This approach is based on comparing the educational attainment of those in employment with the average level of educational attainment for their occupation (average based on all workers in an occupation), using two-digit International Standard Classification of Occupations (ISCO) occupational groups. Each individual is assigned a status depending on whether their level of education corresponds to the average for their occupation.

There are few large-scale studies that calculate the extent of vertical mismatches. The common finding of those studies is that **vertical mismatches are less of a concern than horizontal mismatches and tend to be higher early in a career, although there are large variations in the magnitude of the issues across the studies.** The study by Mojsoska-Blazevski (2017), which analyses the data from the first tracer study in North Macedonia finds a vertical mismatch of VET graduates of 34%, and a mismatch of 40% of university graduates (with under-education dominating over over-education). The World Bank study (published as World Bank, 2016) assessed both sides of the labour market – the supply of workers and skills (through a so-called STEP survey) and the demand side through an employers' survey. A comparative report published by the World Bank using STEP data (Handel et al., 2016) found a much smaller vertical mismatch of 27% in North Macedonia (of which 22% is due to over-education) and concluded that this mismatch was relatively small compared to the middle- and low-income countries examined in the study. The largest vertical mismatch was found in the study by Mojsoska-Blazevski and Bartlett (2016). The graduate survey implemented for the study shows a high degree of vertical skill mismatch, as 53% of university graduates reported that their level of qualification was not matched to the skill requirements of the job they held (34% of graduates hold a job that is above their level of qualification, while 19% hold a job that is below their level of qualification).

⁷⁴ Disaggregation into high, medium and low-skill jobs is based on employment data by European socioeconomic group, which is closely related to ISCO (International Standard Classification of Occupations) classification. A document published by the EU is used to make the link between the two classifications, in the absence of available matching data for young by the ISCO and ISCED (International Standard Classification of Education) classification.

Figure 4.18. Educational mismatch by status in employment, normative approach, in North Macedonia, 2011-2021 (left) and in neighbour countries, 2021 (right)

Source: ILO, 2023a.

Horizontal mismatches

Measurement of horizontal mismatches is more difficult and depends on the quality and depth of the data on workers' skills and the job description. The more detailed job requirements can be measured in terms of skills or qualifications, the more likely it is that (some) horizontal mismatch is found; whereas the less detailed data is, the less likely it is to identify a horizontal mismatch, even if it exists.

Unfortunately, there are no recent data for North Macedonia which can be used to calculate the level of horizontal mismatches. There is no Labour Market Information System (LMIS) in place and there is a failure to regularly perform skills needs assessments and predictions. The last studies calculating the horizontal mismatch are based on data from 2014–2016 (Mojsoska-Blazevski, 2017; Mojsoska-Blazevski and Bartlett, 2016), the STEP (Skills Measurement Survey⁷⁵), and an employer survey by the World Bank implemented in 2014 and 2015 data (World Bank, 2016). The analysis presented below uses the data and findings of the 2014–2016 studies, however with a caution that, in the meantime, substantial reforms were implemented in the VET curricula, especially with regards to the expansion of the practical training/work experience of students, as well as an introduction of dual VET education. These reforms, at least in part, were initiated based on the findings of the World Bank study. Due to the different methodologies used, the findings of the above studies are diverse (regarding the size of the mismatch) but not contradictory, i.e. they all reach similar conclusions.

The World Bank study (2016) argues that the skills mismatches in the country are mainly related to the lack of skills. **The report concluded that the problem of lack of skills is not tied to a specific industry or occupation but is instead a general problem of low-quality skills acquired in education and training, which prevents firms from further expansion and holds back productivity growth.** The findings showed that:

- Although the demand for labour was relatively small, firms, especially firms that were growing, considered lack of skills as one of the major limitations in expansion.
- The VET system is not producing skills: the most significant skills gaps were found for workers holding a VET education, irrespective of the economic sector or occupation they are employed in.
- Employers complained about the skills of their current employees, i.e. that they lack the skills to perform their work effectively. Though it is worthwhile mentioning that firms

⁷⁵ Skills Toward Employment and Productivity Survey.

were not that willing and open to provide or finance the training of their employees themselves.

- The employer survey showed that the skills gap is related to a range of job-specific technical skills, as well as generic skills. Job-specific technical skills are important for all employers, and the need for such skills depends on the sectors of operation (for example plant and machine operators in the case of automotive industries, versus technicians and professionals, in the case of information and communications technology (ICT)). Employers also reported a need for a range of higher-order cognitive and socio-emotional skills, including communication skills and people skills (for managers and professionals) and basic cognitive, time management and people skills. Workers are also expected to have many transversal skills, e.g. team working skills, communication skills and similar. Though the study found that employers were not able to articulate exactly which technical skills were in insufficient supply they could identify socio-emotional skills and similar skills as skills gap.
- Employers also frequently complained about job applicants' lack of work experience.
- Findings show that education pays off in terms of continued skills use, and skills development on the jobs. Moreover, individuals with higher levels of education tend to use more cognitive and other skills on the job.

The 2016 tracer study of VET and higher education graduates in North Macedonia showed that young people are rarely well matched to their jobs (early in their careers). **Still, young workers with tertiary level education were better matched than those with lower levels of education (Mojsoska-Blazevski, 2016). Horizontal mismatches are generally higher for VET graduates relative to university graduates.** About 45% of VET graduates self-reported that they do not have the skills required by the job (horizontal mismatch), whereas only half (52%) responded that their own field of study was most suitable for the job they hold. On the contrary, 69% of the university graduates are horizontally well matched i.e. they believe their current job requires the same or a related field of study (horizontally well matched), whereas 13% of respondents stated that the job requires completely different skills (i.e. field of study), which is a proxy for the horizontal mismatch (Mojsoska-Blazevski, 2017).⁷⁶ Mojsoska-Blazevski and Bartlett (2016) calculated a slightly higher vertical mismatch for university graduates of over one third (37%).

Graduates who reported that their job does not match their course of study in most cases considered their current job to be a stepping stone to a more appropriate job, or that they had not found a more appropriate job (Mojsoska-Blazevski, 2017). What was somewhat unexpected in the study was the high level of job satisfaction (76% of employed survey participants), particularly with the possibilities for applying the acquired competencies in their current job, clear and regulated work tasks and a good work atmosphere. On the other hand, they were least satisfied with the salary.

The study by Mojsoska-Blazevski and Bartlett (2016) on the labour market experience of university graduates shows a very low internal efficiency of the university education system in North Macedonia. Data collected through a survey of university graduates show that many of the students who graduate face the prospect of unemployment and, of those who do find a job, many are also in jobs that are not matched to their field of study or their level of qualification. These issues point to a low internal efficiency of the combined HE and labour market systems. In particular, combining the low completion rate of tertiary education, about 50%, an employment rate of 54%, and a relatively high vertical mismatch of youth employment (47%), Mojsoska-Blazevski and Bartlett calculate that the internal efficiency of the combined HE and labour market systems is just 12%.⁷⁷ In other words, of every hundred new students that enter the HE system in any one year, only twelve will eventually graduate and find a well-matched

⁷⁶An additional 10% stated that the job did not require any specific field.

⁷⁷ Data are from official statistical sources for 2016 (for the completion rate) and findings of graduates and employer surveys implemented within the particular study. The situation has not changed to date: in 2021 the completion rate was slightly above 50% and only 26% of graduates completed their studies on time (State Statistical Office).

job. Such low internal efficiency of the system leads to a large waste of taxpayers' resources, as well as significant lost potential for production and growth.

The findings of Mojsoska-Blazevski and Bartlett (2016) point to **few factors that have a significant influence over whether a university graduate finds a well-matched job, namely field of study, nature of skills gained, mode of teaching, etc.:**

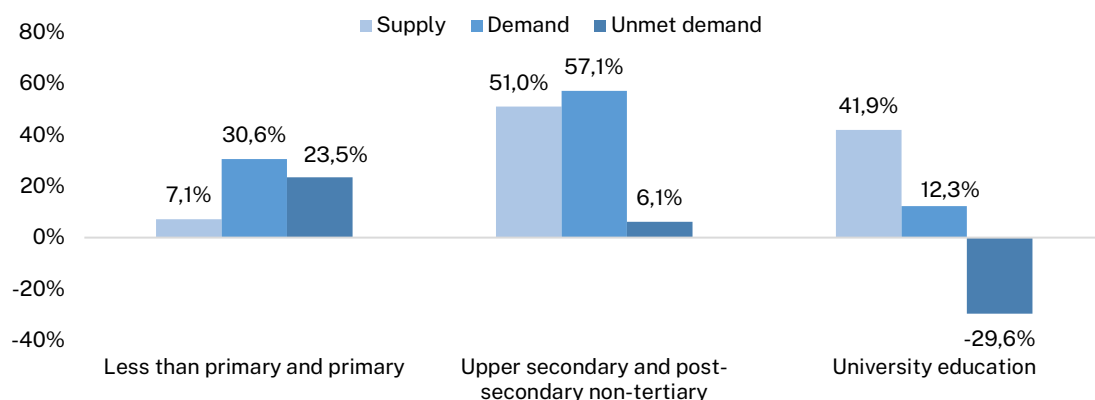
- *Field of study.* Some graduates encounter difficulties in finding a job, due to the subject they studied at the university. The degree of matching varies by field of study with better vertical matching of graduates from Engineering, Manufacturing and Construction, while graduates from Education and ICT fields of study are less likely to be well matched.
- *Nature of the skills* learned at HE institutions. Graduates who (reported to have) studied and learned subject specific skills were much more likely to have a well-matched job. Also, learning decision-making skills, interactive skills such as adaptability, and planning and organisational skills, are all associated with a greater likelihood of finding a well-matched job than graduates who learn more traditional cognitive skills.
- *Mode of teaching.* Graduates who reported that their study programme was delivered predominantly through lectures in large groups and on the basis of rote learning of facts had a significantly lower chance of finding a well-matched job compared to those who were not taught by such methods. Problem-solving skills and creative thinking significantly contribute to a well-matched job.
- Some additional factors contributing positively to a well-matched job are the assistance received from the HE institutions in finding a job; family support; studying at private HE institutions, etc.

4.2.3. Labour demand and skills deficits

This section examines the demand for workers and skills based on the available employer surveys. The Survey on Needed Skills in the Labour Market in the Republic of North Macedonia is a regular, annual survey conducted by Employment Service Agency (2022). The survey is based on a sample of private sector employers with seven or more employees stratified by region and activity of the employer.⁷⁸ All medium and large employers are included in the survey, and the rest are chosen randomly until the planned coverage is met. The survey only takes into account planned employment for the next 12 months segregated by activity, geographic region, level of education of the new employee (primary, secondary, post-secondary or tertiary), type of education and additional relevant skills needed.

The demand survey by the Employment Service Agency (ESA) shows that the economy still creates most jobs for workers with secondary education (about 57%), but the demand is also still high for workers with basic education (30.6%). The 2021 survey showed that, of the total new planned jobs (demand), 45.9% will be for workers who have completed secondary education and an additional 11.2% for workers who have completed either secondary or upper secondary, non-tertiary education (ESA, 2022). The demand for workers who have completed only basic education is still high, at 30.6% of the total labour demand, while the demand for workers with a university education is low at 12.3%. Unfortunately, the survey does not distinguish between general and vocational secondary education. This structure of demand differs significantly from the structure of the supplied youth workers, the labour market entrants (age 20–29). For instance, only 6.6% of the active population aged 20–29 holds only basic education and 31.7% have completed a university education (*Figure 4.19*).

⁷⁸ In 2022, the survey involved 3,214 employers with 7+ employees ЊХ, with a response rate of 81.7%.

Figure 4.19. Comparison of overall labour demand and supply of youth by education level, 2021

Source: Authors' calculations based on data from Employment Service Agency (ESA), 2022 and Eurostat, 2023a.
 Note: Supply is calculated as active population aged 20-29.

Besides formal education and qualifications, **employers highly value knowledge of foreign languages and IT skills of workers, which should be proven by formal certificates.** The following soft skills were also highly rated by employers: communication skills, responsibility, confidentiality, teamwork, data analysis, flexibility, etc.

Within the Project 'Education for Employment in North Macedonia' (E4E@mk), several analyses were recently conducted (2019–2022), such as 'Analysis of the Predicted Needs of Occupations in the Key Seven Sectors of Occupations', 'Analysis of the Supply and Demand of skills in five planning regions in the Republic of North Macedonia', and so on. These analyses assess the labour demand and supply and attempt to measure skills deficits by qualifications (as per the National Qualifications Framework – NQF) and by region. **The common finding in all of these studies is a lack of workers (shortage of labour supply), as well as a lack of qualified workers, across all sectors and regions.** For instance, a recent publication (2021) by the Economic Chamber of North Macedonia 'Synergy of the partners in providing market-oriented vocational education and training' (Economic Chamber of North Macedonia, 2021) notes that the education in the country does not reflect the real needs of business and fails to produce a sufficient number of skilled/professional staff.

The Analysis of the Supply and Demand of skills in five planning regions (Novkovska, 2021) shows that **labour demand has increased in recent years, as assessed by the job vacancy rate.**⁷⁹ **Close to one third (29%) of surveyed companies reported that they face unmet labour demand, i.e. they are not able to fully fill the open job vacancies.** This unmet demand is lowest in the region of Skopje (17%) and then increases to 43% in the east region. The analysis shows that unmet demand is inversely related to the average wage in the region, i.e. regions with lower average wages face higher unmet demand. While all five regions face a decline in unemployment, unfortunately this has been achieved by a reduction in labour supply rather than by an increase in the employment rate. The study also assesses the skills/labour deficits by region and proposes which qualifications should be the focus of the VET schools and programmes (and the educational policy) by region. These findings should also be fed into the plans of the regional VET centres.

The findings of this study point to an unmet demand for workers, as well as skills deficits. In other words, it is both a matter of quantity (insufficient labour supply) and quality (qualifications and knowledge) of the supplied labour. The situation is different across the

⁷⁹ There are eight NUTS-3 statistical regions in North Macedonia. This study is a continuation of a previous study that assessed the labour supply and demand in the remaining three regions.

regions, with the capital Skopje being least affected by labour shortages (and also paying the highest average wage). In 2020, 78% of the surveyed companies had open job vacancies (were hiring) and only 18% were able to fully accomplish their labour expansion plans. The limited number of candidates with suitable qualifications and work experience was the main reason why companies were not able to meet their demand for workers (Table 4.7).

Table 4.7. Reasons for failure of the company's attempts at hiring labour, 2020

| Reasons for the failed attempts at hiring labour | |
|---|-------|
| Limited number of applicants | 19.5% |
| Limited number of candidates with suitable qualifications and work experience | 46.8% |
| Terms of employment or salary are not sufficiently attractive | 10.4% |
| Other | 23.4% |

Source: Novkovska, 2021.

Employers generally expressed dissatisfaction with the skills acquired through the VET education and adult education systems, and while many of them were open to cooperating with education institutions, few are doing so (Novkovska, 2021; interview with Economic Chamber of Commerce). Only 26% of the surveyed companies believed that the practical skills of the VET graduates are good and meet the requirements of their companies, and 42% agree that VET graduates hold relatively good theoretical knowledge. The main form of cooperation is in the provision of Work-Based Learning (WBL), which should lead to better practical skills and work experience among VET graduates.

Similar findings emerge from the 'Analysis of the Predicted Needs for Occupations in the Key Seven Sectors of Qualifications' (Economic Chamber of Commerce, 2019).⁸⁰ About 60% of the surveyed companies reported an insufficient supply of qualified workers with specific skills.

This finding is the same across all industries, size of company and type of ownership. **The unmet demand ranges across the whole spectrum of skills and qualifications, from manual workers to engineers and medical doctors, and across all occupations and regions in the country.**⁸¹ In the view of the employers, the lack of labour force is due to high emigration, high turnover among workers (competition among employers for acquiring workers), as well as low-quality education which does not provide the skills and knowledge required for the jobs, nor practical experience. Applied knowledge and WBL are viewed as key considerations for employers when hiring workers. Most employers reported that they were willing to provide initial on-the-job training to new employees (as well as training to their current employees), however, most of them still prefer to employ already trained staff. The study proposes a higher involvement of companies in the education and training of the workforce (starting with their engagement in VET education and in dual education), preparation of an analysis of the workforce deficits per sector, preparation of standards for occupations and qualifications based on needs and with the involvement of the companies, etc. Moreover, the study argues for strengthening employers' cooperation (the Economic Chamber of Commerce) with the ESA, in terms of programmes for pre-qualification and re-qualification of registered unemployed people based on the needs of companies.

The analysis presented above, and the available related studies, provide several explanations for the difficult school-to-work transitions, as well as labour market mismatches. **The main**

⁸⁰ The analysis focused on the following seven sectors of qualifications from the National Qualifications Framework: machinery, hospitality and tourism, chemistry and technology, agriculture, personal services, health and social protection, electro-technicians, and two additional sectors of qualifications in construction, geodesy and law and trade.

⁸¹ A detailed list of the occupations in demand can be found in Annex 2 of the original report.

factors that constrain a successful transition of youth from education to work are (Mojsoska-Blazeovski, 2019; World Bank, 2016; World Bank, 2018) the following:

- Low job creation, including lack of formal jobs.
- Inadequate skills of the labour market entrants, related to the low responsiveness of education to external demand, low preparedness and quality of teachers, outdated teaching methods, etc.
- Lack of work experience of the young workers (considered very important by employers), and limited exposure to the world of work.
- Lack of high-quality and systematic information on the skills needs of employers, despite the country having so far invested in a range of instruments for the collection of labour market and skills data with broad support from donors.
- Low involvement of employers in educational policy development, curricula design and the delivery of practical training, and their unwillingness to bear the costs of the initial on-the-job training.
- The signals between education and labour market are pretty weak, but also related to (formal) qualifications rather than skills, as Macedonian employers continue to reward diplomas rather than skills.
- Weak career guidance system and high expectations of young people about jobs and wages.

4.3. Practical knowledge and work-based learning

The previous section identified **lack of work experience and practical knowledge as key impediments to higher employability of workers**. Hence this section examines the practices and curricula of VET schools and universities from a perspective of the provision of students' practical knowledge.

4.3.1. Secondary vocational education

The terminology that the VET system uses to describe work-based learning (WBL) or practical learning is specific. In particular, the acting law on VET uses only the term 'practical training' and 'summer practice'. The new draft law on VET (North Macedonia, 2021c and 2024), prepared in cooperation between the Ministry of Education and Science (MoES), the VET Centre and the Chambers of Commerce, defines practical education as a set of activities for acquiring knowledge, skills and abilities for employment, which is organised as practical teaching, WBL, summer practice and training at a VET institution and at an employer.

The VET system in North Macedonia comprises several types of programmes (see *Diagram 4.1*):

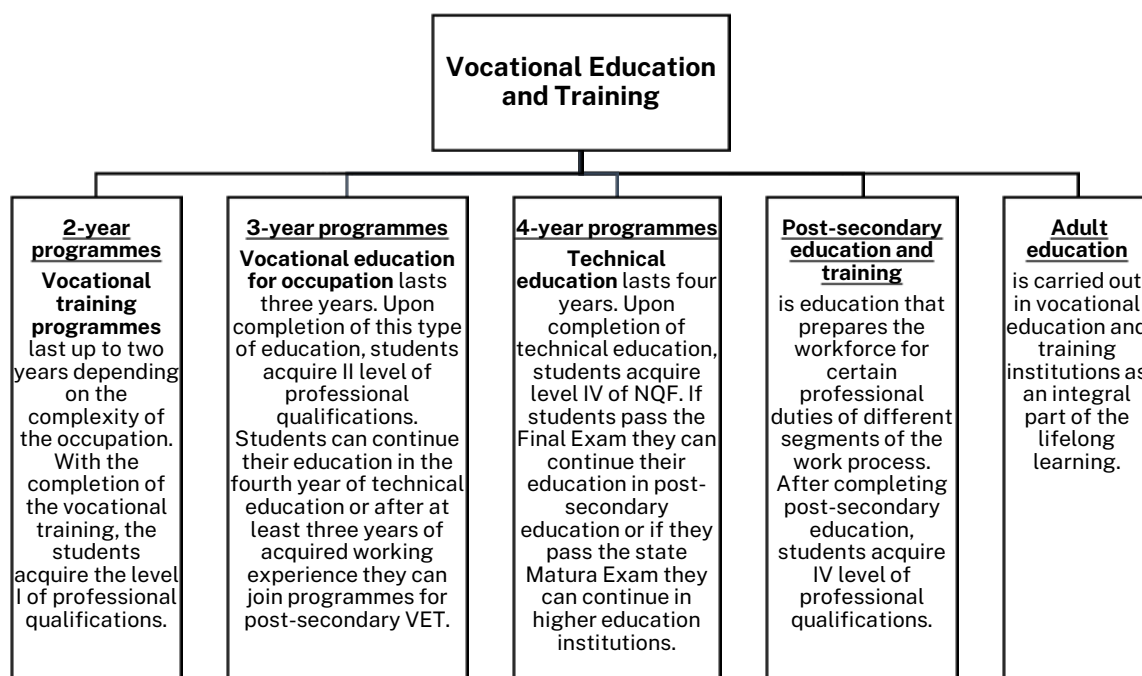
- **Four-year vocational** education (nationally termed as technical), which envisages that students perform WBL (throughout the school year in years 3 and 4) and summer practice (5 to 20 days, depending on occupation and year of study in year 1, year 2 and year 3). The vocational education component (VET) and WBL are absorbing a growing share of the curriculum across the education cycle. In particular, during year 3 the approximate ratio between general (GE) and VET is 40/60. In year 3, longer periods of WBL or in-company training were introduced into the school year in 2019/20 for three pilot qualifications and in the 2020/21 school year for all qualifications. The total number of VET time/classes in year 3 is 720, while the total WBL classes in a company is 144, plus 15 days of summer practice. In year 4, the total number of VET time/classes is 660 and the number of WBL classes in a company is 198. The primary focus of year 4 is on quality-assured WBL,⁸² taking between 50% to 60% of available VET time (six classes per week). The approximate ratio between GE and VET is 30/70 during year 4.

⁸² Implemented in companies which employ workers from occupations that are compatible with the specific VET school.

- **In the three-year VET (nationally called vocational education for occupations),** the students have practical teaching during the school year (delivered on school premises or in a company decided by the schools) with a duration of between 6 and 16 classes per week, depending on occupation and year of study, as well as a summer practice of 10 to 20 days in years 1 and 2.
- **In the vocational training (2 years VET)** students have practical training during the school year (combined delivery in school and in company) with a duration of 14 classes (lessons) per week, as well as a summer practice (10 days).
- **In the so-called ‘dual model of education’,** students have increased WBL and practical training in the company during the school year. The increased number of WBL classes means that WBL in the company is introduced in the second year, with 144 classes per year, followed by an increase in WBL in the third year, with 288 classes per year (versus 148 classes for teaching without dual education) and an increase in the number of classes in the fourth year, at 330 hours per year (versus 198 in teaching without dual education). Furthermore, summer practice in dual classes is not defined by a framework of an absolute number of days spent at the employer, but a minimum number of days per qualification, which leaves flexibility for arranging more time spent in the company. The curricula are devised according to the needs of the company where the students complete the practical training or WBL.

The network of vocational education and training in North Macedonia consists of 75 secondary schools that provide vocational education and training (46 are VET-only schools, and 29 are schools that offer combined general and vocational education). The total number of students attending vocational education and training in the 2023/24 school year is 42,153. Four-year programmes account for approximately 93% of all VET students and three-year programmes.

Diagram 4.1. Vocational Education and Training system: duration of programmes, level of qualifications and vertical mobility within the system



Source: Law on Vocational Education and Training and law on NQF.

The systematic organisation and modalities of the WBL of students from secondary vocational education have been part of continuous reform processes in the education system of North Macedonia. The main aim of these reforms is to ensure that vocational education produces the right skill sets that meet labour market needs. The reforms are predominantly focused on increasing the share of practical training/learning in the VET curricula and improving

quality assurance. Some of the recent reforms in this area include: curricula reform of the four-year vocational education in 2017, by increasing the number of vocational subjects compared to general subjects; the inclusion of WBL and summer practice as a mandatory condition for the transition from one year to the next; introduction of the so-called ‘dual education’; the opening of regional VET centres and drafting a new law on VET expected to be adopted by the end of 2023, etc. In 2020, the VET Centre prepared a Concept note for WBL, followed by Guidelines for WBL in 2021, based on the Guidelines for summer practice already developed in 2020. Although it is reasonable to anticipate that the VET curriculum reforms, particularly the expanded practical learning hours, will enhance students’ skill development, it is important to note that the first group of graduates from the reformed VET programme completed their education in 2022. Therefore, it is too early to evaluate the results of the reform. However, initial data available on the employability of the graduates show that the first generation from the three-year dual model of education were employed immediately after completion by the company where the WBL was completed. While there are no exact data on the employability of the graduates from four-year dual education, information collected through interviews also showed high employability of those graduates.⁸³

WBL is provided by TVET schools in their own workshops and laboratories, at an actual company established by the TVET school⁸⁴ or at the premises of an employer. By function, organisation and content, the summer practice is considered a type of WBL. It is organised after the end of the school year except for the last year of education and, as a rule, it is conducted continuously and in relevant companies. By exception, summer practice may also be organised by the school itself if it possesses organised and relevant production or other service-related processes, such as a registered company or similar.

Systematic collection of WBL data (including summer practice) is currently not integrated within the EMIS system of the MoES, and the existing data quality and depth do not meet the desired standards. Instead, data are collected by the VET Centre in Excel tables (through Microsoft Forms). The data are not gender-segregated, nor disaggregated by year of study (they cover all years of study). The percentage of VET students attending WBL has continuously increased over the years, from 75% in the 2017/18 school year to 82% in the 2021/22 school year.⁸⁵ This increase is mainly due to the newly reformed 4-year VET (introduced in 2020 nationwide), where WBL is mandatory in the last two years of study. More than half (53.5%) of actual WBL in 2021/22 was completed at an actual company (up from 36% in 2017/18). The number of companies included in WBL increased from 1,292 to 3,817 over the same period. The data collected from the VET Centre for 2021/22 shows that the fields of study with the highest percentage of students included in WBL are economics, law and trade, health and social protection, catering and tourism, while in mechanical engineering, electrical engineering and chemistry and technology the fewest students are involved in WBL.

Cooperation between institutions for VET education and employers is crucial for ensuring quality VET, particularly in the area of conducting practical training for students at an employer. According to the new draft law on VET (with most recent changes in 2023), (North Macedonia, 2021c and 2024) employers must meet certain conditions to be approved for providing practical training for students. These include space, equipment and trained relevant staff, with continuous training of the professional and other staff (mentors). Article 15 of the law on VET regulates the rights and duties of employers involved in the practical training of students, including the employers’ rights to obtain certain financial, customs and tax benefits. The conditions for employers are established by the VET Centre and approved by the respective

⁸³ Readers should keep this in mind, as the majority of the analysis and findings presented below pertain to the pre-reform VET education system.

⁸⁴ According to the Law on Secondary Education, Article 104, secondary schools can earn revenue from the sale of products and services produced within their core activity which does imply an economic activity.

⁸⁵ Data from the Ministry of Education and Science. First-year VET students are not obliged to undertake any practical training/WBL.

chambers of commerce. The chambers verify fulfilment of the conditions for employers and maintain a registry of companies that are authorised to provide practical training for VET students and can organise training for mentors in companies. The largest chamber, the Economic Chamber of Commerce of North Macedonia, is actively involved in the provision of training for in-company trainers and mentors, under the guidance of and in close cooperation with the VET Centre. So far, this Chamber has 97 registered employers and has trained over 730 mentors.⁸⁶ In total, 1,130 mentors have been certified so far, of which 730 by the Chamber of Commerce, 192 by the Chamber of Crafts of the City of Skopje and 208 through various projects. This training for mentors is mandatory for companies that want to offer practical training to learners. There is no sustainable funding for training-the-trainer activities.

The interview with the Economic Chamber of Commerce showed employers' satisfaction with the recent VET reforms, increased practical training and the introduction of a dual model of education. The Chamber is heavily engaged in the reform, through the provision of analysis on skills deficits, work on the National Qualifications Framework, etc., and generally expresses satisfaction with the outcomes of the reform. In its opinion, now that the quantity is satisfactory (increased classes/instruction hours for WBL), the focus should be on the quality of the WBL. The Chamber is supporting stronger connections between companies and vocational schools for practical training and learning, through the development of occupational standards, qualifications standards, educational programmes, etc., with a specific goal in the forthcoming period of expanding the engagement of micro and small companies in the WBL and dual model of education. The Chamber also works to increase the attractiveness of vocational education, especially among ninth graders, for example by organising a digital trade fair for vocational education.

The quality of the practical training depends heavily on the available resources. However, a small number of schools allocate some financial resources for attending or organising practical training with an employer. The MoES, with Swiss support within the project 'Education for Employment in North Macedonia (E4E@mk)', has prepared a new funding formula for secondary education which takes into consideration the specifics of VET schools and WBL compared with a general education where a 'per student' formula is a relatively good funding approach. The new formula accounts for the differences in materials, tools, equipment and costs between different programmes of VET. The new formula is expected to be implemented in the 2024/25 school year.

The study by Shapkova-Kocevska and Trenovski (2020) shows that, **in general, employers are willing to organise practical training and provide the required conditions for WBL, and that employers are open to modifying jobs for the needs of practical training/the needs of the students.** Moreover, the key findings of this research reveal that the prevailing opinion among employers is that the benefits they gain from organising practical training for students outweigh the actual costs. About 2/3 of the respondents clearly stated that involvement in practical training is not a cost, but there are long-term benefits, such as reducing recruitment costs, reducing the costs of training new employees, making it easier to find people with the right skills for the job, positive impacts on the productivity of other employees, employer promotion and recognition in the community, etc. The willingness of the companies to cooperate with the VET schools is confirmed with the results from a survey conducted by the MoES in 2021 during the campaign 'Learn smart, work skilfully' (Учи паметно, работи стручно). Out of 450 companies that participated in the survey, 85% expressed their willingness to cooperate with secondary vocational schools and receive students for practical training/WBL. VET Centres collect data on schools' satisfaction with the cooperation with companies, as well as how satisfied the companies are with the students during the completion of WBL in a company. The average grade of schools' satisfaction from cooperation with the companies in the last school

⁸⁶ Data from the Chamber of Commerce of North Macedonia.

year was 3.93, while the companies' opinion on students' commitment was assessed as 3.95 (on a scale of 1–5).⁸⁷

Several documents and analyses identify better management of VET schools and improvements to the role of schools in establishing and maintaining cooperation with companies as key areas for improvement. Employers express a desire to participate in the student selection process for the WBL. According to Shapkova-Kocevska and Trenovski (2020) and ETF (2020a), employers report that they utilise personal contacts and connections to ensure a higher quality pool of students for their company's practical training programme. The Final Report on the Project 'School Meets Business' (Ristovska, 2018), implemented in 2018, showed that 37% of schools had signed a memorandum of cooperation for WBL with 5-10 companies, 21% with 10-20 companies, 16% with more than 20 companies, 16% with no company and 11% with 1-2 companies. Around 79% of schools regularly update the list of companies where WBL is implemented, 16% partially and 5% do not update the list at all. According to the schools, the primary factors considered when selecting companies for WBL are ensuring the curriculum aligns with the desired qualifications or professional educational profile, as well as the companies' commitment to imparting professional knowledge, skills and abilities relevant to the specific sector. The schools emphasise the significance of companies providing mentors who can guide students throughout the entire practical training process in the company. It is recommended that the student selection process for company-based practical training be conducted based on pre-determined criteria. This approach would foster competition among students at the VET school, encouraging them to secure placements in more favourable companies and enhancing their engagement during the practical training period.

Another area for improvement is the quality assurance by the VET schools with regard to the knowledge, skills and social behaviour of students before entering the practical training. For students to quickly adapt and participate effectively in the work process, it is important for them to possess adequate prior knowledge. Unfortunately, **employers express the belief that students lack practical skills and fundamental knowledge when they arrive at the company for training** (Shapkova-Kocevska and Trenovski, 2020). As a result, **there is a pressing need for ongoing refinement and enhancement of curricula, guidelines and training materials, with active involvement from employers.** According to the law on VET, an employer implementing WBL has to meet the objectives of the practical training as specified in the curricula, including a prescribed number of lessons. The study by Shapkova-Kocevska and Trenovski shows that 76% of the employers have adjusted or partially influenced the curriculum, i.e. the programme that the students are supposed to/should learn in school and/or at work; 10% of respondents answered had not had any influence on the curriculum. Results showed that companies that are engaged in dual education are more likely to be involved in the development of the curricula. Employers generally agree that students assist mentors and other employees in the company by performing simple work processes, maintaining the workplace and taking care of work materials, machines and tools.

Prior to beginning the practical training, a tripartite contract is signed between the student (or the parent if the student is minor), the VET institution and the employer. The contract governs the work and training conditions, rights and obligations of all sides, as well as students' compensation if applicable. The law on VET (Articles 15, 16 and 22) stipulates that the employer can provide compensation to students during the practical training in the company. Information provided by the Economic Chamber of Commerce shows that some large and medium-sized companies provide compensation to students of MKD 4,000 (approximately EUR 65). Companies experience a slight increase in costs after the company's involvement in practical training for the following: supervising and monitoring the student's work (working hours of the in-company mentor), tools and work materials; administrative costs; student insurance and transportation, as well as costs relating to health and safety at work (Ristovska, 2018). While

⁸⁷ Data from the VET Centre.

employers do not complain about those costs, only 37% of them pay compensation to the students, usually up to 20% of the average salary of the employees in the same jobs in the company/sector. Some companies argue that the compensation should be supported by the MoES or the schools.

The revised draft law on VET promises enhanced and more comprehensive regulation of WBL, building upon insights from recent experiences and addressing identified challenges. In particular, the new draft law on VET, prepared in 2023 (Articles 21, 23 and 25) regulates in more detail the student compensation and the contract provisions. The law envisages compensation for food and transportation to and from work (if not organised) and compensation for work, if agreed between the student and the employer. The only exception is for students in dual education, where the employer is obliged to pay compensation to students of up to 20% of the minimum net salary (10% in year 2, 15% in year 3, and 20% in year 4). The contract also must have provisions for the expected professional qualification gained by the student and the duration of the practical training. The MoES will be responsible for keeping records on contracts signed between VET institutions and employers, and records on contracts signed between students, VET institutions and employers, which will allow the MoES to have statistical data on practical training. The new law also describes in detail the responsibilities and the process for training and approving mentors for practical training in a company.

4.3.2. Higher education

Several initiatives have been adopted in the last decade aimed at improving the transition of young people from higher education (HE) to the labour market and supporting students to gain applied and practical knowledge and skills. But reforms made since 2013 have shown fewer positive results (interviews with the MoES staff).

In 2013, an obligation was introduced in the Law on Higher Education for each student to undertake a one-month internship each academic year, to enable students to gain some work experience during their studies, improve their practical skills and ease their transition to the labour market. However, the requirement was not easily implemented due to the limited absorption capacity of the economy (dominated by micro companies) and the way the education (teaching) process is organised at universities. In addition, higher education institutions (HEIs) were required to ensure that 30% of the curricula be taught by businesspeople, so-called clinical practice professors. This requirement aimed at introducing more practical learning into the curriculum and building relationships between companies and students for future recruitment. This measure has only been partly implemented, as employers have been unwilling to devote their time and energy to teaching and owing to weak human resource capacities at HEIs.

To enhance the links between higher education provision and the labour demand, Boards for Public Cooperation and Trust were established at public HEIs in 2014. These boards have an advisory role and comprise representatives of the business community with experience in the relevant fields of study. Most private HEIs now have business councils, which play a similar role.

Following the public strikes against the 2015 Law on HE, a new law was adopted in May 2018 which cancelled some of the requirements of the previous law, such as the mandatory internships and the involvement of business practitioners in teaching. In January 2015, parliament adopted amendments to the HE law that provoked strikes by students and professors, mainly due to a lack of prior public debate and discussion. It was also seen as a direct interference in the autonomy of HEIs. Following the strikes, the implementation of the amended law was postponed, and a completely new Law on Higher Education was prepared and adopted in May 2018 (North Macedonia, 2019b). The new law revoked the requirement for regular internships as well as the requirement that 30% of the curricula be taught by businesspeople. Only the provisions for the Boards for Cooperation and Public Confidence remained the same (with the same role). Practical training and/or internships are only mentioned in Article 153 of the law, in the section *Scope and organisation of studies*: 'The student load shall include lectures,

exercises, seminars, individual classes and other forms of studies that are appropriate to the specificity of the teaching-scientific and artistic field (practical training, internship, performances, fieldwork etc.), consultative-instructional classes, forms of continuous examination of knowledge and exams which are considered contact hours, individual study work (sporting activities, literature research, seminar work, project work), autonomous learning, as well as the preparation of the final (master's, Doctoral) paper'. However, this requirement is very vague and leaves the decision of whether to include practical training and internships to the HEIs. The MoES does not collect any data on the internships completed by the students, which was the case even at the time when internships were mandatory.

Many HE students found their internship of little or no use, highlighting the need for closer cooperation between HEIs and employers in order to ensure more meaningful and learning-related internships. The graduate survey conducted in 2016 showed that 72% of HE graduates had experienced some form of work experience or internship during their period of studies, but only 45% of them found such experience to be 'extremely' or 'very' useful to their learning outcomes, and 35% found it to be only 'a little' or 'not at all' useful (Mojsoska-Blazevski and Bartlett, 2016). This may be because internships are useful only when they are supported by close cooperation between HEIs and employers, and where an element of learning is built into the internship and closely supervised. Since relatively few employers actively cooperate with HEIs, it is not surprising that a substantial proportion of graduates report that their internship experience had not been very effective. The study also found that work experience and internships while studying do not seem to ensure a graduate's success in job searches, as there is no significant relationship between the amount of work experience undertaken at the HEI and the subsequent labour force status reported at the time of the survey. **Despite that, having engaged in work experience or an internship while at a HEI improves the chances of a graduate finding a job that is well matched to their level of qualification.**

Career centres, located within all HEIs, provide little assistance to students to find a job, as employers use other recruitment channels instead of contacting HEIs. The 2018 Law on Higher Education requires the establishment of Career centres in HEIs: 'The university shall establish at least one career centre. The career centre shall keep special records of the former students (alumni), organise career fairs at each faculty/university that has a career centre and shall perform other activities stipulated in the statute of the university.' Although HEIs have established career centres, they are not functional or helpful as students seldom use them, preferring to seek information on internships, jobs and similar using other means. Their activities mainly involve providing training on writing CVs and organising career days.

Ensuring that graduates possess the necessary skills and knowledge that align with labour market demands is crucial. Although the Bologna process has had a positive impact on certain study programmes, it has yet to bring about substantial reform in higher education governance systems or teaching methods (Mojsoska-Blazevski and Bartlett, 2016). The Bologna process ensured comparability of HE programmes, improved the standards and quality of higher education qualifications, thus contributing to higher learning mobility abroad, cross-border academic cooperation and the mutual recognition of study programmes.

Teaching methods continue to prioritise theory over practical application, limiting students' opportunities to acquire hands-on practical knowledge and experience. Conversely, almost all available job positions require practical skills and experience. **Furthermore, universities are failing to equip students with essential interactive skills, which are not only essential for current employees but also vital for adapting to a dynamic and increasingly flexible labour market** (Mojsoska-Blazevski, 2019).

4.4. Skills development and active labour market programmes aimed at improving the relevance of education and training for labour market inclusion

4.4.1. Active labour market programmes (ALMPs)

Governments employ active labour market programmes (ALMPs) as interventions in the labour market to assist not only the unemployed in finding jobs, but also those who are underemployed or seeking better employment opportunities. These policies typically target individuals who are hard to employ, such as the long-term unemployed, but there are also arguments supporting the focus of ALMPs on youth. ALMPs have the potential to address deficiencies in education and the labour market, facilitating a smoother transition from school to work, although they cannot substitute formal education. Active measures can effectively prevent prolonged periods of unemployment or complete labour market disengagement, while also helping individuals to enter stable employment relationships.

North Macedonia has a relatively long history of implementation of ALMPs and continuous progress in their design and implementation. However, the scope and coverage of the programmes are quite low, despite the recent improvements.

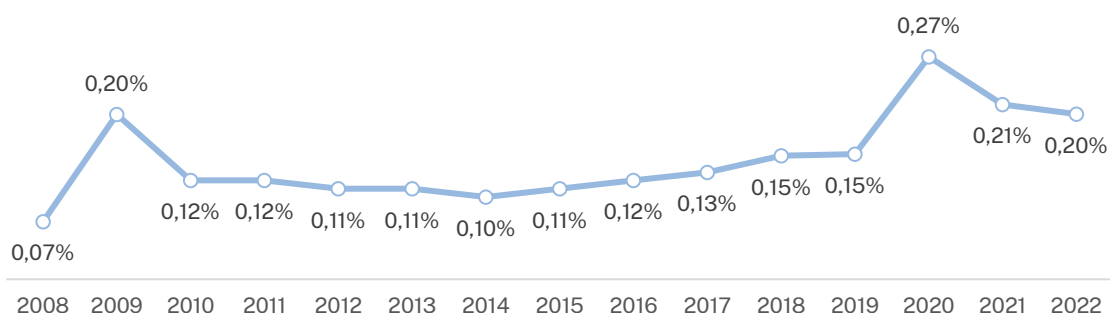
The implementing body for ALMPs is the Employment Service Agency of North Macedonia (ESA). There is quite a developed portfolio of active measures that includes adult vocational training, job/wage subsidies, public works, vocational rehabilitation, inclusion of persons with disabilities, start-up grants, etc. (see *Annex 4.1*). While all ALMPs are open to young individuals, several active programmes are specifically targeting youth: youth guarantees, internships, youth allowance programme, etc., which are analysed in detail below.

The funds allocated to ALMPs started to increase in 2014 and surged in 2020, due to the COVID-19 anti-crisis policy package deployed by the government. Spending on ALMPs stayed at a relatively high level in 2021 and 2022, though declined compared to the COVID period (*Figure 4.20*). Over the period, the allocation increased by 30% – from EUR 20 million (in 2014) to EUR 26 million (in 2022), or 0.2% of GDP. The coverage rate in 2022 was 10% of the registered unemployed. A very simple computation shows that the average cost of ALMPs per participant increased significantly between 2014 and 2022, from EUR 872 to EUR 2,287 (an increase of 162%). This is partly a result of the introduction of more expensive measures (such as specific certified IT training) but the increase is also present among all programmes.⁸⁸

According to the Operational Plan for 2023, 14,536 unemployed individuals (or 13% of the registered unemployment) were targeted, with an allocated spending of EUR 32 million (0.22% of projected GDP). Proportionally the country spends more on passive measures,⁸⁹ and especially on social assistance. Of the total funds spent by ESA for programmes for the unemployed in 2022, 46% was spent on passive measures (unemployment benefits) and the remaining 54% on ALMPs. *Annex 4.1* presents details about the planned ALMPs for the period 2020–2022 by type of programme and the allocated budget.

⁸⁸ Inflation cannot explain much of the cost increase as the Consumer Price Index increased by only 26 percentage points between 2014 and 2022.

⁸⁹ Income support during periods of unemployment, such as unemployment benefits and/or social assistance programmes (guaranteed minimum income).

Figure 4.20. Spending on ALMPs as a percentage share of GDP, 2008-2022

Source: Authors' calculations based on ESA, n.d.

Even though the implemented ALMPs in North Macedonia are characterised by a high level of transparency and accountability, there is a lack of rigorous assessment and impact evaluation, with the ESA calculating and monitoring only the immediate effects of the programmes. In 2019, the employment rate at follow-up for participants in active measures was 58.2%, while 29.1% were still unemployed after the programme end and 12.6% could not be traced.

There is no regular impact evaluation of the ALMPs. The last two evaluations were conducted in 2015 for the programmes implemented in the period 2008-2012 (Mojsoska-Blazevski and Petreski, 2015) and in 2021 (Nikoloski, 2021). The latter assessment involved five programmes, in different years: training for drivers (2016 and 2020), training for known employers (2018 and 2019), training for advanced IT skills (2017/2018 and 2019), training for in-demand occupations (2018 and 2019) and the wage subsidy programme (2018 and 2019). Several outcomes of interest were analysed: employment after training, type of contract, wage, change in financial situation, job search efforts, emigration propensity, etc. **The findings showed that most of the assessed programmes had a positive impact on better financial situations and better employment prospects, however only one programme (training for drivers in category C and D) had a positive impact on employment after the programme end.** Since one of the main objectives of active labour market measures is to assist the unemployed to get back into work, they require a reasonably buoyant supply of job vacancies in order to be effective. **The most effective programme, based on the findings of the study, was the wage subsidy programme:** wage subsidies exert a diminishing impact on unemployment, associated with a positive impact on salary and a negative impact on the intention to emigrate. The most 'popular' active measure among youth and the more educated unemployed is training in advanced IT skills, which is quite expensive. The evaluation identified significant effects of the training in IT skills on the subjective perception of participants in 2017/18 and on the intensity of searching for a job in 2019. However, the negative incremental cost effectiveness and diminishing beneficial effects suggest that this programme becomes increasingly expensive.

The cost of programmes per beneficiary shows a high variation. The least costly programmes in 2021 – calculated as total cost per participant – were public works and internships (EUR 144 and EUR 452 per participant, per year respectively), while the costliest was the self-employment programme (at EUR 5,493 per participant, per year).

The Youth Guarantee (YG) programme

The YG is financially supported through the IPA II programme 'EU for Youth', for the period 2020-2022 in the selected three regions. North Macedonia is the first non-EU country to implement a YG programme similar to that of EU countries. Based on the EU model, the North Macedonia YG is meant to provide young NEETs with an offer of employment, continued education and training, or a traineeship within four months of becoming unemployed (registered with the ESA) or leaving school. The YG was piloted in 2018 at three employment centres (out of 30 centres),

and the number of participants amounting to 526, of which 41% successfully completed this programme, which is comparable to the programme success in the EU. Following the initial success, the programme was extended in 2019 to cover the whole country, with special emphasis on three regions (Polog, Northeast, and Southwest), where the percentage of young people who belong to the NEET category is the largest. According to the plans, more than 10,000 young people were expected to be involved in the YGs annually, with a planned success rate of 30%. The planned annual cost is between EUR 4 and 5 million (Ministry of Finance, 2022b).

The introduction of the YG has significantly increased the coverage of young unemployed people with employment measures and services. In 2020, 66.8% of the young unemployed aged 15-29 were involved in some type of active measure and 35.5% in the employment services.

The implementation of YG required significant reforms and preparation of the system, such as establishing an institutional capacity, mapping out disengaged young people and their needs, establishing partnerships to reach out to disengaged young people, expanding the range of available services and programmes of the ESA, etc. In the second phase (2020-2022), when the YG was expanded to the whole country, the results started to deteriorate relative to the pilot phase, with 35% of YG participants receiving an offer within the 4-month time-frame in 2019 and 2020, which is still above the targeted success rate of 30%. In 2020, the YG recorded over 25,000 young people registering in the YG (12,863 women), more than double the planned target of 10,000.

Table 4.8 below provides summary statistics showing that, since its introduction, the YG included more than 70,000 young individuals, which is about one fifth of all NEETs in the country, with an almost equal gender representation. Thirty-eight per cent of the participants (26,775 young individuals) received either a job offer or an offer for continuous education, training or internship. The programme performed slightly worse in 2019 and 2020, mainly related to the pandemic situation.

Table 4.8. Key indicators of the youth guarantee (YG) programme in North Macedonia, 2018-2021

| Indicator | 2018 (pilot) | 2019 | 2020 | 2021 |
|---|--------------|--------|--------|--------|
| Total no. of registered participants in YG | 5,266 | 20,248 | 25,502 | 19,298 |
| Of which women (%) | 51.1% | 51.7% | 50.4% | 50.0% |
| Enrolment into the YG as a % of NEETs | 4.2% | 20.4% | 24.5% | 20.6% |
| Distribution of registered participants as % of total | | | | |
| Share that received an offer in 4 months | 41.9% | 36.8% | 34.2% | 43.5% |
| Of which a job offer (% of total participants) | 36.6% | 31.0% | 29.3% | 37.1% |
| Of which an offer for other activities (% total participants) | 5.3% | 5.7% | 4.9% | 4.8% |
| Share of participants still in YG after 4 months | 34.3% | 45.8% | 61.3% | 41.8% |
| Share of participants with unknown destinations | 23.7% | 17.4% | 4.5% | 14.7% |

Source: ESA, n.d.; State Statistical Office and International Labour Organization, 2018, 2021.

Further success of the YG programme, as well as other employment measures, hinges heavily on the improvement of the ESA capacity and staffing and reducing the staff-client workload. The worsening performance regarding the YG programme is due to several factors: i) the expansion of YG to the whole country required an extensive reform of the ESA, in terms of human and financial resources, workflow, staff training and introduction of new services; ii) the expansion skewed the participants' composition towards low-skilled persons, more difficult-to-place young people, which required more intensive assistance prior to their transition to the labour market and iii) some legislative changes in the minimum guaranteed income significantly increased the burden on ESA staff in terms of having to deal with new, hard-to-employ clients

in need of tailor-made assistance and close monitoring. The ESA continuously trains counsellors for implementation of the YG.

A new YG Plan 2023–2026 has recently been adopted by the government. The plan puts more focus on field activities, quality job and training offerings, better partnerships and a better provision of services for the YG participants. The YG Plan proposes reforms in educational and employment policies and a concrete plan of actions in the following areas:

- Mapping and early interventions through formal and informal re-education and training within the ‘second chance’ programme.
- Field activities to attract and activate youth that are not registered as unemployed in the ESA or are inactive.
- Activation services for inactive youth.
- Measure for the integration of young people into the labour market.

Box 4.3. New pilot measure ‘second chance’

Aim: This measure will give a second chance to unemployed individuals with lower levels of education (incomplete secondary education) and/or irrelevant qualifications to finish secondary VET education and receive a formal certificate for completion of secondary education. The measure will be implemented as a pilot in 2023 and, depending on the results, it may become part of the ALMPs from 2024 onwards.

Target group: Registered unemployed individuals with primary educational attainment, though priority will be given to those who have completed at least two years of secondary education. Besides youth (age up to 29 years), other eligible categories of workers are the beneficiaries of the guaranteed minimum income, women, Roma, persons with disabilities and the long-term unemployed.

Responsible institutions: A proper implementation of this measure requires cooperation and coordination between several government institutions: ESA, MoES, VET Centre, MoLSP, Adult Education Centres and secondary VET schools.

Scope of the programme: 200 registered unemployed persons.

Training plan: Training will be delivered by secondary VET schools based on their application to the open call by the ESA with a training plan. The training will last 12 months, and training providers will receive a payment of approximately EUR 500 per participant.

Internship programmes

The ESA, within the scope of the ALMPs, implements an internship programme that targets youth aged up to 29 years who have completed at least upper secondary education. In 2022, 1,620 interns were involved in the internship programme, and the target for 2023 is 1,600 young individuals, who will receive a monthly allowance of EUR 178 from the ESA (partially supported with IPA funding). The maximum duration of the internship is three months. Unfortunately, there is no recent evaluation of the performance of this programme. The evaluation of the internship programme from 2010 and 2012 showed large positive effects of the programme on current employment, subjective employment, wages, etc. In addition to this active measure, a specific law on internships was enacted in 2019 with the aim of easing the transition from education to work. The law targets young people (aged up to 34 years) who are unemployed and have completed at least primary education. The maximum duration of the internship is six months.

Employers are obliged to ensure a mentor for each intern (with a limit on the number of interns based on the number of employees at the company), and to pay an internship allowance of up to 74% of the minimum wage in the economy (for internships up to three months), or equivalent to the minimum wage (for internships that last 3-6 months). In 2022, 621 interns were engaged, with 158 employers (ESA website).

Youth allowance

An additional measure specifically targeting youth is the so-called youth allowance for young workers employed in manufacturing (2020 Law for Youth Allowance, Official Gazette of the Republic of North Macedonia No. 18/2020). The main objective of this measure is to support the demand for young workers and to ensure longer-term employment. This measure targets youth aged up to 23 years who have completed secondary education, with a goal to increase the supply of qualified workers and financially support employers in the first month of employment (when productivity is expected to be low). Participants in the programme receive EUR 50 per month. At the end of 2022, 5,596 young people were recipients of the youth allowance, of which 2,790 were new entrants into the programme. The target for participation in 2023 is 3,500 young workers (new entrants).

4.4.2 Other government programmes for skills development

Besides the ESA programmes, there are some other programmes and activities which aim at improving the collection of information and information flows to support policy-makers, employers and young workers in making more informed choices. As explained in *Section 4.3.1, career counselling in North Macedonia is underdeveloped and exists only formally. Hence, young individuals face difficulty in accessing information about skills in demand, potential career options, available jobs, internship opportunities, etc.* In addition, young workers develop unrealistic expectations about jobs and wages, partly due to a lack of information.

The Ministry of Labour and Social Policy made an effort to fill this gap by establishing a dedicated website containing information for different occupations, or an Occupational Outlook (www.zanimanja.mk), where young people (as well as all workers) can acquire important information about different occupations, such as available jobs in the particular occupation, required skills and education, wages, working conditions, etc. The website has been promoted with the ‘Find a job with vocational education’ (Снајди се со стручно) project, supported by the SDC, USAID, UNDP and the International Labour Organization. According to the adopted Methodology and Operational Plan for the preparation and updating of the Occupational Outlook for the period 2018-2021, 18 new occupational descriptions/outlooks were prepared in 2019 and 15 in 2020. The existing descriptions were updated with the latest statistical data. By doing so, the total number of vocations in the Outlook is 60.

In 2016, the MoES, in cooperation with the World Bank, started working on establishing a Skills Observatory on a national level as a tool for reducing the skills mismatch and skills shortages. The main objectives of the Observatory are to collect, analyse and disseminate information on higher education options, curricula and skills development, education and training costs, job placements of graduates, as well as forecasting labour demand. This Observatory was planned to be available to the public, policy-makers and stakeholders sharing information on the performance (students placed in practical training/WBL at firms, job placements after graduation) and resources available (courses, firms providing internship and practical training opportunities, infrastructure, instructors) in secondary schools, HEIs, as well as general labour market information on employment opportunities and wages in different occupations and sectors in order to have more effective social impact. The Skills Observatory was planned as a strategic tool through which the MoES will analyse the adequacy of the skills of graduates in correlation with the demands of the labour market in order to continuously improve the curriculum in accordance with market requirements. Even though the Skills Observatory was designed and developed, it is still not operational due to the lack of data from universities and

the need for harmonisation of the educational laws with the law on data protection (the Law on Primary Education and the Law on Secondary Education were harmonised in 2019 and 2020, while the Law on Higher Education is still not harmonised). However, the interview with the MoES officials at the time of preparing this report revealed that major data protection issues cannot be overcome, and the ministry advised other methods for data collection. According to this model, schools will be in charge of collecting data for their students and graduates, which will be difficult (if not impossible) to achieve. Most likely, many more years will pass before a good data collection system – educational management information system – is established.

4.5. Coordination and regulation mechanisms between education and the labour market

The establishment of a strong linkage between vocational education and higher education and the business sector is imperative in order to develop an effective education and training system that produces relevant skills. Specifically, vocational/higher education necessitates collaborations with the business sector to stay updated about the most recent advancements and evolving dynamics of skills and qualifications. Conversely, the business sector relies on high-quality graduates from the VET system and higher education to acquire a skilled and competent workforce that meets their specific demands and requirements. Within this context, this section delves into the primary mechanisms of collaboration that ensure effective coordination among the various stakeholders involved in facilitating the educational and labour market transitions of youth.

4.5.1. VET education and training

According to the law on VET, the key institutions in charge of vocational education and training are the MoES, the Ministry of Labour and Social Policy, the Council for Vocational Education and Training (VET Council), the VET Centre, the municipalities and social partners (chambers of commerce and employers' organisations). Their roles and responsibilities are summarised below.

- **The responsibilities of the MoES** in the VET system consist of: proposing to the government a network of institutions for vocational education and training; carrying out the verification of VET institutions as well as accreditation of institutions that organise teacher training; cooperation with the chambers of commerce to supervise employers regarding the fulfilment of the conditions for the implementation of the practical training; and adoption of a programme for training of trainers from employers (mentors) where the practical training is carried out. In addition, the MoES, upon a proposal from the VET Centre, adopts concept papers for VET, standards for the achievements of students in VET, qualification standards, national curricula and programmes on VET as well as the programmes for the Final exam and the state Matura.
- **The Ministry of Labour and Social Policy (MoLSP)** is responsible for participating in the implementation of the national policy on vocational education and training; for anticipating the labour market/skills needs for VET and for submitting an opinion on the enrolment quotas to the VET Council; as well as for participating in the preparation and harmonisation of the qualification standards. Within its scope of work and responsibilities, the MoLSP adopts occupational standards, prepared by the VET Centre, participates in organising careers guidance for students and supervises the implementation of regulations for safety at work during the completion of the practical training in companies.
- **The VET Council** has an advisory role and acts as a steering body of the VET Centre. The Council consists of members elected from the different stakeholders which are relevant to the VET system. Of the 11 members, three are elected from the MoES and one member from each of the following institutions: Bureau for Development of Education (BDE), the

chambers of commerce, MoLSP, Ministry of Economy, Ministry of Finance, trade union, the community of the local self-government units and the ESA. The Council has the role of the main formal coordination mechanism of VET stakeholders. It has the following responsibilities: proposing to the MoES amendments and additions to the list of occupational standards; proposing new national qualifications and occupational standards; submitting the MoES a proposal for the development of the network of VET institutions in cooperation with the municipalities, etc. In addition, it is responsible for giving an opinion on the strategy for the development of VET, on the standards for occupations and on the qualification standards.

- **Vocational Education Centre (VET Centre).** The Centre is an institution responsible for the development of the national framework for professional qualifications, as well as for the implementation of the VET policy. The Centre serves the following roles and responsibilities:
 - Develops educational qualifications (occupational standards, qualification standards, curricula, programmes and examination programmes in vocational education) and prepares concepts for vocational education.
 - Supports vocational education through advising, instructing and mentoring teachers and trainers in vocational subjects in the field of VET.
 - Gives an opinion on fulfilment of the conditions of institutions that require verification for delivering VET and develops standards for school space and equipment.
 - The managing board of the VET Centre consists of nine representatives selected from the stakeholders involved in VET education and training. Representatives from government institutions dominate the managing board, with six representatives from the MoES and MoLSP, and four representatives from the VET Centre, whereas the other three members are from the community of local self-government units and chambers of commerce. The Centre has formally signed memoranda of understandings (MoUs) with all major chambers of commerce (three in total) as well as with the representative employers' organisations. However, interviews with the representatives of the VET Centre revealed that the MoUs are rather formal and do not automatically lead to actual cooperation.
- **Municipalities** are also important stakeholders in the VET system. They are mainly engaged in the analysis of the needs of the labour market at the local level, submit proposals to the MoES and the VET Centre for the development of curricula and programmes, and submit proposals for the enrolment quotas in VET to the MoES.

Besides these main institutions and actors, there are many other institutions that play some role in the VET system, such as the BDE, the State Examination Centre, Adult Education Centre, State Educational Inspectorate, etc. **Consequently, achieving coordination among all institutions proves to be a challenging task, thereby presenting difficulties in policy design and implementation.**

The primary mechanisms for coordination, specifically formal mechanisms, are established through the governing and managerial entities of public institutions, such as the VET Centre and VET Council, along with the government-level coordination facilitated by various ministries. Additionally, coordination efforts are fostered through the implementation of several projects within the domain of education and labour market policies, as well as the activities of international institutions such as the International Labour Organization and the World Bank, which offer opportunities for coordination. In particular, most of the projects establish coordination bodies (such as steering committees) that involve all major stakeholders. Interviews with key informants showed that these established coordination mechanisms are sometimes weak, due to the low engagement of the members or their low capacity. In addition, the proportional participation (composition) of members from different institutions is highly

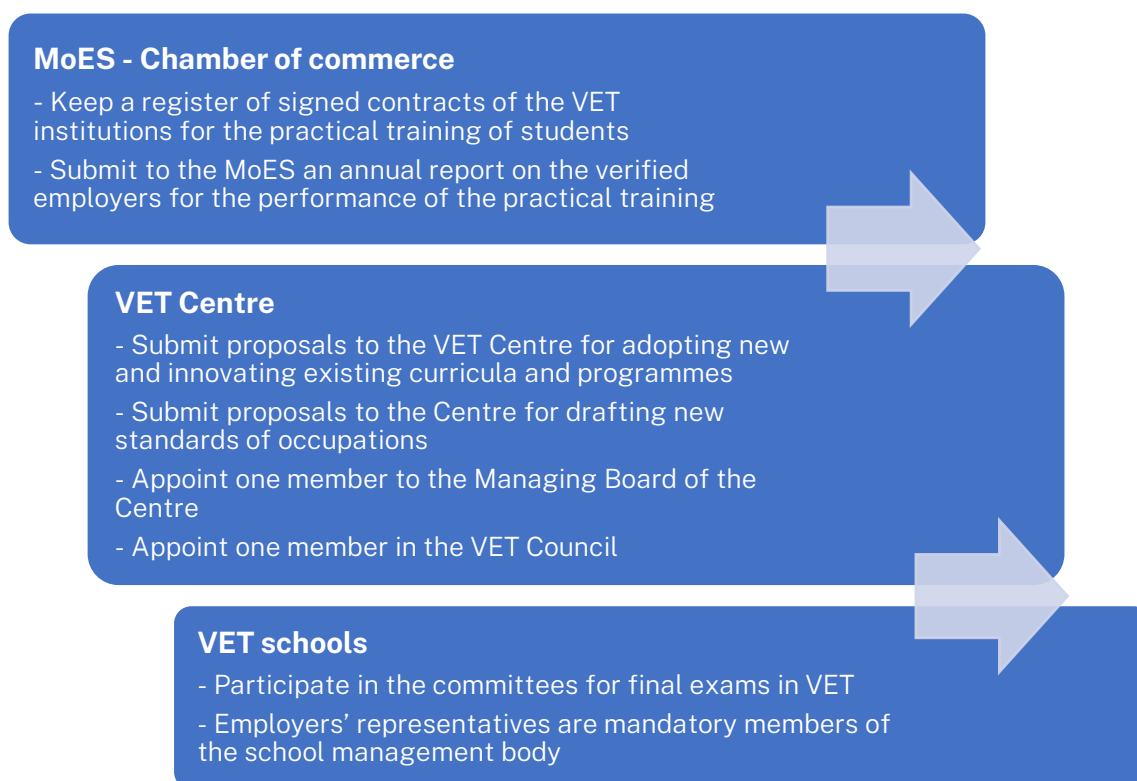
skewed towards representatives from government institutions (for instance at the VET Centre). A good example of a coordination mechanism that is effective is provided through the National Board for the Macedonian Qualifications Framework as well as the sectoral qualifications councils that were established to support the development of the NQF (examined below). The Socioeconomic Council at national level, and councils established in some municipalities, also offer an avenue for cooperation between different government institutions and social partners, with a focus on employment policy.

An analysis conducted in 2018 within the Project E4E@mk noted that **the VET system involves a number of state institutions (ministries and other bodies and institutions) that often are not coordinated in their activities**. There is an evident need to connect/merge these institutions (a number of competencies are given to one or two institutions), in order to ensure the coordination and efficiency of the system. **There is also no efficient cooperation, coordination and synchronisation within responsible institutions** (such as the BDE, VET Centre, Adult Education Centre, State Educational Inspectorate, National Examination Centre) or with the professional bodies (the VET Council and the Council for Education of Adults).⁹⁰

The role of the chambers of commerce

The law on VET prescribes in detail the role of the chambers of commerce regarding practical training and WBL. However, the law does not regulate the mechanisms for coordination between education and economic actors in the enrolment policy for VET. Based on the analysis of legislation and practices (information collected through interviews) there is a large gap in the planning of VET regarding the enrolment policy. Even though it is regulated with the law on VET, in practice neither the MoLSP nor the VET Council participate in the planning of VET enrolments. Moreover, data from the LMIS are not sufficiently comprehensive and therefore not used by MoES for evidence-based policy-making.

⁹⁰ <https://www.e4e.mk/wp-content/uploads/2019/05/Analiza-Pravna-ramka-i-resursi-ENG.pdf>.

Diagram 4.2. Avenues of engagement of chambers of commerce/employers' organisations in secondary VET

Source: North Macedonia, 2006 (Article 11).

Few municipalities make an analysis of the labour market needs, assess or anticipate skills needs or, in cooperation with the local chambers of commerce, submit proposals for the local provision of VET qualifications and enrolments to the MoES. The limited capacity and human resources of municipalities are major constraints for their more active engagement in VET policy. Therefore, starting from 2023, the process of 'Learn Smart, Work Skilfully' ('Uci Pametno Raboti Strucno') is being transferred from the national level to the local level i.e. municipalities. Municipalities and the secondary VET schools, in cooperation with the private sector companies and the ESA, will implement a market analysis of the skills needs of local companies, as well as preparedness for the practical training of students at a local level. Moreover, cooperation will be promoted between schools and companies/employers for the establishment of partnerships and to organise Open Days at secondary VET schools. A series of training sessions were organised for the municipalities, schools and business sectors representatives during 2022 and 2023. The first results are expected in the next school year, 2023/24.

Successful cooperation between stakeholders in the VET system does exist. One form of successful cooperation between stakeholders in the VET system implemented in the past three years has been the wide-ranging public campaign 'Learn Smart, Work Skilfully' ('Uci Pametno Raboti Strucno').⁹¹ The campaign and its related activities are implemented in cooperation between the MoES, the VET Centre and the Economic Chamber of North Macedonia. The campaign is carried out through social dialogue and consultations with companies, chambers of commerce and local governments, and focuses on assessing needs for new qualifications and skills. In the first, preparatory stage, an analysis is conducted that maps the existing profiles offered by the schools, whether they meet the needs of the companies and the readiness for

⁹¹ With the support of the Government of Switzerland through the project Education for Employment in North Macedonia – E4E@MK.

cooperation of the companies with the secondary vocational schools at local level. Then consultations are held, led by the MoES, mayors, companies and vocational schools. The outcome of the activities should be implementation of changes in the VET policy in order to meet the labour needs of the businesses. Changes will be made in the network of schools by regions, with the introduction of dual education, changes in enrolment policy, changes in curricula, etc. Open days are also organised at secondary vocational schools, with the objective of raising public awareness about secondary vocational education and emphasising the importance of vocational education for the national economy.

Cooperation between education institutions and employers has increased in recent years.

Social dialogue successfully supported the advancement of VET, especially dual education, and helped achieve the involvement of 450 companies and the inclusion of over 60 professions and 14 sectors in dual education, as well as increasing the number of certified mentors in companies (HELVETAS North Macedonia, Macedonian Civic Education Center, Economic Chamber of Macedonia, 2022). One of the most important developments in VET education – and higher education – was the adoption of the national qualifications framework (NQF) in 2014. The Law on the NQF came into effect in September 2015. While substantial work has been completed so far regarding the NQF, the NQF is a work in progress and requires a lot of effort from all the stakeholders involved. Employers play a very important part. The NQF has the potential to improve signals between the labour market and the education system and subsequently reduce the level of mismatch, both in VET education and in tertiary education. The NQF will help to clearly define qualifications, facilitate the recognition of learning outcomes and improve graduate mobility at national and international levels. It can also play an important role in reducing skills mismatches by defining qualification standards and including employers in the process. The National Board of the Macedonian Qualifications Framework has established sectoral qualifications' councils, which, *inter alia*, have the competence to analyse the situation in a particular sector, areas of work, follow the development tendencies in the sectors and promote them appropriately. So far, around 360 occupational standards have been developed, as well as 110 new qualifications which are standardised on the basis of the methodology for development of qualifications standards.⁹² For each qualification, a separate syllabus was prepared with relevant modularised curricula, as mentioned above, together with the business community. Interviews with chambers of commerce showed high satisfaction from employers with the NQF and the work of the National Board. In their opinion, the work and activities are progressing at a good pace and all partners are engaged and share a common interest in making the education and acquired skills more compatible with labour market needs.

⁹² Adopted by the VET Centre in 2017.

Box 4.4. Cooperation of social partners within the NQF.

Representatives of the chambers and the Independent Trade Union for Education, Science and Culture are members of the National Board for the NQF. Among other tasks, the National Board discusses evaluations of policies on education, sustainable employment and regional development, and recommends actions to better link the education system with labour market needs. The chambers maintain a registry of companies that are authorised to provide practical training for VET students. According to the law, the employer is required to achieve the objectives for practical training as specified in the curricula, including a prescribed number of lessons. The Economic Chamber of North Macedonia is actively involved in approving companies for practical training of students, in the design and provision of training for in-company trainers and mentors (in close cooperation with the VET Centre), maintains a register of certified mentors and approved companies, and manages a specialised portal that provides useful information on vocational education and training, the dual model of education and WBL (<https://praksa.mchamber.mk/>).

The increased focus on the quality of VET, as well as the increased cooperation between policy-makers and employers has led, *inter alia*, to an introduction of dual education. Starting from the 2017/18 school year dual education is being implemented. It started as a pilot, with only one class in one school. Officially, dual education was implemented in the 2020/21 school year and started with 11 classes and 98 students. In the 2022/23 school year there were 61 secondary vocational schools with dual education programmes, 225 classes, and 3,228 students enrolled. In 2023/24 the number of classes increased to 259 (MoES, 2023c). The success of dual education can be attributed to the: i) policy-makers that recognised the need for making the VET curricula more oriented towards the world of work, with a much higher practical learning component, as well as ii) employers and employers' organisations that were open to establishing close cooperation and engaging intensively in the curricula design and curricula implementation (predominantly in WBL).

Higher education

A major coordination challenge for HEIs is to develop cooperative relations with employers. Cooperation is needed for the development of appropriate and up-to-date curricula, for placing students in companies for internships, for finding jobs for graduates, the enrolment policy and for improving HEI career guidance.

There are several channels (some legislative and some informal) which aim to ensure a higher involvement of employers and cooperation with HEIs. However, their effectiveness seems to be low. In an effort to enhance this cooperation, the government introduced a mandatory establishment of Boards for Public Cooperation and Trust at public universities (Law on Higher Education, Article 122) as described in Section 4.3.2. Many private universities have business councils. The study by Mojsoska-Blazevski and Bartlett (2016) showed that 28% of employers 'never' discussed study programmes with HEIs, 53% 'rarely' do, while only 19% responded that they do this 'often'. When asked how frequently they cooperate with a university/faculty in the recruitment of graduates, 46% responded 'not at all' or 'a little'. Overall, these answers suggest that cooperation between employers and HEIs is rather limited. Yet, most employers believed that such cooperation would improve the recruitment process. While these findings are old, the interviews conducted within this study confirm that they are still relevant. There are few, sporadic examples of a cooperation between companies and faculties, mainly for recruitment purposes, but that is on an individual basis and driven by the labour needs of the companies.

Employers also participate in the most relevant bodies at HEIs. For instance, the National Council for Higher Education and Scientific and Research Activity, established in 2021, comprises 15 members, of which one should be from the business community. The Council is responsible for ensuring, assessing, developing and promoting the quality of higher education and scientific and research activity. The Board for Accreditation of Higher Education, responsible for accreditation of the Foundation Project for autonomous private or public-private HEIs, as well as for the accreditation of study programmes, consists of 15 members, of which one member is appointed by the most representative organisation of employers. The Board for Evaluation of Higher Education, responsible for monitoring and evaluate the quality of performance of the higher education activity, scientific and research, artistic and professional work of academic staff and of HEIs, and especially of their study programmes, has the same organisational structure. The University Council of public HEIs, according to the law, should comprise up to 11 members, out of which one member shall be appointed by the most represented organisation of employers in North Macedonia. However, the participation of employers in these bodies is not sufficient and better coordination between HEIs and business sectors is needed, especially for providing practical training.

4.6. Key take-away points

This chapter assessed the relevance of education for the labour market by examining the main labour market trends with a focus on the educational attainment of workers and by age, documentary analysis of the education and employment policy, information available from the government institutions, as well as interviews with key informants (educational and employment policy-makers, representatives of public institutions and employers and employers' organisations). The analysis was constrained by a lack of certain data (mainly non-functional management information systems), changes of the methodologies over time, and a general lack of culture for collecting evidence and evidence-based policy-making.

The main findings from the analysis are the following:

The labour market in North Macedonia has undergone significant changes in the last 15 years. It has been changing gradually from a position of a slack labour market with excess labour supply to a tighter labour market, where employers report a lack of workers. All categories of workers (as distinguished by age, gender, educational attainment, etc.) have experienced improvements in the labour market situation. The unemployment rate in the country has halved over about 10 years.

- Despite the declining unemployment of youth, their position relative to adults has not improved. While young workers have benefited from the improved labour market conditions, the youth-to-adult unemployment ratio was 2:1 in 2021, compared to 1:7 in 2010. Young workers in North Macedonia have much lower activity and employment rates compared to their peers from the EU and some neighbouring countries. The low activity and employment can be partially explained by younger people staying longer in education, which holds true especially for young women.
- The absence of a well-functioning labour market, quality issues within education, as well as the weak links between education and the labour market in North Macedonia, give rise to high youth unemployment, low-quality employment of youth, high rates of NEETs, but also a lengthy and difficult transition of youth from education to the labour market, as well as large skills mismatches.
- There are prevailing gender gaps in activity and employment, both for the overall population and for youth. The low activity of women is mainly related to the traditional division of gender roles within the household, with women being much more likely to take care of the elderly members of the household, children and adults with disabilities, as well as doing the household duties.

- Educational attainment is a good predictor of labour market outcomes. Individuals who have completed tertiary education (generally young individuals) are much more likely to be active in the labour market, to be in employment and to transition faster from education to their first stable employment.
- Youth NEETs present a large challenge for policy-makers. The share of NEETs is declining but is still at a comparatively high level. While NEETs rates are similar among young men and women, there are large differences in the categories of NEETs. In particular, women NEETs are much more likely to be inactive rather than unemployed (as men are) and are ahead of men in terms of participation in education up to the age of 24, but then decide to stay out of the labour market, most likely for family reasons.
- There is a general trend of improvement in the quality of jobs for youth in terms of the structure of employment by sector, occupation, etc. Still, youth are more likely to fall into vulnerable employment, working informally, on temporary contracts, etc. Education is a strong predictor of the quality of jobs. Education is a good predictor of the quality of jobs and men on average work in lower-quality jobs relative to women.
- The labour market in North Macedonia rewards education, such that workers with tertiary education are more likely to find a job which is of good quality, and a higher-paying job. While available data do not allow for making a strong statement about the relative value of vocational versus general secondary education, there is some evidence that VET education pays off. This is supported by the results of the earnings function (returns to education) and the transition matrix. Still, one has to keep in mind that VET education leads directly to the labour market, whereas gymnasiums usually lead to further education.
- Young workers face a long and difficult transition to the labour market, which leads to a high share of long-term unemployment (90%). While youth face a very lengthy transition to jobs (2.5 years on average), those who have completed higher education are more likely to find stable employment in a short period of time.
- Lack of data prevents a detailed analysis of vertical and horizontal mismatches, however the calculations made, and available in previous studies, show that horizontal mismatches are more of a concern, which is especially the case with VET education. Graduates (both those from VET and from higher education) lack some technical skills specific to the industries/occupations, but also some general skills, mainly higher-order cognitive and socio-emotional skills (communication skills and people skills) and basic cognitive skills (such as time management).
- Employers complain about a general lack of workers, but also a skills deficit. Lack of skills is especially pronounced among VET graduates. The lack of workers and skills is mainly a result of low-quality education, a high turnover of workers (competition among employers for workers) and labour emigration. While employers generally express a willingness and openness to cooperate with educational institutions for improvements in the curricula and practical learning, few of them are actually doing that. As the higher form of cooperation between employers and education institutions, the dual education was introduced as a pilot in 2017/18 and has expanded since then due to a positive experience. However, the first cohort graduated in 2021/22 and hence it is too early to assess the outcomes.
- VET education underwent significant reforms to introduce a larger practical learning (WBL) and summer practice component. The engagement by employers increased, mainly for the completion of WBL. While progress has been achieved, the next focus should be on the quality of the practical training. There is a slight reverse trend in the mechanisms for engagement by employers in the curricula design and implementation at tertiary level, though there are established forms and mechanisms for cooperation.
- While North Macedonia has made progress in implementing ALMPs and youth-specific programmes, ongoing evaluation, capacity-building and improvements are necessary to ensure their effectiveness and efficiency in addressing unemployment challenges and

facilitating young people's entry into the labour market. The YGs programme is the most comprehensive and important ALMP for targeting youth.

- Apart from ALMPs, the government has implemented measures to enhance information collection and dissemination, such as the Occupational Outlook website and Skills Observatory. These initiatives provide young individuals with access to job information, the required skills and education, wages and working conditions, reducing skill mismatches and shortages.
- Effective coordination mechanisms are crucial for ensuring the successful linkage between education and the labour market. In VET, there are several established coordination mechanisms; however, challenges remain in achieving comprehensive coordination among all institutions involved. Similarly, in higher education, efforts are being made to enhance cooperation with employers for curriculum development, internships and job placements, but the effectiveness of these mechanisms needs improvement. The establishment of the NQF has provided an excellent avenue for cooperation among all stakeholders, fostering an improved relationship between education and the labour market for both VET and higher education.

Chapter 5. Governance of education and the effectiveness of the educational administration

5.1. Introduction

This chapter examines the topic of governance through two main interrogations: what is the role of different actors in education policy formulation and in the planning and management of the education system; and how effective is the educational administration in governing the system. In order to do so, the chapter is divided in three parts. First, it analyses the institutional architecture and arrangements within which the educational administration operates. It examines public management in general, as well as the relationship between the central level and the municipalities. Second, it looks in detail at the internal functioning of the educational administration. This part focuses on those issues, identified as key constraints. It covers questions such as: how well do different agencies, departments and centres within the administration collaborate? How well are staff managed, in terms of professional development and appraisals, for example? How are data managed and used? What internal accountability mechanisms exist? The third part analyses the relationships between the administration and its main partners (private sector, civil society, international partners) and their involvement in policy formulation, planning and management.

The evidence for this chapter comes from three sources:

1. Existing literature on the topic, in particular reports from national and international agencies, as well as some articles.
2. Interviews with a wide range of actors and stakeholders. We discussed the issues with senior staff from several departments in the ministry, agencies and centres, staff at two municipalities, some experts with profound insights into the administration's functioning and challenges, and representatives from international agencies and civil society organisations. We undertook 29 interviews, covering a total of 54 persons, mostly face to face but a few remotely. All interviews went well: they lasted between one and two hours; people spoke openly about their work and about the broader issues of interest to the analysis.
3. A survey administered to senior staff from the educational administration, namely all directors, deputy directors and heads of departments. The survey was sent to 98 recipients; 65 answered all questions, while 92 answered the first 10 of the 40 questions.⁹³ These 65 represent about 90% of senior staff, as defined above.

A final introductory note relates to terminology. In principle, we use the term 'education administration' to refer to the Ministry of Education and Science (MoES) and all other agencies and centres that have responsibility for education. We refer to the MoES when the issue under discussion is particularly relevant for that structure. However, many interviewees used the term 'ministry' to refer to the whole education administration. The regular use of the term 'educational administration' may also become somewhat tiring for the reader. We have therefore used the term

⁹³ The reason is probably that, when sending the questionnaire, two agencies mistakenly shared it with all staff. This was corrected through a subsequent mailing, but in the meantime some people had started replying to the questionnaire. As the survey was anonymous, it is impossible to know who replied to all questions, but it is probable that only senior staff completed the full survey. If so, this represents over 90% of that staff.

‘ministry’ as an equivalent of ‘education administration’, and the abbreviation ‘MoES’ to refer to that particular structure within the administration.

5.2. Institutional architecture and arrangements

The governance of education and the performance of the educational administration cannot be examined in isolation from the public administration, of which the educational administration is an integral part. Many impactful decisions, in particular on the management of human resources, are not within the remit of the ministry of education, but are taken ‘above’ that particular ministry, as they concern the whole public administration. This section therefore starts with an analysis of public sector management and its impact on the education administration.

An area in which education can and needs to take initiative is the definition of its policies and strategic plans, which aim to improve the performance of the education system. The second discussion within this section therefore goes into more detail on the existence and effectiveness of these policies and plans. Their implementation will, in part, depend on the internal effectiveness of the educational administration, which is the subject of the second section of this chapter. It also depends on the municipalities, and their role in education, which we will examine in the final part of this first section.

5.2.1. Public sector management

The public administration in North Macedonia fails to contribute significantly to national development.

There is a broad consensus, reflected in the literature and among the interviewees, that the public sector in North Macedonia performs poorly: it does not lead or contribute in a significant way to the social and economic development of the country. This is not a recent phenomenon. The 2018 Public Finance Review by the World Bank (2023b: 6) notes, for instance, that the country scores lower than peer countries on the Public Sector Performance (PSP) index and has a similarly low score on the Public Sector Efficiency (PSE) index. While it is difficult to compare performance over time, several interviewees, when asked the question, responded that there had been no improvement, and that this was a ‘permanent situation’. It is also a factor that looms over the EU accession talks.

While the public sector as a whole is subject to much criticism, the performance of the educational administration is at times singled out as more concerning than that of other ministries. Respondents highlighted four factors when comparing education with other sectors:

1. First, the ‘lack of a clear vision, of what they want to do’.
2. Second, the frequent change in ministers, which is not unique to education but worse in this sector. Since 2011, there have been nine different ministers.
3. Third, ‘the lack of capacities, which is true for all ministries, but more for some than for others, because some areas are seen as more of a priority than others’.
4. Fourth, the internal organisation, in particular the level of autonomy and accountability of different agencies and departments.

Each of these aspects will be examined in some more depth further on.

While there is an almost universal recognition that the public service underperforms, this does not translate into a shared sense of crisis, nor into a common conviction that the present situation is a genuine threat to the development of North Macedonia. According to one international expert: ‘We recognise this crisis, but I don’t think the government does.’ The longevity of this situation may temper that feeling of crisis, without which any reform is difficult to implement.

The core cause of this underperformance is the politicisation of the administration, particularly the civil service.

All interviewees and the literature agree on the core cause of the underperformance: the politicisation of the administration. This is most visible in civil service management, particularly in recruitment. The following quote by a senior international expert summarises what many consider to be the present recruitment scenario: ‘There is a kind of hidden politicisation in the education sector, starting from hiring government officials, but including the hiring and selection of school principals and of teachers.’ This is not unique to education. An official from another ministry recognises that ‘recruitment based on political party affiliation is not an isolated phenomenon in this ministry; this is not something new, nor something that happens only here’. It is, however, particularly visible and worrying in education because of the size of that sector within public sector employment. Neither is it limited to recruitment. The 2019a OECD report (p.14) refers to the difficulty of sustaining reforms to develop a merit-based career structure for teachers. Politics even perverts some of the processes in education. The same study mentions that ‘it was reported to the review team that the State Education Inspectorate evaluations are sometimes used for political purposes, for example to justify principal dismissals’ (p.37).

Here again, while this analysis could not compare the level of politicisation over time, several key informants see a deteriorating situation. An international expert, referring to one particular agency as an example, laments that ‘this used to be an institution that you got into based on merit. Nowadays, it’s a dumping ground for people that have to be employed politically.’ It led one high-level staff member to comment that ‘these political appointments used to be a minority. Now, I don’t know how it happened, they are in the majority.’

Staff in the administration are well aware of this situation and deplore it. A staff survey undertaken as part of a capacity assessment by the European Union (EU) in 2022 (p.140) found that 73% of respondents considered that the recruitment and selection of employees was ‘not satisfactory’ (40%) or ‘barely satisfactory’ (33%). None found this process ‘very good’ or ‘excellent’. In our own survey, when asked, ‘what are the obstacles to career advancement for education officials?’, the ‘lack of transparent job offer processes’ was singled out as the most important obstacle, more important even than the unattractive salaries.

The detrimental impact on the functioning of the educational administration is evident, affecting competence, internal functioning and performance. In terms of competence: according to a well-placed ministry expert: ‘many staff at the Ministry, who should be technical advisers to the minister in designing reforms and the like, tend to be political appointees who don’t know basic things about the issues that we face’. In terms of internal functioning, the political influence on the selection of directors and deputy directors at agencies and centres creates, at times, separation and mistrust between the leadership and the technical experts, which is unhelpful for defending the specific role and autonomy of the agency or centre. Finally, in terms of performance: ‘it is often more important for your career advancement to be a member of the political party rather than contributing to programmes or being responsible and proactive,’ to quote an international observer. The second part of this chapter discusses these issues in more detail.

While there is recognition of the need for reform, little action is taken and crisis has become the norm. The Government of North Macedonia is well aware of the need for a profound reform of the public administration. There have been several ambitious and wide-ranging reform programmes, and the Ministry for Information Society and Administration (MISA) has designed and is implementing a Public Administration Reform (PAR) covering the 2023-2030 period, with a significant emphasis on human resources management. This Ministry asserts that ‘one strategic goal for the reform of the public administration is to combat politicisation’.

However, such reforms are difficult everywhere, as international experiences demonstrate and North Macedonia is no exception. It is helpful in this regard to refer to the SIGMA reports prepared by the OECD, which monitor how various countries respect the principles of effective public administration and how they implement reforms. The most recent report, in 2021, provides a mixed picture: ‘The overall quality of the strategic framework of PAR has improved since 2017, following the adoption of two strategic planning documents in 2018 and the establishment of key co-ordination structures for PAR. The actual effectiveness of reform implementation, as measured by

the rate of full implementation of the annually planned activities, has been weak. Less than half of the annually planned PAR measures were fully implemented in 2018-2020. Organisational and management structures for PAR co-ordination, at both the political and administrative levels, are established, but they do not meet regularly or frequently enough to monitor PAR implementation effectively.’ (pp. 14-15)

This summary accurately reflects the situation in other reform areas: a willingness to declare reform and design relevant policies, in part to satisfy external pressure, and an absence of political will, combined with a lack of administrative capacity to implement these same reforms. It is not surprising that an earlier SIGMA report in 2014 had arrived at similar conclusions. One senior ministry official ascribes the lack of motivation and drive to ‘tiredness with declaring reforms without genuine reforms’.

Politicisation is not unique to North Macedonia but is particularly damaging because it is combined with other factors: the scarcity of competencies, lack of attractiveness of the civil service, rapid changes in minister, and absence of professional development.

The politicisation of the public administration is not unique to North Macedonia; it is characteristic of many public administrations, as is indicated by much research around the topic. What makes this particularly damaging is the combination with at least four other factors.

First, the relative scarcity of candidates who have the correct political background and relevant technical profile, in terms of experience and expertise. Obviously, the size of the country, combined with the temptation of migration, help explain the existence of a small pool of competent experts in, for instance, educational planning, management or statistics. At the same time, the frustrations created by ineffective management have led to an unwillingness to become a public servant among the competent professionals.

Second, the lack of attractiveness of the civil service, particularly in financial terms. Several interviewees pointed out that the lack of competent staff within the public administration is related to the increased attractiveness of the private sector, which offers better salaries and a more motivating work environment. Even within the public service, staff at ministries have the lowest salaries. Therefore, they are moving from ministries to other parts of the public sector, including to become teachers in municipalities.

The third factor is one highlighted earlier: the rapid changes in ministry leadership leads to equally quick movements in senior positions, including those that are technical and therefore not dependent on political loyalty. An official from another ministry, which also encounters such changes, though fewer than in education, explains the detrimental impact: ‘Every time a new minister comes in, we need to introduce them and their advisers to the policy. But not only that, we should persuade them that we should continue with the implementation. For the staff doing this every year, it is demotivating and discouraging. It affects the quality of implementation and the sustainability of the policies.’

Finally, **the absence of a professional development strategy within the public administration, and within the educational administration, as Section 2 highlights, is harmful at any time, but even more so when senior staff change regularly.** The SIGMA 2021 monitoring report identifies this as a core challenge for the whole administration: ‘The professional development of civil servants is very weak, both in terms of training activities and strategy. The MISA has no real instrument to deliver training as the so-called “Academy” [a professional development institute for the whole public administration] is not functional and lacks human and financial resources to do so.’ (p. 67)

Minor interventions can limit the damaging impact of the politicisation. This brings us to the question of what should or can be done to improve this pernicious situation. While it is necessary to decry politicisation, it may not be realistic to propose its ending, and it is unhelpful to postpone all action until the ideal scenario – the end of politicisation – has arrived. Several interviewees argued that the end of politicisation required a long-term commitment, which is currently absent. At the same time, the damage that this practice causes may not be immediately visible, and

administrative underperformance can and is ascribed to other challenges, such as lack of resources or the slowness of legislative reform. One intervention that may therefore be indispensable in combating politicisation is to clearly demonstrate the damage it is doing, not so much to the system (which is an abstract concept for many parents and students), but to their daily experiences and their long-term future.

This is not to say that the space for reform is completely closed. One example of a fairly minor change that does limit politicisation can illustrate this. It concerns the election of school principals by the school board. Until a few years ago, the board was made up of nine people: three teachers, three parents, two municipality representatives, and one ministry representative. The number was recently cut to seven, with the disappearance of one municipality representative and the ministry representative. As such, the selection is expected to be more based on professional than on political characteristics. In addition, when previously the final decision was that of the mayor, who could choose between two candidates, now, the decision of the board is final, in principle. If the mayor fails to respect the decision, the minister is obliged to appoint that person as a director. This was interpreted as a move towards de-politicisation, though others, including some municipal authorities, see in it a sign of re-centralisation, a topic which is discussed later.

Usually, when confronted with undue political influence on the civil service, reformists propose stronger regulatory **frameworks, for instance in terms of recruitment procedures and criteria, and in terms of numbers of staff.** The challenge in North Macedonia is that such frameworks already exist and are well constructed. Discussions with relevant staff in MISA and in the education administration, as well as the literature, confirm this. The 2021 SIGMA monitoring report, for instance, concludes that ‘merit-based recruitment, demotion and dismissal of civil servants are adequately regulated’. (p.67). Similarly, ‘Macedonia maintains a complex system of monitoring and control of employment in all public institutions. The key element of this control is systematisation (Систематизација), an internal document which must be adopted by every public institution. It includes the number of positions, key requirements, rank of the position (relevant for the level of salary). The document must be approved by the line ministry and by the Ministry of Finance.’ (Herczyński, 2019: 41). Our interviews showed that all staff are well aware of this systematisation document, and its essential role in deciding on the numbers of posts.

The problem is that informal processes, which are more difficult, if not impossible, to regulate, intervene. This is evident in the final recruitment decision reached by a panel, where political loyalty outweighs professional characteristics. While senior and middle-level employees of the administration are typically involved in the recruitment process and interviews (though some reported being excluded from this process), they have little influence on the decision on who gets to be hired. Because many potentially good candidates are aware of this, they decide not to apply. As a result, recruitment is not sufficiently competitive. There is also misuse of the ministers’ discretionary power to appoint special advisers and similar staff. This leads to a situation of imbalance, as described by some ministry staff: several key units lack personnel and are unable to exercise their core functions, while there are various advisers in the ministry whose role is unclear and whose contribution to delivery is invisible to other staff.

One senior national expert argues that one way out of this conundrum consists of creating, within each ministry, a few key units (for instance, a policy and a delivery unit) within which core staff are appointed for several years and are therefore protected from political influence. This staff could consist of experts from different backgrounds and could bring together competencies from within and outside the ministries, including national academia, international experts and civil society. It should also include experts from all political parties, to ensure some political buy-in and protection from recurrent change.

A change in mentality needs to precede structural changes, and accountability may help do so. Such proposals are constructive, but risk remaining fragile as long as the underlying issues that allow for politicisation to continue are not addressed. Several interviewees referred in this regard to the mindset, the mentality: ‘we need to change the mentality before we change the system.’ That mindset includes the very low expectations that the citizens have of the public administration.

Several interviewees argued that there is no real demand that the public administration should be effective. The beneficiaries tend to take it for granted that the public administration is ineffective, and that staff do not know their job. This is particularly true for those parts of the administration that deal directly with citizens. This can become a vicious cycle: politicisation leads to low performance; low performance becomes the norm and translates into low expectations; low expectations blunt any demand for accountability; the lack of accountability allows for the politicisation to continue.

Maybe the link in the chain that can be broken with least resistance is the creation of some form of accountability mechanism, combined with a professional development programme. Further parts of this chapter will refer to these two issues in more concrete terms.

5.2.2. The design of policies and strategies in education

There is broad recognition that the education system is in crisis, but there is some doubt that its reform is a priority for government. The vision of those we spoke to regarding the state of the education system is similar to their vision of the public administration: there is universal recognition that the system is in dire straits. Among many actors, both within and outside of the administration, national as well as international, this translates into a feeling of crisis. However, when asked if education is identified as a priority for government action, many of the same interviewees did not think so. In their eyes, there is too little consistency and too many abandoned reforms. The discussions identified two broad reasons why this feeling of crisis does not lead to a sense of urgency and priority among policy-makers. First, the prevalence of the crisis for several years has blunted the imperative of reform: policy-makers, experts, principals, teachers, students and parents have gone through this crisis, and the system has not completely broken down. Second, to quote one representative of an international agency, 'I don't think that there is sufficient understanding about what education means for a country. There is no leadership in government that really understands that public education is not only a set of policies and curricula and programmes, but also a vehicle towards generating citizens in this country, and people that are competitive in the labour market.'

Different reforms have been and are being undertaken, stemming from three sources: the minister and cabinet; the 2018–2025 strategy; and international agencies.

This is not to say that the education administration has not responded to the crisis. Several policies and strategies have been developed, but their implementation is weak. The remainder of this chapter examines the reasons for this, with this section focusing on the formulation of policies and plans.

Simplifying a rather complicated process, policy formulation takes place through a combination of three distinct processes:

1. The first is the initiative-taking by ministers. In principle, and in regular practice, policy formulation, in the sense of defining the priority reforms and actions in education, is exercised by the minister and his/her cabinet, as part of policy definition by government.
2. The second is the preparation of long-term strategies, such as the one for the period 2018–2025.
3. The third is the influence of international agencies, which, either through their own programmes or projects, or through technical advice and, at times, pressure, influence the national agenda.

The last part of this chapter will examine the third factor. Our focus here is on the first two processes, and in particular on the factors that impede policy implementation.

The 2018–2025 strategy was prepared through an open, consultative process, which has contributed to its ownership by the administration.

The strategy has several strengths: it is aligned with the national development plan, is comprehensive and was developed in a participatory manner. These points deserve emphasis.

First, the strategy is linked to the national development framework. As such, it responds to the criticism that education leadership is not sufficiently aware of the role of education in socioeconomic development. Second, it presents a comprehensive strategic vision for the future development of the whole education system and can therefore bring together all different actors around shared goals and strategies. Third: the strategic plan was prepared in a participatory manner, through a process that involved a wide range of actors and stakeholders.

This last point deserves emphasis: a participatory approach has challenges, in terms, for instance, of the time and resources spent and risks of opposition, but it has the major advantage of building ownership. Our interviews and the survey results indicated that there was significant consultation within the educational administration, with other ministries and with international partners. One third of respondents to the survey of education staff indicated that they actively participated in the development of the strategy; in our interviews, all agencies, centres and departments recalled that they were asked to send representatives. Other survey responses indicate a good awareness of its existence and purpose. The process went beyond the education administration. For instance, representatives from the Ministry of Labour and Social Policy (MLSP) were included in the drafting and, as a result, the parts related to pre-school education in the strategy are synchronised with the MLSP's strategy documents. One international partner confirmed that 'the consultations were really wide and well intentioned. The consultation meetings were constructive, and interviewees gave examples of the influence they had on the content of the strategy. The third part of this chapter digs deeper into the capacities of the administration to absorb the feedback gathered through consultation processes with broader stakeholder groups.

There are different, even contrasting, practices when it comes to the preparation of such sectoral strategies. According to a senior national expert, the Adult Education Strategy was prepared mainly by a consultant as part of a project, with little national ownership and without systematic consultation. Consultation for the design of the National Employment Strategy, which also benefited from external technical assistance, was more organised, through 'a broad platform of working groups, with representatives of social partners, all key ministries, and some independent experts', according to an international adviser. Within that broad spectrum, the preparation of the education strategy offers a good example of an open consultative process.

However, the strategy has not functioned as a systematic implementation framework for the whole administration. Some basic elements that would allow the strategy to become a comprehensive guide for the development of policies and practices in the education sector were in place. However, in the view of most interviewees and survey respondents, that did not happen. Opinions differ. Not surprisingly, those closely involved in the preparation process consider that the strategy creates some stability when preparing the operation-oriented plans of the ministry: 'each time we prepare our three-year plans of the ministry, we are looking at this 2018-2025 educational strategy'. Other interviewees are more critical, claiming that the strategy quickly became outdated. Several questions in the survey show this diversity of opinions. *Table 5.1* summarises the replies to four questions about the strategy's content and its use by the administration. The first two questions relate more to the content: a fifth of respondents or fewer indicated high satisfaction with the strategy as a guide for prioritisation and the definition of interventions to improve quality. About a similar share showed dissatisfaction. Half expressed some satisfaction. The third question shows the existence of a disconnect between the strategy and the daily work of the administration: less than a quarter of respondents use the strategy frequently to guide their work; 35% does so rarely or never. The final set of answers offers some explanation, as a large majority indicate that it is not easy to follow the policies, guidelines, or recommendations in the strategy.

Table 5.1. The use of the education strategy within the administration, 2023

| | | | | |
|--|-------------------|--------------------|-------------------|--------------|
| To what extent does the education strategy reflect the priorities needed in the sector? | To a large extent | To some extent | To a small extent | I don't know |
| | 20% | 51% | 15% | 14% |
| How effective is the strategy in improving the quality of education in the country? | Very effective | Somewhat effective | Not effective | I don't know |
| | 15% | 51% | 22% | 12% |
| To what extent does the education strategy guide your everyday work? | Frequently | Sometimes | Rarely | Never |
| | 23% | 42% | 26% | 9% |
| In your everyday work, how easy is it to follow the policies, guidelines or recommendations in the strategy? | Easy | Somewhat difficult | Difficult | |
| | 10% | 75% | 15% | |

Source: Survey of staff from the education administration. N=65.

However, the reasons for the limited effectiveness of the education strategy go deeper than its level of difficulty, and an examination of this issue allows for a broader reflection on policy-making within the education sector.

Ideally, a strategic document such as the 2018–2025 strategy should be translated into legislative/normative terms and operational/financial terms. However, both these falter for various reasons.

The strategy was not always accompanied by relevant laws, due in part to its disconnection with ministers' initiatives and to the lengthy process of law creation. Translation into laws is conditional upon the initiative of the minister. But the connection between the strategic plan and the reform initiatives by different ministers is weak, if not absent. Some interviewees identified as a reason for this that the impetus for preparation of the strategy came not so much from within the ministry, but instead from outside. It came from two sources: the international community, including the European Commission and the General Secretariat, which requested that ministries prepare a strategy, the implementation of which the Secretariat would monitor and hold each Ministry accountable for.

Translating a strategy into a legal framework and preparing laws is time-consuming in any context, but becomes a major worry in the context of North Macedonia for three reasons:

1. First, even fairly minor changes in the organisation of the education system require a law. Where in many other countries decrees or bylaws, which do not require parliamentary approval, may be sufficient, in North Macedonia a law must be prepared by the administration and approved by parliament. We were given several examples of how the process of creating a new law can start from a fairly small initiative. For instance, to organise the validation of adult education programmes, a working group was created. Originally, the intention was to amend the law for adult education. 'However, while doing so, the working group found out that there were a lot of changes, including because of feedback from providers and other social partners. So, we decided that we should not change the existing law, but that it would be better to have a new law because, according to some practices, if more than 50% of the articles in the law change, we have to go with the new law, instead of amendments that will make it unreadable.'

2. Second, the frequent change in ministers evidently further slows down the process. It regularly happens that newly appointed ministers interrupt the parliamentary process to ensure that the new law is in line with their vision and priorities.
3. A third possible reason, mentioned by some interviewees, is that education may not be a priority in parliament and that, within education, adult or vocational education receive less attention than primary or secondary education. The fact that the Law on Vocational Education has been stuck in parliament for several years is quoted as an illustration of this.

Whatever the reasons may be, the long time it takes to finalise laws that are an essential instrument for translating strategy into action and for launching reforms is a source of frustration and even demotivation deplored by interviewees within and outside of the administration. It adds to the existing image of ineffectiveness.

There are several reasons why the strategy was not translated into operational terms: the lack of a strong monitoring and evaluation (M&E) framework; the absence of a ‘champion’ within the administration; and the difficult collaboration between education and other sectors.

The difficulty of translating the policies and strategies into operational terms has several causes. The strategy is insufficiently concrete. The fact that it is a broad document, which covers the whole sector and arguably lacks focus, is in itself not damaging and may even be unavoidable in a sector-wide strategy. However, an effective strategic plan tends to have a limited number of major goals, reflected in a set of well-defined Key Performance Indicators and targets, as well as a clear M&E framework. These guide the whole administration towards a common set of achievements and can be used as an accountability tool. This is absent in the strategy, which has not therefore been used as much as it could have been for accountability purposes. The strategy contains a series of detailed action plans, but their relevance is quickly outdated if they are not regularly adapted to the speed of progress and the changing context. This particular weakness of the strategy may be the result, in part, of an incomplete understanding of its role. Some senior officials recognise that ‘until recently, the government and the ministries did not understand the purpose of this strategic plan; we didn’t understand the meaning of this document, because there was little explanation, and almost no training when staff at different ministries were asked to develop them’.

There is no strong champion within the educational administration to advocate for the use of the strategy. The Department for Strategic Planning, as we will see later, is small and, although it has competent staff, its role is not well known by all staff.

Implementation demands effective coordination and collaboration within the ministry and, for some aspects, between ministries.⁹⁴ Collaboration between ministries, based on our discussions, differs from one to the next:

1. In the area of pre-primary education, the scenario is somewhat positive: the distribution of competencies between the different ministries (Education, Labour and Social Policy, and Health) is clear, and coordination works well. The subsector benefits, as an analysis by the World Bank in 2015 (pp. 19-21) demonstrates: the policy framework for Early Childhood Education and Care (ECEC) is well established, for instance with standards for what students should know and learn, a government-approved curriculum, service delivery standards for ECEC centres, requirements to become an ECEC caregiver or educator, and mechanisms to enforce standards. There is overlap in one area, namely that of inspections, with kindergartens complaining that two different inspectorates ask them for the same information.
2. The 2022 capacity assessment, undertaken by the EU, concludes that the situation is different in Technical and Vocational Education and Training (TVET). The linkages between ministries, when it comes to implementing those parts of the strategy that demand inter-

⁹⁴ The next part of this chapter examines internal collaboration.

ministerial collaboration, are not systemic: 'We identify a particular need to improve interconnections, standing communication and cooperation between the MoLSP and MoES. The education part of the National Employment Strategy is well developed and presents an integral part of the strategy, but we still found a weak understanding among departments/civil servants of the impact of education on employment policy, as well as of the mutual impact between education and labour market needs' (p.28). 'We found that, to improve inter-institutional cooperation, it is necessary to explain very clearly where their liability lies. "Lack of commitment" is not a result of "automatic" or "pathological" resistance to cooperation but a result of lack of understanding of how their sectors interconnect with employment.' (p. 38).

Because of the need for various ministries to work together in education, some proposals were put forward to strengthen cooperation. One official voiced the idea of creating a national coordinating body in education to facilitate the communication between the different ministries, institutions and other bodies. Other interviewees also saw an added value in this. At the same time, it was highlighted that this coordination body would need to be situated within the government rather than the MoES: 'If we really want this body to be effective, it has to be situated within the government. This is where the real power lies. The place where things are sorted out in reality.'

The different uncoordinated initiatives demonstrate a lack of consistency rather than an eagerness to reform.

A further explanation lies in the lack of consistency in reform. One international observer summarises the situation by saying that 'education is a place where everyone gets to try whatever they want. There are a lot of pilots and initiatives. Many reforms are started; very few of them are brought to fruition or completed. Their results are not taken into account in a new cycle; there is no research to make sure that the next steps are more meaningful. Of course, the change of ministers plays a role, but there is also the influence of the donor community.' One example, among others, relates to the introduction of electronic testing, which was discontinued for reasons more to do with resistance among teachers than with technical arguments. This inconsistency and instability of vision contributes to a further reason for the lack of implementation: it feeds a professional fatigue among administrators and teachers and strengthens their resistance to change. Why invest in supporting reforms and developing new practices when it is probable that the reform will be abandoned or remain at a pilot stage?

The situation in the education sector is not unique. The 2021 SIGMA monitoring report (p.29) offers a rather bleak summary of the medium-term government planning system, which is 'established, but it has gaps, particularly in the area of sector strategy development and monitoring, and the quality of the planning documents is still weak. Despite the recent efforts of the General Secretariat, the preparatory process of the new regulatory basis for sector strategy development is slow, and the whole area remains unregulated. Alignment and coherence between government plans is not ensured, and a high number of Government Annual Work Plan measures are carried forward from one year to another (58% from 2020 to 2021). Central oversight, monitoring and quality control on sector strategy development is not institutionalised. Sectoral strategies of ministries are prepared using differing methodological approaches and standards and often lack action plans to help plan and monitor implementation to achieve the ultimate policy goals. There is no practice of preparing and publishing regular monitoring reports on the implementation of key government planning documents, with the exception of the report on the state budget.' This is not new. A somewhat similar conclusion appears in the 2014 assessment.

The ineffective implementation of the strategy, and of other reforms, reflects a lack of consensus on the direction of the education system. While externally promoted reforms could build such a consensus, they may lack political buy-in.

The difficulties of policy or strategy formulation and implementation reflect a broader challenge. On the one hand, several actors within and outside of the administration clamour for a national strategy that represents and commits the whole education community, identifies clear priorities

and does not belong to a particular government, party, or social group (in the words of one official: ‘we have to find a way to create a national consensus on how to improve the sector, to define a mid-to long-term effort of all the actors in the country, not only the current government, and not only the current political structure.’). On the other hand, such a strategy, precisely because it is situated above politics, may not have the authority that comes with political buy-in and approval. It is precisely this aspect of the existing strategy, that has enfeebled it as a reform instrument, and helps to explain the limits to its implementation. It is difficult for a policy document or a strategic plan to be above politics, so that it does not suffer from political changes, and also politically supported, so that it has authority, all at the same time.

One possible way of getting out of this conundrum is to refer to a supranational document, – one produced by non-political international experts that is subsequently discussed internally to create national commitment and consensus. There were several references to the 2019 review by the OECD of evaluation and assessment in education. Some experts considered that this analysis was a stronger source of stability than the education strategy, a judgement based on the fact that several ministers were involved in its preparation and others in following up on its recommendations. According to them, the analysis has two characteristics, which distinguish it from the strategy: it is more evidence-based and proposes genuine reforms. To ensure its use, the national authorities that requested the analysis, made efforts to mobilise support among political parties, and to create a broad consensus, for instance by organising round tables with different stakeholders.

Some interviewees consider that the absence of such a consensus remains the major challenge. The strategy has to reflect a national consensus; it cannot replace it. This national consensus may be missing. The reform direction is unclear and, as a result, the commitment to change is missing.

5.2.3 The promise and disappointment of decentralisation

So far, the analysis of governance has concentrated on the central authorities, the ministries and their departments and agencies. Within education, municipalities also play an essential role, and their performance contributes to the success or failure of education reforms.

Municipalities in principle play an important role in the management of education. In general, their performance is unsatisfactory, as is most evident in teacher management.

The decentralisation policy was not introduced in order to improve education, but instead for political reasons, as is the case in many countries: it was a political response to a political reality, namely an armed ethnic conflict, fuelled by grievances among some ethnic communities about the inequitable provision of basic services, including education. Decentralisation was designed to mitigate the risk of renewed ethnic conflict. The expectation of improvements in educational delivery was an accompanying benefit, not the main focus. It is important to keep this in mind. As we will see later: the political rationale remains strong and impacts upon the performance of municipalities in education.

The division of responsibilities between the central level and the municipalities is clear and well known by all. The main responsibilities of the latter are: the establishment and maintenance of primary and secondary school buildings, payment of staff salaries, organisation of school meals and transport of secondary school students living more than two kilometres from their school. In principle, they can adjust human resources and maintenance costs according to their needs. They can recruit teachers and decide on the opening and closing of schools, taking into account criteria pre-defined by the MoES. All major decisions on the content and quality of education, such as development of curricula, approval of textbooks and teacher training, remain at central level, which is also in charge of capital spending.

It is difficult to assess whether decentralisation has made management of the education system more effective, as the alternative scenario – a centralised system – does not exist, but it is clear that there is much dissatisfaction with some aspects of decentralised management. The most evident one is that of teacher management: while the number of pupils has decreased, numbers of

teachers have increased, in some cases to absurd pupil/teacher ratios, thus moving resources away from inputs and processes that are essential for quality improvement (See *Section 3.4.1* in *Chapter 3*). A 2022b UNICEF paper (p.3) concludes that ‘over the past two decades the student to teacher ratio has decreased from over 18 students per teacher to 10 students per teacher. When considering non-teaching staff, some schools have more staff than students.’ In addition, there are significant disparities between municipalities in terms of pupil/teacher ratios and unit costs (See *Tables A6.11 and 16.13* in *Chapter 6, Annex 6.1*, for details). While some difference is unavoidable because of local context and school size, they are extreme in North Macedonia: ‘An analysis of expenditures per student by rural and urban schools highlights significant disparities. The differences among rural schools are most striking – the municipalities with the highest expenditure per student spend almost 15 times more compared to the municipalities with the lowest expenditure per student.’ (p. 5)⁹⁵. Observers refer to two other facts to argue that decentralisation has been unsuccessful in improving education delivery: teacher recruitment is politicised; and many municipalities have problems with financial management, incurring significant debts.

The ineffectiveness of municipalities has three immediate causes: insufficient competent staff; a lack of financial resources beyond teachers’ salaries, and no mechanisms for collaboration between municipalities.

In discussions with central as well as municipal actors, three constraints are identified as the main causes for the performance of the municipalities:

1. **First, very few municipalities have sufficient competent staff to manage their schools network.** According to the OECD (2019a: 44), ‘each municipal government has just one or two members of education staff.’ The situation may have changed somewhat and differs a lot between municipalities, with many having nobody assigned to education as such, and a few having a team in charge of social sectors as a whole, including education. But the overall conclusion remains valid and led one senior observer to argue that ‘the municipalities don’t have capacity, the mayor may have capacity, but not the institution’. This is not a recent phenomenon. In principle, the process of financial decentralisation took into account the capacity of the municipality to manage funds. ‘Capacity’ was mainly interpreted as having a minimum level of staff (in a first phase) and a demonstration of good management and reporting (in a second phase). With the start of the decentralisation process, the intention was to reduce the numbers of employees in government institutions at central level, and recruit more people in local government administrations. This did not happen. Already, in 2010, in an interview with a local think tank, former Minister of Education and Science, Sulejman Rushiti, confirmed the ‘lack of administrative capacity’ within some municipalities to effectively identify local education needs: ‘Most of the municipalities have only one or two employees in the sector for education, which ... is far from sufficient’ (Bakiu, 2010: 43).
2. A second point that municipal staff and some observers refer to, to explain the performance of municipalities, is that **they have insufficient financial resources to take proper care of their duties in education.** Two arguments are usually presented to make this case. On the one hand, central government, which provides municipalities with most of its funding, does not provide sufficient resources. Municipal representatives tend to complain about the lack of capital investments in new schools, and scant central level efforts to make school life better for students. On the other hand, most municipalities do not mobilise local resources for education. The overall result is that a growing number of them have financial problems. As early as in 2017, a study concluded that ‘we are increasingly witnessing many municipalities and schools under their jurisdiction having major financial

⁹⁵ See also *Chapter 6, Section 6.4.1* for further details.

problems and even blocked school accounts due to unpaid obligations to various suppliers'. (Blazhekovikj Toshevski and Tushi, 2017: 75). The situation has got worse, including because of the COVID-19 crisis.

3. One way of overcoming these financial and staff constraints would be to set up collaborative mechanisms between municipalities. It is precisely the **lack of such collaborative mechanisms** that is quoted as a third constraint. Undoubtedly, the Association of Local Self-Government Units (ZELS) is offering a useful set of services to the municipalities, including platforms for exchange, but its own resources to do so on a systematic basis, in areas that demand specific expertise, are limited. The World Bank's conclusion in 2018, namely that 'cooperative arrangements among smaller municipalities and service agreements between smaller and larger municipalities have helped mitigate these problems, but there have been too few such agreements' (World Bank, 2019a, p.50), remains valid. When municipalities collaborate with others on matters of education, it is mostly about school visits and field trips, rather than on issues related to the delivery of education or the management of schools. And it is not facilitated or supported by the MoES or any other central body.

However, there are many differences between municipalities, with some being much more competent and effective than others.

This somewhat pessimistic image of the municipalities does not fully reflect the diverse reality of North Macedonia. Indeed, one characteristic of decentralisation is precisely that there is much diversity among municipalities, and significant differences. We can quote, at length, one expert who regularly works with municipalities: 'There is a lot of untapped potential in municipalities when it comes to governing schools. There are municipalities that function very well and that could be more autonomous, because they have a developed business community that supports schools, and they have leadership at local level that support schools and teaching staff. Some have the equivalent of school inspectors within the municipality. In some cases, the person who is in charge of education pushes initiatives forwards, sometimes even more so than staff from the ministry can do. But for every one of those, there are at least three to five that have none of these things.' The fact that some, though only a few, municipalities do their own 'development planning' (which is not only about infrastructure but includes, for instance, a focus on inclusive education) is a further indication of this diversity.

The fact that these municipalities, which are more capable and more willing than others to take action in education, are also constrained, is an indication of the existence of more 'structural' factors than the three mentioned above.

The decentralisation policy suffers from various systemic constraints. Several of these find their cause in the absence of genuine financial decentralisation.

Arguably, an ideal decentralisation scenario is characterised by a high-level balance between capacity, autonomy and accountability. What this means is that municipalities have strong capacity to manage their schools network, in terms of human as well as financial resources. As a result, they are given important responsibilities and significant autonomy. And at the same time they are being held accountable for the use of the financial resources and the exercise of their responsibilities. In North Macedonia, the scenario is very different – almost the opposite.

A first aspect relates to financial decentralisation, or rather the lack of it. To summarise a complicated situation, the decentralisation policy is not accompanied by genuine financial decentralisation and has not succeeded in creating a strong role for municipalities in financial management, from the collection of funds to accountability for their use. North Macedonian municipalities collect few taxes and rely heavily on transfers from the national budget. For pre-primary, primary and secondary education, financing from municipalities' own revenues is very low; estimated at 1.3% in 2022, with block grants by central government contributing to about 92% of all school-level expenditure (see Table 6.12 in Chapter 6). At the same time, municipalities manage most spending on pre-primary, primary and secondary levels. However, they complain about a lack

of financial autonomy: 'The funds just pass through the accounts of municipalities and go to schools. Municipalities don't have space to do something with these funds; they're just like a channel where the money passed through.'

Secondly, the low capacity of municipalities and the fact that most do not collect funding for education, are presented as reasons for the lack of functional autonomy. Municipalities are not requesting a change in the distribution of responsibilities, but they complain about the fact that the central authorities encroach on what are local responsibilities. The example given earlier of the 'depoliticization' of the election of the school principal is interpreted differently by municipal representatives, who consider it a form of re-centralisation and an expression of distrust in municipal decision-making. Some also believe that too many decisions that are closely linked to their responsibilities, for instance decisions on establishing a class or opening and closing a school require final confirmation or approval from the central authority.

This results in various misalignments: between responsibility and source of funding, between accountability and funding, and between accountability and autonomy.

The result of these different factors is a series of misalignments:

1. There is misalignment between responsibility and source of funding: municipalities are responsible for several aspects of pre-primary, primary and secondary education, but almost all funding comes from the central level.
2. There is misalignment between accountability and funding. The following example was given most frequently: students and parents hold municipalities accountable for the state of buildings, but municipalities do not have control over the capital spending that they would need in this regard. One recurring request by municipal representatives was to transfer all capital spending for the renovation of school buildings to municipalities.
3. There is misalignment between accountability and autonomy. Most interviewees are of the opinion that parents, students, and even teachers, tend to hold the municipality accountable for the state of the schools, but municipalities say that they have insufficient autonomy to take action to improve school quality. The central authorities, on the other hand, do have such autonomy but are not held accountable. This misalignment may lead to an overall absence of accountability, as municipalities argue that they are not in charge of quality improvement and cannot be held accountable for it. This is, in their view, the function of the ministry and its different departments and agencies. Those, however, can and do point to the poor quality of teachers, who are recruited by municipalities, as a core reason for low quality.

The 2018 Public Finance Review by the World Bank (2019a) emphasises the need for greater clarity on levels of accountability: 'It is unclear what obligations municipalities have for delegated responsibilities. For example, are they supposed to spend their own revenues beyond transferred funds in areas like education? When responsibilities are delegated, what functions are to be performed by line ministries, such as the MoES – should they oversee overall performance or conduct efficiency audits? A clear definition needs to make explicit which level of government is responsible for the three main features when any function is assigned: 1) regulation and setting standards for the service; 2) financing; and 3) actual delivery of the service. That has not been done in North Macedonia, and the ambiguity undermines the accountability of municipal governments to their citizens and makes it difficult to assess their performance' (p.52).

The regulatory and support framework is weak: municipalities receive little guidance from central authorities; communications between them are rarely satisfactory; and there is insufficient monitoring of how municipalities use their funds.

This extract highlights a further structural challenge: namely the weakness of the regulatory and support framework. Central-level funding to municipalities for education is not accompanied by effective guidance on how this can best be spent, nor by effective monitoring of the funding's

actual use. Municipalities 'have no obligation to disclose the criteria and standards which they use to decide on the distribution of funding to schools. Other than monitoring that the funds are spent on the specified sector, there is no follow-up by any central government unit (including MoES) on how efficiently these funds are spent' (World Bank, 2019a: 16). Some municipalities blame the fact that they have amassed significant debts in part on the lack of clear criteria and support, but mismanagement is undoubtedly also a factor. In 2021, the central government forgave a 50-million-euro debt that several municipalities had amassed. The problem is that it did so without any strings attached and without any strategy to make sure that municipalities did not continue indebting themselves. This further emphasises the lack of accountability mechanisms.

Central ministries have to monitor whether earmarked funds are used as intended, but this does not apply in the same way for block grants, where the monitoring role of the ministry is more limited: according to Article 157 of the primary education law, the funds within block grants for primary education intended for students with disabilities must be allocated between the schools according to the number of students with disabilities, and have to be used for the needs of those students. In education, municipal funding is mainly in the form of block grants (as stressed in *Chapter 6, Table 6.12*). This situation may threaten the achievement of a major objective of the central funding of municipal expenses, namely equity, as there is no monitoring of the use of the grant and of the differences between municipalities.

Effective decentralisation also requires regular and open communication between central and local authorities. On this issue, opinions differed, probably in part because experiences differed. The World Bank noted in 2019 that 'a positive aspect of the decentralisation process so far has been the continuous dialogue between the two levels of government, facilitated over the years by the ZELS, and with several ministries involved' (p. 48). A municipal representative indicated appreciation for the fact that they had a contact person within the ministry who responds quickly to various requests. However, there were also other voices. In the interviews with central administration, it was underlined that the deficiency in coordination between central and local levels has led to the implementation of unsynchronised policies concerning schools, as admitted by one official: 'It is not uncommon for the MoES and the municipalities to have a different understanding of what the schools need, and to act in different directions'. Some municipal staff expressed dissatisfaction with the fact that the ministry tends not to listen ('they [central government] don't need to give an explanation to anybody'). The lack of communication between the two levels led some interviewees at local level to believe that the legislature and other policy instruments created by the central education administration are detached from local needs and show little awareness of the situation 'on the ground'. When communication between the two levels does happen, it is mainly with the departments for primary and secondary education. There are no coordination meetings at national level with the municipal education administration representatives.

The over-recruitment of teachers by municipalities is the result of a range of incentives, and fits with the use of the decentralisation policy as a tool to temper political and ethnic tensions.

These different elements help explain why many municipalities recruit more teachers than necessary, and continue to do so, even with declining demographics. It is a rational response built on different factors:

1. First, this is an area in which municipalities have autonomy.
2. Second, it brings in funding because central government provides a block grant to cover salaries. Indeed, 'the actual funding that municipalities receive for primary schools is determined mainly by the previous year's allocation and the agreed increase in salaries (UNICEF, 2022b: 5). Thus, the number of students and population density play an almost negligible role in determining the funding allocation', while teacher salaries are the main

factor. So, there are no financial incentives for decreasing the number of teachers; quite the opposite.⁹⁶

3. Third, there is no monitoring on the use of funds, and little if any guidance on good practice, and no sanctions on what could be considered ineffective use.
4. Fourth, teacher recruitment offers visible and immediate benefits to selected people, which is important in a competitive political environment. From a technical or strategic point of view, spending on items and processes which on the long-term may lead to 'quality improvement' may be wiser, but it may be less efficient in building political support and loyalty. As one international expert pointed out: 'I don't believe that any local government, regardless of its political orientation, will reduce the number of teachers in order to decrease the costs of the municipality, as this will create problems at the next elections'. It is interesting to note that, even in times of crisis, municipalities have protected salaries: 'salary spending now covers a larger share of overall spending by schools in both primary and secondary education, compared with pre-pandemic spending' (World Bank, 2023b: 24–25). It is also noteworthy, however, that the share of salary spending differs significantly between municipalities: in primary education from 97% to 64% of overall spending, and in secondary education from 92% to 60% (World Bank, 2023b: 25).⁹⁷

The implementation of decentralisation in North Macedonia cannot be understood outside of its political context. The technical solution to the over-recruitment of teachers is straightforward and consists of designing a formula which takes into account the major factors that impact on the number of teachers. There has been some progress with this: the relevant documentation has been submitted to the government for official approval, but due to lack of funds the adoption has been postponed until September 2024. Work is ongoing on the formula for ECE and secondary. However, the slow and uneven progress, due in part to the existing resistance to their design, is an indication that the main challenge is political. Politics indeed plays a role, as much at local level as at central level. The fact that the policy was originally developed for political reasons is therefore no exception to this. If one purpose of the decentralisation policy was to mitigate the potential for ethnic conflict, it is not surprising that the preferred strategy at central level to build and retain support among an ethnic group has been imitated and therefore multiplied at local level. As at central level, this is most visible in recruitment. We have already referred to the recruitment of 'unnecessary' teachers, but it is not only a matter of numbers. While principals have, in theory, responsibility over the hiring and firing of teachers, 'according to stakeholders interviewed by the review team, principals' autonomy in hiring decisions is limited by pressure to accept teachers based on political affiliations' (OECD, 2019a: 57). This led one experienced observer in our discussion to say that *'the worst teachers are the best party members'*. In other words, at times, accountability to the political party may be more important than the accountability to the educational administration and the teaching profession.

The existence of a standard decentralisation policy, while there are significant differences between municipalities, is unhelpful.

The preceding discussion brings us back to the diversity among municipalities, and the fact that the decentralisation policy is a standard approach to municipalities, which are very different in size, in needs, in resource mobilisation potential and economic opportunities, and in capacity. The policy does not take this into account, either by providing more support to those with the most severe needs, nor by allowing more autonomy to those with greater capacity. When the policy was first developed, it was based in part on the reasoning that the level of capacity would inform the level of autonomy, with municipalities going along somewhat different paths (admittedly, the distinction was broad and municipalities with quite different characteristics did follow a similar path). But now the principle is no longer applied, although municipalities may have become more diverse. An

⁹⁶ See the discussion on block grants in the *Chapter 6 Annex 6.3* for additional highlights.

⁹⁷ See also World Bank. 2023a.

alternative solution, namely merging municipalities to build greater capacity, did not receive support from the municipal representatives, their opinion being that this goes against the purpose of decentralisation, which is to bring services closer to the population.

There is a lack of appreciation of the potential of municipalities among central-level actors, which may feed a process of re-centralisation.

A deeper reason behind the ineffectiveness of decentralisation is that the central administration does not consider municipalities as an important actor that can play a core role in shaping and implementing policy, but rather as a minor implementing actor that helps organise school logistics and provides data. Municipal actors complained mainly about two aspects of this ‘disregard’. First, they are often sidetracked or bypassed by the ministry in the line of communication with schools. Municipalities receive key information about particular initiatives by the central administration from schools rather than from the administration itself. This can be a major source of frustration, as the following quote by a municipal staff illustrates: ‘Recently, the MoES came up with a protocol for improving security in schools. We weren’t consulted about it – in fact we only found out about it from the school directors. The school directors contacted us asking to provide finances for stronger infrastructural elements prescribed in the ministry’s document. We are only contacted by the MoES when they cannot get the directors to answer their requests’. Second, municipalities feel that they are not properly consulted in policy formulation. Their involvement in the preparation of the education strategy, for instance, was very minor. As a result, while there is some awareness of its existence, they have little knowledge about its content, and they do not believe that it reflects local needs.

This risks creating a vicious cycle: the ‘ineffectiveness’ of municipalities is used as an argument or an explanation for the disregard by the central administration and the fact they are regularly bypassed. To quote one central official: ‘the municipalities still do not take ownership of the education process, and this is why the coordination of the system is kept at a central level’. This weakens and frustrates the municipalities, who show little enthusiasm for collaborating with the central authorities. They describe the relationship between the central and municipal level as very hierarchical: ‘There is no space for dialogue with the MoES, they are giving the orders, and we are expected to fulfil the tasks’. The central administration staff, however, complain that they receive little support from municipalities, and that, to quote one central staff, ‘contrary to the initial intentions of the legislator, decentralisation inadvertently intensified the workload of the central administration instead of alleviating it.’

The conclusion, that several staff and observers, at central and local levels, arrive at, is that the country has recently gone through a process of re-centralisation rather than decentralisation.

5.3. Effectiveness of the administration (with a focus on policy formulation, planning and management functions)

In the second part of this chapter, we highlight key impediments to the effectiveness of the education administration, especially in the area of policy formulation, planning and management. We look at four sets of issues: the mandate and functions of relevant units within the administration; internal functioning, management, communication and coordination; human resources; and accountability.

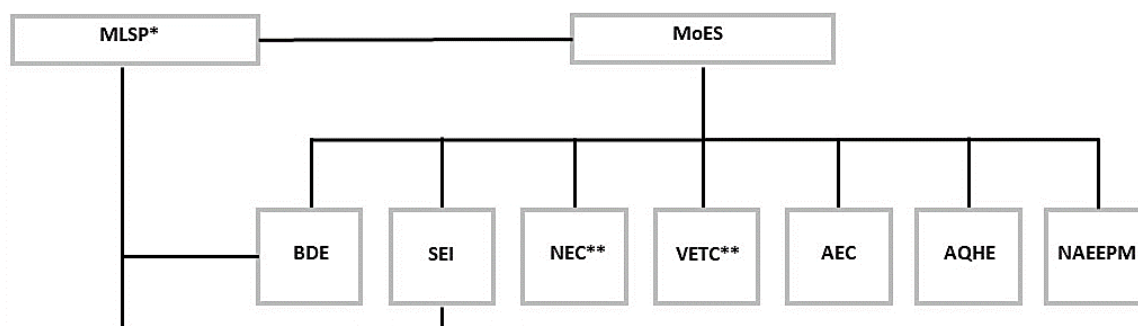
5.3.1. Mandate and function of relevant agencies and departments within the educational administration

This section examines whether the structure of the administration and the autonomy and authority of different agencies allow them to exercise their mandate. It examines recent changes in this regard and compares the mandate with their regular tasks.

The education system has a complex structure with a mostly clear mandate, with a solid understanding of this structure across the entire education administration.

The structure for educational policy-making in North Macedonia is rather straightforward. As in much of the world, a MoES decides on the policies in the field. The ministry is the leading government institution managing the education system. Connected to the ministry, with varying degrees of autonomy, are several agencies. These include: the Bureau for Development of Education (BDE), the State Education Inspectorate (SEI), the National Examinations Centre (NEC), the Vocational Education and Training Centre (VETC), the Adult Education Centre (AEC), the Agency for Quality in Higher Education (AQHE) and the National Agency for European Education Programmes and Mobility (NAEPM) (see Figure 5.1).

Figure 5.1. Structure of the education governance system at central level, 2023



Source: Authors.

Note: * Shared responsibility with the MoES for ECEC. ** Budget under the BDE

While the MoES has a leading role at central level, there is an element of co-management. The MoLSP is the body governing ECEC in North Macedonia, overseeing the staffing, budgeting and infrastructure, while collaborating with the BDE under the MoES, which is responsible for the educational programme taught in kindergartens. The Ministry of Health does also play some role in ECEC, taking care of the sanitary conditions in the kindergartens.

Over time, the system of education administration has increased in size and complexity. Several new bodies and agencies have been established over the past 10 to 15 years. After an analysis by the World Bank, the Adult Education Centre (AEC) was established as a separate entity in 2008 and the Vocational Education and Training Centre (VETC) a year earlier in 2007 – both of which were part of the BDE previously. The change of status to autonomous institutions was perceived positively in the interviews, as it has allowed greater focus on these subsystems that were mostly ignored when part of the BDE. In 2009, the NEC was also separated from the BDE as a separate legal entity dealing with quality outputs, while the BDE remains concerned with the quality inputs. The reason for this is clear: ‘The body that prepares the education programmes cannot be the same one that conducts the examinations’. Until 2014, the inspectorate was working as a unit within the MoES – it now acts as independent body (i.e. a legal entity with its own budget/budgetary account). This change of status makes the SEI more efficient and independent in its work. Another added value is that the SEI is now more agile in addressing internal needs: ‘After 2014, we increased the number of employees – prior to that we had 40-50 employees, now we are around 100. Before 2014, one inspector was responsible for 30 to 40 schools, and now we have 3 or 4 inspectors for the same number of schools. Another positive change is that now we have the office equipment we need to conduct our work properly – in the past, all of these expenses had to be approved by the ministry and it either took a lot of time to get an approval or they weren’t approved at all’.

Despite the increasing complexity that this has brought to the system, there is a relatively clear rationale for the existence of each of these bodies. There is also a solid understanding of this

structure across the entire education administration. The staff that we interviewed consistently described the roles and duties of different parts of the system and voiced no major objection to the current structure. In a similar fashion, there was awareness among staff of the mandate of their institution and departments/units, and subsequently the tasks they are expected to undertake.

The main challenges do not necessarily reside in the structure and the mandate itself, but more in the ability to exercise this mandate.

In principle, the distribution of tasks between different ministries and different agencies is fairly logical, clear and without much overlap. There are a few exceptions. One of these relates to ECEC, around the existence of two inspections, one within each of the ministries responsible for ECEC, namely the MoES and MoLSP. In addition, the SEI has a role in the evaluation of the work of pre-school institutions. However, it is not performing this role, instead mainly focusing on checking legal compliance. As a result, SEI overlaps with the responsibilities of the MLSP inspectorate and the municipal authorised inspectors, who are also checking legal compliance. Currently, there is no one to evaluate the quality of ECEC, though this should be the main responsibility of the SEI. A somewhat similar situation is found in primary and secondary schools, but here the cause resides within the educational administration. Schools at times complain that they have to provide the same information to the inspectorate and to several departments. Aside from duplication of effort, such examples of overlap pose a risk that none of the institutions respond to a specific problem, assuming that another institution is responsible. Alternatively, more than one institution may act without coordination, leading to confusion and inefficiency.

One organisational challenge that contributes to the inability of some agencies to perform the assigned functions in a satisfactory manner relates to their level of autonomy, both in terms of handling finances and in deciding on policies and strategies. While ‘the agencies are separate from the ministry, they do not have a strong independent voice. Their leadership positions are often subject to political interference or are left open’ (OECD, 2019a: 55). The VETC, NEC and AEC are clear examples. While they are autonomous institutions, their budget is part of the BDE and needs its approval, which leads to serious resource constraints. In principle, there is little reason why they should not be allowed to handle their own budget. The current process of financial approval is also quite complicated and reduces the efficient work of these bodies. Multiple signatures are needed to process documents, which ‘takes so much of our time’. What adds to this complexity is that the VETC, NEC and AEC have Governing Boards that have a financial oversight function – but this role may not be necessary or useful, given that the level of financial autonomy of these bodies is limited. Employees in these institutions believe that if they have more financial autonomy than they have at present, they would more properly exercise their mandate. The BDE, on the other hand, faces its own financial problems (to some extent also related to its level of autonomy). Its staff claim that it has not been allocated enough funds by the Ministry of Finance to provide professional development opportunities to teachers, despite a legal obligation to do so (See *Section 3.5.2 in Chapter 3* for further details). In terms of the autonomy in issues related to policy-making, several interviewees described the structure as like a ‘pyramid’ in which many issues still depend on the MoES. For instance, the educational programmes (per subject) for the VET schools are prepared by the VETC, but their final approval still sits with the minister.

Potential mergers are not seen as the solution to current problems. As previously mentioned, the structure of the education administration is complex and, as some interviewees argued, perhaps more so than necessary. On several occasions in our discussions, it was perceived to be ‘unnecessarily fragmented’ and ‘too compartmentalised’. As part of a bigger restructuring of the public administration, discussions are ongoing about a possible merger of several education agencies under one umbrella (with different interpretations of which bodies would be part of the equation). Some said that, in the past, the proposal covered only the VETC, AEC and NEC coming together, while others also included the BDE, with the inspectorate always remaining independent. In the interviews, we asked officials inside and outside of the administration for their opinion.

While some interviewees found potential benefits in consolidating institutions, most did not view it as the most effective solution. Those who found logic in consolidation argued that it could

improve communication and coordination and reduce duplication of effort. In addition, as the number of competent people in some areas is relatively small, the merger was seen as an opportunity for sharing human resources. In terms of the bodies that need to come together, one experienced national expert proposed, 'I would support a merger between the AEC and the VETC, perhaps as lifelong learning'. However, a significant majority of interviewees did not see consolidation as an ideal solution, citing concerns that a merger for the sake of a merger would not address existing issues around coordination and communication. While some may argue that political resistance is a factor in the reluctance to merge these agencies, as one interviewee stated, 'it gives political parties a negotiating base, if they cannot offer a minister spot, they can offer a director spot to one of these agencies', this is not necessarily the primary reason against the merger. In fact, the objection to consolidation related primarily to its composition, with many interviewees preferring that certain bodies remain independent, in particular the SEI, the BDE and the NEC. 'The merger of the agencies is a bad idea: our tasks are too different'. One advantage of having specialised bodies is that it has allowed for more attention on these subsectors. As one official noted: 'Prior to the establishment of the AEC, the subsector was neglected by the ministry, with the unit responsible for adult education doing very little. Adult education was always the lowest priority for any minister. However, after the AEC was established, things started to improve. While there may be some fragmentation now, a merger could potentially result in adult education being overlooked once again'.

Ultimately, interviewees felt that the administration is lacking certain business approaches (such as clear coordination mechanisms), the creation of which does not necessarily entail restructuring or merging institutions, 'it may not be needed if the ministry itself strengthens some of its processes and how it manages the bodies under its remit'. A commonly emphasised point was that it is crucial to engage in a broad debate with all stakeholders before making any decisions regarding the introduction of any merger. In summary, interviewees believed that a simple reliance on structural reform could be superficial and would not be the solution, especially if imposed without consultations, which can ignite additional resistance and an attitude of obstruction. That is, it would not change the way officials act and it may not lead to genuine change.

In recent years, there have also been discussions regarding a potential consolidation of the work for pre-school education under one ministry, the MoES. However, the capacities of the ministry to undertake such a massive change were and still are perceived to be low. The same challenges would persist if the MoLSP were to take over this role.

5.3.2. Strategic planning and management

This section analyses how the educational administration exercises the function of strategic planning and management. It also examines existing formal and informal internal and external communication and coordination mechanisms and their effectiveness.

The MoES plays a key role in strategic planning, but without a system-wide process. The development of strategic and operational plans is a key function of the MoES. It has developed some guidelines, in particular when it comes to the preparation of the three-year plans in order to follow an ISO 9001 quality procedure. However, evidence from the interviews indicates that their existence does not translate into systemic practice. There may be two main reasons for this. First, capacities to plan strategically within the MoES and the agencies need to be strengthened. Second, planning processes are not well embedded in the day-to-day functioning of the education administration. Overall, this policy formulation and planning process seems to be implicit. Many of the people interviewed had difficulties in explaining the steps in which planning takes place and how it relates to their daily practices and tasks. The impression is that several ad hoc approaches exist. Many times, the success and shape of the strategic planning process depends on a certain individual and their interest in involving others. While in principle the heads of department should participate in strategic planning, much of their day-to-day work is devoted to reviewing papers and

files, and to some extent coordination. Furthermore, while decentralisation was introduced almost two decades ago, education planning still retains many of the hallmarks of a centralised system.

In 2019, the MoES, with the help of UNICEF, conducted a functional analysis of its operations. This analysis recognises that ‘It is necessary to raise capacities for planning and strategic decision-making in the ministry, based on analytics and facts, with which the MoES will strengthen its services to society.’ To address this challenge, based on the recommendations of the functional analysis, in 2020, the Unit of Strategic Planning was transformed into a Department for Strategic Planning, consisting of two separate units: a unit on strategic planning and a unit on data analysis. However, the creation and functioning of the department has encountered several difficulties. The Department has neither the number of staff required nor all the requisite capacities for ensuring sector-wide planning. The data analysis unit is particularly small (only two people, of whom one very new) to be able to do that work. The department does not get much support from staff at other agencies, where there is at most one individual with a role in policy formulation and planning. Furthermore, both within the ministry, and particularly in the other bodies of the education administration, there is little awareness of the existence of such a department under the MoES – and it was not always recognised as the coordinating body for strategic planning and policy formulation. In this context, the Department for Strategic Planning has not yet assumed the key planning role which motivated its creation. In this respect, if the objective of the Department is to lead efforts in the area of strategic planning, it may need to occupy a higher position in the organogram, closer to the top leadership of the ministry.

In the absence of any effective institutional mechanisms for policy formulation and planning, international partners play a major role in these processes. In fact, a significant portion of policy formulation and planning functions are supported, or in some cases taken over, by them. This partly comes as a response to a lack of such capacities in the ministry itself, but at the same time it could be interpreted as a substitute for what should be the ministry’s own responsibility. While such external support may have improved the quality of education policy formulation and planning, and reduced pressures on Ministry staff, it has not incentivised internal change and commitment to these aspects. The third part of this chapter will discuss this in more detail.

The management of the system is a bigger challenge to the education sector than policy formulation and planning. When asked which of the three key functions – policy formulation, planning and management – is the most difficult one for the administration, all interviewees agreed that management is most challenging. As mentioned earlier, policy formulation and planning may be less of an issue because of the support from international partners.

Management decisions are mostly centralised, with the MoES playing a significant role in defining processes and regulations for the education sector. Almost all decisions are taken at the top, between persons in the highest political positions – the minister and members of cabinet. Although lower levels of decision-making can suggest ideas, the prevailing perception among interviewees is that management practices are hierarchical, which usually entails a loss of precious time, as decisions take a long time to be made at the top and to reach their destination. In some instances, this delay throws programmes and projects out of gear. Execution tends to be deficient, too, because such top-down decisions are sometimes seen as divorced from local realities.

Two factors, mentioned in the first part of this chapter, further impede swift implementation of management decisions. First, the regular changes in ministry leadership. ‘Every minister comes with a new team. This means that you’re losing one year, and the new team needs time to understand what’s happening in the institutions’. Second, the lengthy process of formulating laws, which are needed to give management decisions full authority.

The instability in leadership and frequent change of policy direction has led to inertia in the education administration. Its enthusiasm, morale and aspirations are suppressed, if not killed off altogether by the frequent changes of ministers and other top leadership. Aware of a possible change in direction with every new minister, the administration is not always fully committed to the success of programmes. In a politically unstable environment, the safest way to avoid mistakes

is not to act at all, which is yet another source of delay and inertia. This also leads to lack of innovation – administrators find it more convenient to solve problems in a manner that has been tried before than to venture out into the unknown. While relying on precedents can help to achieve a certain uniformity and preserve some stability, an inherent major weakness is that, in unusual circumstances, such as with COVID-19, these precedents simply have no bearing on the present situation. Although it may be said that the country was able to absorb the effects of the COVID-19 crisis at the level of maintaining a functioning education system, the context for planning, management and implementation tended to favour a certain structural inertia. ‘While the ministry took some useful actions, it failed to address the “cracks” in the system which widened under COVID.’ A good example of this is the lack of training available for teachers to increase their digital skills in remote ways of teaching. The lack of investment in teacher training has been a persistent problem for many years, and did not increase during COVID, despite the urgent need to do so. Another relevant illustration is the reoccurring problem of textbooks arriving late in schools. In the 2022/23 school year, numerous textbooks reached schools only at the conclusion of the school year, leaving a portion of students reliant on alternative learning materials as a substitute for textbooks. Some of the same issues persisted at the outset of the 2023/24 school year, affecting several textbooks in primary and secondary education. This delay in textbook delivery has created a cloud of uncertainty for schools, teachers, students and parents, and has garnered public criticism due to its potential adverse effects on the quality of education and the learning outcomes of students. It has also diminished the trust in the ministry’s capacity to efficiently oversee and execute some of the fundamental functions of the education system.

Due to frequent shifts in policies and leadership, schools have also developed a level of resistance to change. As one expert from an international partner noted: ‘There have been many, many initiatives started and never finished, which has caused a professional fatigue. Among teachers predominantly, because with pretty much every policy on education, teachers are the ones that need to implement it in practice. So, there is like a push back, even when good initiatives or tested initiatives are being introduced, teachers tend to be a little bit sceptical, which was not the case maybe 10 years ago. Not to mention that, when introducing these reforms, teachers are rarely included in the process of decision-making.’ While some level of protecting the status quo can be seen as justifiable under the current levels of change, the risk is that this can also lead schools to create irrational forms of resentment and prevent a level of desirable change. One example quoted to us is the resistance to the new concept for primary education, and in particular to a more interdisciplinary approach to teaching, inspired by the fear that schools would lose teaching hours.

Memory is held by individuals, not by the institution. Institutional memory⁹⁸ within the education administration is limited and many of the lessons learned are lost over time. A number of causes can be attributed to this situation. The most important of these is that there is no clear strategy for keeping institutional records of the procedures and processes that have taken place. As a result, many official correspondences and discussions are lost or not documented in sufficient detail to inform future policy and planning, or management and implementation for that matter. This means that there is little knowledge of what work has been accomplished, what tactics and approaches have been effective, and which aspects have proved challenging. The failure to document actions is more often a matter of not having procedures in place to take minutes or record important conversations, rather than a deliberate strategy to keep things secret – though inevitably both lead to a lack of sense of accountability.

Much of the institutional knowledge is vested in several experienced individuals. When these individuals leave the organisation, this knowledge may be lost permanently. This is not an

⁹⁸ While there are different conceptions of the precise meaning of ‘institutional memory’, here we refer to the accumulated knowledge, experience, and history of an organisation or institution, which is retained and shared over time. Institutional memory is important because it may help the education administration to avoid repeating past mistakes, build on past successes, and maintain continuity in the face of turnover, instability and change. The aim here is to assess how institutional memory is built and maintained and whether it is treated as a resource for better functioning of the system.

unlikely scenario, given that some key staff are close to retirement. This worry was confirmed by interviewees, who expressed fear that if certain individuals leave the administration, many processes would need to start right from the beginning – which confirms that there is no strategy to transfer and institutionalise individuals' knowledge in a more systematic way. In some cases, even if an individual possesses valuable knowledge and is willing to share it, there may be no one to share it with. For instance, in the NEC, there are very few experienced psychometricians left, but no new ones are hired to be trained, and to whom this experience can be transferred.

Frequent changes in leadership further affect institutional memory. As new ministers arrive, they may not all be familiar with the history or nuances of past policy decisions and may be unaware of commitments made by predecessors. In this respect, it takes time for ministers and the newly appointed senior staff to become acquainted with the intricacies of their portfolio. Further, each new leadership frequently implements its own policies without assessing the causes of failure or success of previous ones. A frequently voiced criticism in the interviews was that the process of policy-making is not informed by best practices and lessons learned. Because the administration is not benefiting from the lessons of the past, there is inevitably a great deal of 'reinventing the wheel'. When a new minister is appointed, as one international partner described, 'almost everything starts from scratch'. Moreover, this results in a frequent repetition of projects that were done or tested years before. While repetition itself is not necessarily harmful, it can be if there is no learning from previous experience – which are poorly recorded to draw important lessons from them. The following quote summarises this: 'There is a repetition of projects because the institutional memory is lost. The knowledge and information of what happened 10 or 20 years ago is lost. There is no learning from previous exercises.'

Lack of systematic coordination and communication is one of the weakest parts of the system.

The communication between the MoES and the various agencies in the central administration and among these agencies is sporadic and lacks coordination. This is reflected in the lack of set processes that support continuous consultations and structured debate around issues of policy formulation, planning, management and implementation. As a result, the MoES does not effectively fulfil its coordinating role as mandated. When there is communication, it is almost always with the top management (e.g. the minister meets with the director of the NEC, BDE, etc.), who then decide whom to follow up with internally. Minutes of these meetings are typically not produced, which may prevent a more systematic follow-up on agreed actions.

Furthermore, the quality of the relationship between the MoES and the agencies is influenced by the individuals who hold leadership positions within these bodies and the political party they are associated with. In other words, when the top leadership originates from different political parties, even if they are in the same government coalition, it can disrupt the quality of coordination and communication between these entities. During interviews, it was revealed that there can be a noticeable rivalry, competition and even open resistance to collaboration, which extends beyond the specific mandates of the institutions and is driven by underlying political interests. As a result, this creates polarisation and distinct factions within the administrative structure. The following statements by two officials in the administration, illustrate this: 'The education administration is being fully polarised,' 'They see themselves as rivals, not partners'. However, even in situations where political affiliations do not pose a hindrance, coordination remains insufficient in the eyes of many, as the following statement by an official reflects: 'Even if the minister has good relations with the heads of the different agencies, usually they do not sit together around a common table, and I think this is something that is lacking in the planning.'

Apart from processes such as the development of the national strategy for education, there is no platform that brings together the different agencies in charge of the education sector, reducing the effectiveness of joint work. As the OECD (2019a: 55) report notes 'There is also no established forum to ensure that the agencies work together to share information, or to systematically and regularly contribute to policy development within the ministry.' In the past, some ministers have made efforts to increase cooperation by arranging joint meetings, but this has not led to any permanent change in prevailing practices. The examples of effective collaboration concern more

routine activities and projects than policy. As far as we could assess, they do not lead to the creation of new ideas and a common vision, with the possible exception of the preparation of the education strategy, which the first part examined.

However, it is worth emphasising that there are instances where the communication chain and line of authority is clearer. For instance, if the SEI identifies irregularities in a school's work that fall under the jurisdiction of another agency (such as the BDE), the SEI promptly informs that institution. The institution is then expected to update the SEI on the measures taken to address the identified issues in the school's operations. If no action is taken by the institution, the SEI reports this to the MoES. However, the SEI does not have further competences for penalising the institution or taking further actions (unlike as they do with the schools).

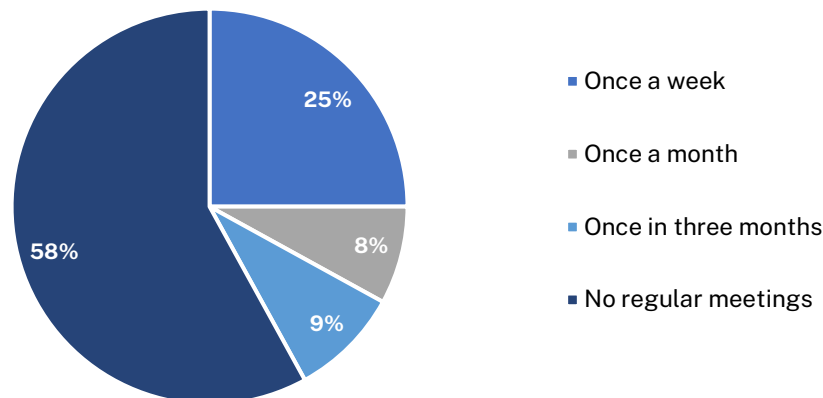
At the moment, the quality of the coordination depends more on the eagerness of particular individuals, rather than on a clear system-wide strategy. At the lower levels of decision-making (e.g. between heads of departments from different agencies), meetings do take place from time to time for various purposes, but these remain an individual initiative and organised mainly through informal channels. They are not an integral part of the system of governance, and as such they cannot overcome the absence of coordination. 'After every international assessment, we organise a meeting with the BDE, prepare a report and share examples. This is at my personal initiative'. The hierarchical top-down process of decision-making, in some respect, also discourages more independent coordination at the lower levels. The survey results paint a similar picture. When asked to state their level of agreement with the statement 'I know what colleagues in other agencies are doing', nearly 54% of respondents 'strongly disagreed' or 'disagreed' with the statement.

The existence of a project supported by an international partner at times leads the different agencies in the administration who have a role to play in that project to work together. But this is not systematic and does not change the prevailing practices in the administration. The international partners struggle to improve their own coordination with the education administration, especially with those agencies where there are frequent changes in mid- and senior-level leadership: 'Each unit/department is different. It is quite difficult to work with some of them, mainly because people in them have been changing. Every time you ask for something, they will give you somebody else to talk to. So, there is no continuity here.'

Internal coordination and communication within each institution of the education administration may also need to be improved. One clear example concerns communication between the departments of the MoES. The officials of the departments interviewed recognised that there is a need for better coordination and for joint meetings to become a common practice. It was perceived that the lack of coordination between them is one of the reasons for misalignment between education policies across various education levels. The following quote by one official is illustrative: 'The changes in primary and secondary education are not followed through in higher education. For instance, if we talk about full inclusion in primary education, then teacher faculties at universities need to adapt to this concept as well and focus more on the competences of teachers in this field.'

The results of two survey questions point in a similar direction. The first question asked respondents about the frequency of meetings at their unit. 58% of the respondents reported that there were no regular meetings. This is particularly worrying if we acknowledge the significant role that regular staff meetings can play in promoting teamwork, facilitating information-sharing and aligning goals within the unit. Only a quarter of the respondents recorded a high frequency of interaction, with staff meetings happening once a week (*Figure 5.2*).

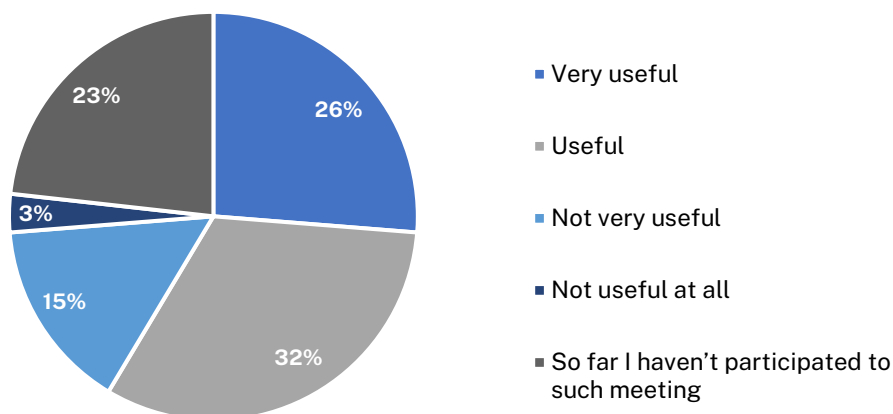
Figure 5.2. Regularity of staff meetings at unit level, either virtually or face to face, 2023



Source: Survey with staff from the education administration. N=65.

The second question (Figure 5.3) asked about the usefulness of meetings. The results for this question are more positive: of those who participated in meetings, about three quarters said that the staff meetings were very useful or useful, with only 3% assessing them as 'not useful at all'. The conclusion drawn from this is that, when meetings do happen, employees find them relevant for their work.

Figure 5.3. Usefulness of staff meetings at unit/office level, 2023



Source: Survey with staff from the education administration. N=65.

By way of conclusion, one could argue that the fairly clear mandate of each institution in the system serves as a good basis for improving coordination and communication. What is also positive is that there is an understanding across the entire education administration that coordination and communication need to improve significantly. The administration can build on the lessons learned in participatory processes such as the preparation of the national strategy and various laws in order to define clear procedures and protocols so that coordination and communication can become part of the day-to-day *modus operandi*. In this respect, what is needed is to define common instruments and systemic procedures to allow for such coordination. This may involve the creation

of inter-ministerial bodies (on specific topics, such as ECEC, or education as a whole), key coordination forums between the different bodies every several months, and annual review discussions which bring other stakeholders, including international partners, civil society and the private sector, to engage in dialogue, review sector status and monitor progress towards the implementation of the national education strategy.

5.3.3. Human resources

This section assesses the availability of human resources and compares these to official numbers and estimated needs. It checks the existence of post descriptions and their relationship to the requirements of the organisational unit. It also studies the profile and qualifications of officers and their appropriateness to the posts they take up. Finally, it analyses the management of human resources, including induction, professional development and support.

The assessment of human resources competencies used a restricted interpretation of the term ‘competency’, by focusing on ‘qualifications’ and ‘experience’. The assessment in the survey and the interviews have unearthed a complex set of issues, some of which can be identified as strengths, while many others are more constraints and challenges.

Staff in the education administration are well qualified, mostly with a background in teaching.

The survey comprised a range of questions that enable us to create a profile of the ‘typical’ education officer holding senior and middle-level positions. The education administration is well qualified and drawn from diverse backgrounds that are in principle relevant to the work of the ministry. Out of all respondents to this question, 97% of them hold at least a bachelor’s degree, and one in four had a masters’ degree. A smaller group, 7.7%, also hold a PhD. Administrators mainly have degrees in the fields of social sciences and humanities, and most commonly in specific subjects such as education, linguistics and law.

The majority of the staff in the educational administration are drawn from the teaching profession. Out of all respondents to the survey, 57% of them have worked as teachers at some point, while an additional 17% have worked as school directors. This may offer distinct advantages in the sense that teachers have first-hand knowledge of how education policies function in practice and the challenges faced by schools in implementing them. At the same time, there are potential drawbacks. The existing talent pool primarily comprises individuals who possess expertise in teaching rather than specialised administrative skills. The skills necessary to excel as a teacher or even a principal may differ from those required in the education administration at central level. This would not be a problem if the school staff who move into administration received some form of induction training. Yet, as discussed in the next section, the current system provides little professional development and support for staff, at the start of or later on in their career.

Forty-two per cent of respondents reported professional experience in public administration outside of education, indicating that some inter-ministerial mobility exists in the system. This can bring several benefits. Administrators may gain a more comprehensive understanding of different sectors, allowing them to view issues from various angles. Inter-ministerial mobility also exposes administrators to different administrative functions, policies and challenges, and enables them to develop a broader skill set, adaptability and versatility. Such a policy may also have disadvantages. It can lead to a lack of continuity in decision-making, slow down the learning curve and weaken the organisational culture; and may require a well-organised induction which does not exist at present (as discussed later in this chapter).

Finally, one third of respondents reported experience in the private sector, and 30% of respondents reported professional experience in the civil society sector. While inviting employees from the private sector could diversify the perspectives and the skills within the education administration, most of the respondents that had work experience in the private sector, and those who had worked in the civil society sector, were involved in it for less than two years.

In terms of length of experience, employees in the central education administration form a highly experienced group, with most employees having more than 15 years of work experience. A

significant proportion – 37% – possess more than 25 years of experience, while an equal share – 37% – have between 16 and 25 years of experience. Again, these many years of experience can be seen as an asset, but it may also become a brake on a profound change in working practices, if staff have become so steeped in the existing institutional culture that they cannot adapt to a new culture and are resistant to move out of their comfort zone.

Post descriptions exist, but inductions are missing. The results of the survey administered among senior and middle-level officials in the education administration show that about three quarters (75%) have seen a job description or other official document that lists the terms of references and duties of their post; while the remainder said that there was no post description (5%) or they did not know if there was one (20%). When asked to write down the name of the documents explaining their post, most respondents pointed to the rulebook for systematisation, and not to an individual job description. The survey also asked respondents to indicate, on a scale from 1 (not clear at all) to 5 (very clear), how clear the definition of their responsibilities is. Their responses, with an average score of 3.85, indicate satisfaction in this regard. In addition, approximately two thirds of respondents agreed or strongly agreed that the rules, regulations and procedures are sufficient, easy to understand and well applied in the workplace.

The interviews alter this rather positive picture. Several staff members argued that, even when post descriptions are clear, there is a mismatch between what is in that document and what one is doing in practice. There are different reasons for this. The pressure to conduct duties outside of the job description is mainly the result of the understaffing (which this chapter examines later). In addition, job descriptions tend to be quite generic. In such a situation, the actual definition of duties depends very much on how employees, when entering their post, are guided, for instance through induction training, mentorship or a formal briefing. However, all of these are missing. As a result, the principal source of learning is through a great deal of self-directed learning and experimentation – or what one interviewee characterised as being left ‘to work it out on my own’ and learn from ‘trial and error’. The reason why induction does not take place is that there is a lack of clarity on who is responsible for the process. Neither the Human Resources Unit nor the heads of departments are involved in this area. This reflects a broader challenge with professional development.

There is a lack of focus on the professional development of the workforce. According to the provisions in the 2010 Law on Administrative Civil Servants, each employee within the public administration has ‘the right and duty to be subjected to the process of professional development and training according to their individual professional development plan, as well as the duty to transfer the acquired knowledge to other administrative civil servants’ (Article 54). The law envisages three types of training: generic (financed by MISA), vocational (financed from the budget of the institution that is in need of the training), and mentorship. The legislative framework requires that MISA and the respective institutions prepare an annual training programme on administrative management. Administrative officers are obliged to take an exam on the accomplishments of the administrative management training. According to the law, this professional exam is a precondition for promotion of administrative officers.

However, this legal provision is not implemented in practice and at the same time it calls into question the effectiveness of the appraisal process. While legally each public servant should follow five generic training sessions per year, as one respondent put it ‘this is science fiction. We do zero’. In the future, there is an intention by the MISA to set up a specific agency for training to take over this role. A lot that needs to be done by the MoES – such as the development of an annual training plan – is not taking place either. While each year, employees note their professional development needs in their individual professional development plans and in the appraisal forms, this is done as a formality, if at all. This calls into question the link between the appraisal process and promotion, for which professional development is a pre-condition. In the interviews with MoES staff, it was mentioned that one of the previous ministers had made a few noteworthy attempts to fill professional development gaps. However, with the change of minister these efforts were not sustained.

One survey question asked respondents to state if they have participated in any training activities related to their work and provided by their employer in the last 24 months. The findings presented reveal several noteworthy observations. Almost a third of all respondents (34%) reported not taking part in any training. Approximately 28% reported engaging in training for less than three days, while 26% reported participation ranging between three and eight days. A smaller percentage of 11% reported participating in training for a duration of 9 to 20 days and only 1% for more than 20 days. The conclusion is that **only a minority have dedicated a substantial amount of time to training.**

Another question in the survey asked respondents to indicate the areas in which they were trained in the last 24 months. The responses were categorised into several themes. The results show that the most common areas for training were 'digital skills' (14% of participants) and 'M&E' (11%). A smaller group, 7.7%, received training in 'communication and public relations' and in 'data analysis'. Only one participant received training in 'financial management' and 'leadership'. The question allowed respondents to provide additional examples of training topics they received beyond the ones that were listed, and the responses varied widely. Some respondents mentioned training on specific work tasks, such as the state Matura testing, while others mentioned general knowledge related to education, such as the National Qualifications Framework, the grading system and quality assurance.

Against this backdrop, it comes as little surprise that **employees in the education administration are far from satisfied with their professional development opportunities.** One of the survey questions asked them 'On a scale of 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the professional development opportunities provided by your employer?'. The average score on this question was 2.48, clearly validating the need for more attention in this area.

It is crucial to understand the various reasons for the lack of professional development. Four possible reasons could be identified:

1. First, as briefly mentioned earlier, **it is not always clear who is responsible for which aspect of professional development.** While MISA has overall responsibility for professional development of staff in the public service, the quantity and quality of its offer depend on collaboration with the sector ministries, including the MoES. Within the MoES, it is not clear who should take the initiative to introduce professional development. There are different points of view from the HR unit and the heads of agencies and departments, for instance on who is in charge of induction training, or who should take the lead in designing an annual training plan.
2. Second, **the MISA does not have the financial resources or the capacity to design and deliver relevant professional development programmes to the entire public administration.** The MoES itself also lacks the capacity, within the HR unit or elsewhere, to design a professional development programme. At the moment, the MoES does not have a specific budget line that goes to professional development training of its staff.
3. Third, there appears to be a **lack of recognition that professional development is actually a need within the educational administration.** In this context, the leadership does not fully recognise or appreciate the benefits that the professional development of staff can bring to their overall performance, which may be the core reason behind the current situation. In part, there seems to be an overreliance on initial qualifications and the perception that recruiting individuals with the required qualifications for the post (at least on paper) eliminates needs for further training. 'We think when we recruit people with the qualifications that they don't need training'. This, however, disregards the fact that continuous learning and skills enhancement are essential for staying up-to-date with

advancements in the field, adapting to changing circumstances and maintaining high performance levels.⁹⁹

4. Fourth, it appears that **training opportunities are primarily offered as incentives or acknowledgements for exceptional performance rather than as integral components of professional growth**. One senior official made the point, for instance, that ‘the ministers, the directors and others in leadership positions see the training as a reward. If I’m working very well, and there is training, even if it has nothing to do with my job, or it is not developing my professional skills, they are sending me a reward because I finished some tasks or some strategy’. This leaves the impression that decisions about who is to be granted training may be arbitrary and based on the judgement of individuals in leadership positions, rather than being part of systematic practice. This can lead to dissatisfaction and demotivation among employees who are not selected for training.

Numbers or skills, or both? Which of these is the core human resources challenge?

One complaint shared by all interviewees in the education administration was the lack of human resources, which they identify as a major obstacle to delivering effective services. Some referred to the issue of numbers (departments and units having fewer staff than what official documents prescribe) while others to the issue of competencies and skills (several officials lacked the required profile to do an effective job).

The lack of staff may be surprising, as the literature demonstrates that staff numbers in the public education sector are high. The explanation lies in the use of the term ‘public administration’ to refer to two different groups of professionals, namely those working in the state and local government bodies (ministries, agencies, and other units) and those working in the public institutions that deliver a particular service, such as education, namely teachers. Teacher numbers are high, which is linked to the decentralisation policy. The situation is different for the state and local government bodies: several units have fewer staff than what is officially described, and insufficient numbers to exercise their functions effectively.

In most bodies of the education administration there is a considerable difference between the officially prescribed number of staff in the systematisation document (which includes, for every public institution, the number of positions, with key requirements and rank) and the actual number of staff working there (see *Table 5.2*). In most bodies there are between 30% and 50% fewer staff than what is officially prescribed. The highest gap is evident in the case of the AQHE and the VETC.

⁹⁹ An illustrative parallel of the general lack of awareness of the importance of professional development can be found when teachers are concerned. The 2019 Law on Teachers mandates that every primary and secondary school teacher must participate in 60 hours of professional development every three years (Article 27). However, this requirement has not been fulfilled for several years, in part due to the lack of funding provided to the BDE. With funding support from the World Bank Primary Education Improvement Project, in 2022 the BDE published a catalogue with accredited professional training programmes, and later in the year enabled approximately 90% of primary school teachers to attend 16 hours of training courses for the first time since the law was enacted (World Bank, 2023a). This is a positive development, but it is important to sustain both the financial and operational aspects of this initiative to achieve the targets set within the law. See also *Chapter 3, Section 3.5.2* for additional insights.

Table 5.2. Employees in the systematisation vs actual numbers, 2023

| Institution | Number of employees foreseen in the systematisation | Present number of employees | % ratio of systematised and completed places |
|--------------|---|-----------------------------|--|
| MoES | 319 | 218 | 68% |
| BDE | 222 | 131 | 59% |
| SEI | 139 | 97 | 69% |
| NEC | 50 | 27 | 54% |
| VETC | 54 | 21 | 38% |
| AEC | 27 | 14 | 51% |
| AQHE | 13 | 4 | 30% |
| NAEEMP | 51 | 36 | 70% |
| MoLSP (ECEC) | 22 | 13 | 59% |
| TOTAL | 897 | 561 | 62% |

Source: MoES, 2023.¹⁰⁰

The shortage of staff leads to a lack of capacity to exercise the mandate. This becomes even more the case when a large portion of existing staff fall are clerical staff and junior associates, with more serious understaffing at senior levels. Within the MoES, there are great imbalances in the distribution of human resources between departments. In the primary education department, the systematisation calls for 16 employees, yet there are only nine at present. This shortage poses challenges in effectively managing a network of 365 schools. Similarly, the secondary education department has 109 schools under its coordination, but only 10 employees to handle the responsibility (only half of what the systematisation stipulates). On the other hand, the higher education department has 28 employees, which is 10 more than the number prescribed by the systematisation. The Department for Science and Innovation is almost at full capacity, with 20 employees out of 25 foreseen in the systematisation, despite the fact that science takes a negligible share of the budget of the MoES.¹⁰¹ The BDE is also struggling to provide professional and advisory support to teachers and visit schools: ‘We have one adviser for English and should cover all English teachers in the country (more than 1,000). For the official school languages, we also struggle to satisfy this duty. The systematisation does not define a limit on how many teachers one adviser can cover.’ The VETC, with about two thirds of posts vacant, is still expected to exercise an ambitious mandate: to advise and aid the work of the VET schools, including visiting schools and having direct communication with the teachers. As mentioned earlier, due to uneven distribution, there are occasions when individuals from one department are called upon to lend support to another department during periods of high workload.

An effective administration does not only require having sufficient human resources, but also having the right people. A reoccurring theme during the interviews was that there is a lack of skills in the education administration. In fact, the predominant impression from the interviews was that the quality of the skills that employees had was of greater concern than the number of employees. ‘The number of people is not so much an issue as the problem that their skills are very low.’ The absence of relevant profiles can be explained by political interference in the recruitment procedures: nominations, including in leadership posts, are at times more a function of political belonging than professional expertise. Some of these issues were examined in the previous section. The next few paragraphs discuss in more detail matters relevant to the education administration.

A number of interviewees explained that, when new posts are approved, which in itself happens rarely, the people hired at times are neither at the seniority level needed, nor do they have the right

¹⁰⁰ These data were obtained from the relevant MoES departments in June 2023. These numbers change over time, which help explain inconsistencies with other data sources.

¹⁰¹ Absorbing 1,2% of the total education and training system in 2022, as per Table 6.4 in Chapter 6.

skills and profile, raising an important question about the effectiveness of the recruitment process (see *Section 5.1.1*). In addition, attracting qualified candidates for positions in the public administration has become increasingly challenging due to low salaries. This issue is prevalent not only in roles requiring educational expertise, but also in specialised fields like data analysis, IT and systems engineering. The OECD report (2019a: 55), for instance, noted that ‘while the specialised agencies have relatively good technical capacity, they are often understaffed and lack specific skill sets (e.g. psychometric, statistical or information and communication technology skills)’. With the 15% increase in teacher salaries in ECEC, primary and secondary education in March 2022, there is no financial incentive for teachers to transfer from schools to the education administration. The salary of an adviser in the education administration can in some instances be lower than that of a schoolteacher. As a result, working as a teacher is more attractive. If salaries do not become more competitive, the administration would lose a key source from where it draws its pool of employees – i.e. schools, teachers and principals.

The low rates of pay of the education administration have also led to greater attrition in recent years. ‘Especially in the case of professionals who have to do the job and who know how to do the job, they leave. It’s not a place where you can attract ambitious people. There are still a large number of employees who are not assigned work tasks’. As we were told in the interviews, many capable individuals have either already left or are planning to depart from the education administration, seeking employment in other segments of the public administration or the private sector – or are leaving the country altogether. The survey findings confirm this narrative and reveal a situation that poses a significant threat to the current and future vitality of the education administration. Namely, 68% of respondents were not at all satisfied with the financial conditions of their position, while 72% of employees had considered applying for positions outside the education administration. In addition, more than half of the respondents (55%) would not choose the same career path if given the opportunity to start over.

Finally, the low capacity of the education administration, both in terms of numbers and skills, may have significant implications on the design and outcomes of education reforms. With limited resources and expertise, policy-makers are often compelled to introduce change in ways that do not require substantial involvement from the education administration (e.g. through laws). This approach may seem pragmatic in the short term, as it does not burden the already strained administration. However, it poses several problems for the policy process and ultimately limits the horizon of what can be achieved. Substantive reforms require a deep understanding of the challenges and nuances in education, and without the necessary expertise within the education administration the potential for impactful change is limited. Reforms tend to be superficial or limited to a legal change, without implementation. Furthermore, the reliance on reforms that do not challenge the capacities of the education administration perpetuates a cycle of mediocrity. If policy-makers consistently opt for reforms that are within the administration’s comfort zone, there is little incentive for them to develop their skills and expand their capacities. This leads to a stagnant and complacent education administration that fails to keep pace with the evolving needs of learners and society.

To address these challenges effectively, it is crucial to invest in developing the capacities of the education administration. This includes providing comprehensive training programmes, attracting skilled professionals and recognising those skilled professionals that already exist, and allocating adequate resources to support their work. By empowering the administration, policy-makers can more confidently pursue ambitious reforms and address fundamental issues within the education system. Evidently, within the MoES, there are highly capable professionals who are highly skilful, have the appropriate expertise and are very experienced. However, these individuals often go unnoticed and lack the empowerment they deserve. To bring about positive change, it is essential to elevate these individuals to leadership positions. By appointing them as heads of sections and units, they can play a crucial role in motivating and guiding their colleagues. Recognising and leveraging the expertise of these capable professionals is key to fostering a more effective and dynamic work environment within the ministry.

Motivation within the administration is fading.

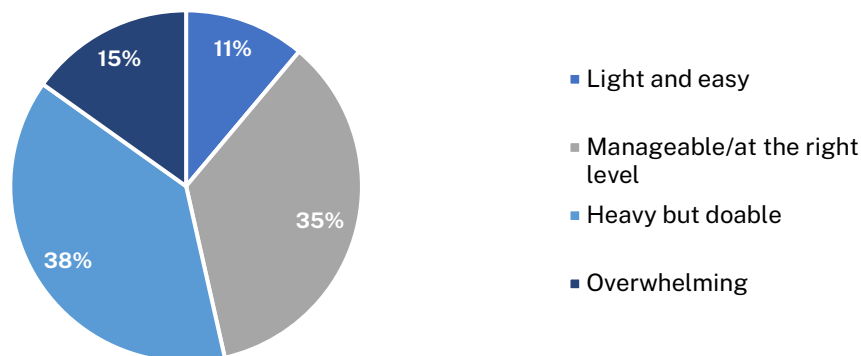
All interviewees, both staff in the education administration and those working with them, expressed a firm conviction that there are still ‘enthusiastic, committed and motivated individuals in the education administration who know the system and are capable and eager to make change’. In this regard, it is encouraging to note that most survey respondents (83%) still firmly believe in the importance of their work for the development of the education system in North Macedonia. However, there was also a sense that motivation and enthusiasm is threatened, after what was described by many as a long period of deterioration of the institutional climate within the education administration. Frequent changes in leadership, lack of attention to staff development, nepotism, favouritism and low salaries, were often cited during the interviews as sources of demotivation, resulting in what one interviewee termed ‘professional fatigue’.

The lack of career prospects and the lack of promotion are additional sources of demotivation.

The survey results indicate that only 22% of individuals have applied for a more senior position since obtaining their current role. When respondents were asked to identify the barriers to career progression, the most commonly cited obstacles were unattractive salaries, non-transparent job offer processes and lack of support from superiors. Not too surprisingly, the lack of experience of the staff and their skills were found to be the least important obstacles to career advancement.¹⁰²

Workload is another factor that can contribute to demotivation. The survey results (Figure 5.4) reveal that respondents had varying experiences with their workload: 11% described their workload as ‘light and easy’, 35% characterised their workload as ‘manageable/at the right level’, and a similar percentage of respondents (38%) described their workload as ‘heavy but doable’. Lastly, 15% of respondents expressed that their workload was ‘overwhelming’. What these results show is that at least half of the staff are facing some challenges with their workload, which can lead to stress and burnout, and negatively impact their motivation and job satisfaction.

Figure 5.4. Opinions about workload, 2023



Source: Survey with staff from the education administration. N=65.

In the interviews, several participants indicated that a few people are often shouldering the full burden of the job in a particular unit/department. In other words, the lack of skills within the

¹⁰² The fact that lack of support from superiors emerged as a major hindrance seems to contradict the responses to another survey question: when respondents were asked to state their level of agreement with the statement ‘I am satisfied with the support that my superior gives me’, 71% of them agreed or fully agreed. The reason for this apparent contradiction may lie in the fact that supervisors can be supportive to colleagues to perform their current tasks, but less so when colleagues desire promotion.

administration leads to a situation where a few individuals are forced to take on a disproportionate amount of work.

The responses to the question examining the constraints that hinder meeting deadlines reveal several noteworthy findings. Among the options provided in the survey, the highest percentage of respondents – 46% – cited having too many conflicting duties as a major constraint that prevents them from delivering in a timely manner. This could suggest that the number of tasks and responsibilities they have is high, that the work is unequally distributed or, as some interviews have indicated, individuals sometimes fill in the work for more than one position to cover for the lack of staff. Over the past several years, due to not receiving approval from the Ministry of Finance for the hiring of new recruits and/or the promotion of existing staff, the lack of heads of departments and units has been overcome by granting powers to employees in other roles. For instance, until recently, the Head of the Department of Strategic Planning was performed by a state adviser.

This is also indicated in the next most chosen answer in the survey – notably, 45% of respondents indicated that a lack of sufficient staff was a significant constraint on handling workload effectively and meeting deadlines. Other constraints mentioned included a lack of financial resources to carry out activities (22%), a lack of support from their superiors (21%), and a small percentage (9% and 7% respectively) noted that the lack of authority over a particular task and lack of clarity about the task could be an obstacle. The functional analysis of the MoES from 2018 points to an additional challenge: ‘Employees are often hired as presidents or members/deputy members in committees, working groups and other work bodies to perform work tasks that are not included in the description of their work tasks systematised in the act of systematisation for the respective position, and take a large part of their work time when performing regular work tasks.’

The necessary material resources are available to allow the education administration to carry out its activities. Most interviewees and survey respondents were satisfied with the working conditions. In the survey, respondents were asked to assess the availability and quality of several important material resources in their offices, namely a computer/laptop, desks, printer/photocopier, mobile phone (paid by the office/at their own expense), and professional email. Overall, the results highlight that essential office tools, such as computers, desks, and professional emails, are generally available and of reasonable quality. Approximately one in four respondents stated that their computers/laptops and desks needed to be replaced. One exception was the availability of a mobile phone paid for by the employer, which only a smaller portion of respondents have (37%). During the interviews, only a small number of participants identified working conditions as a significant obstacle to carrying out their tasks. Those who did mention challenges primarily cited issues with the archive and data repository system, as well as outdated software and scanners (to deliver the state Matura exam). Additionally, some participants noted that the limited availability of vehicles hindered their ability to conduct more frequent field visits to schools.

5.3.4 Accountability

This section of the report starts off by raising some general points about accountability. Our interest here is more specifically in examining if and how (for which results, by which actors) the administration is held accountable for its performance.

The administration does not feel and is not held accountable for the state of the education system.

It is intriguing to observe that, while schools face various forms of monitoring and inspection (see Chapter 3), the intensity of monitoring reduces at the higher levels on the ladder of authority, with the central education administration being largely exempt from such scrutiny. Two sets of interrelated factors help explain this.

First, there is **little recognition of the link between the performance of the administration and the state of the education system.** While it is true that most problems in the education system have a plethora of causes, not all of which are related to the administration, it is also correct that

administrative ineffectiveness does play a role. However, several interviewees perceived the lack of accountability for the system's failures to be a fundamental problem. A frequently mentioned instance of this was the untimely distribution of textbooks in primary education. In certain grades, children received their textbooks only at the conclusion of the school year, which in the opinion of interviewees (mostly outside of the administration) not only highlighted a lack of responsibility in the education administration, but also its inability to fulfil even the most basic obligations. Some interviewees argued that there is also no real expectation that the central education administration should be effective.

As a result, **the internal demand by the ministry's leadership to evaluate the performance of the institution in achieving its policy objectives is weak.** This is not to say that there is no recognition of the potential importance of M&E, although in many cases this was voiced almost in a slogan-like manner without a critical reflection of what present work patterns would have to change. Demand for accountability, particularly M&E, comes as a result of external pressure: mainly from the international partners, which request regular reporting. For instance, in the MoES, under the Department for the European Union, there is a designated unit for M&E – which is the only such unit in the ministry; the other departments do not have a similar unit in their structure. In this respect, the international partners create some form of accountability and have a relatively positive impact. Yet, this demand has not been sufficient to lead to a profound change in the overall institutional culture. The significance of the parliament's role in monitoring and evaluating the implementation of education policies and plans was rarely emphasised during our discussions. The parliamentary committee on education and science serves primarily as an initial screening mechanism for legislative documents under deliberation in the parliament, rather than as a forum for seeking accountability for what is already in place.

Second, **fundamental elements of an accountability system are not in place.** In the present structure, it is not clear who is responsible for evaluating the overall performance of the central education administration and key aspects of the overall functioning of the education system. Nor is it clear who monitors and evaluates the work of agencies and departments and who holds them accountable. Mechanisms for accountability are sporadic or not consistently employed. A more coherent and streamlined process of M&E seems necessary. As one international expert noted: 'Introducing at least some elements of performance management, including an orientation towards results, recognition of individual achievements and appraisals based on outcomes, is a necessary evolution that needs to take place. Currently, employees are only required to be present during certain hours of the day, with no real accountability for their performance or delivery.' The OECD study (2019a: 15) concludes in this regard that 'In North Macedonia, system evaluation is at a nascent stage of development. Recent years have seen important steps towards establishing the institutions and instruments that can support effective system evaluation. However, many basic components are still lacking, and data systems and the processes for feeding information into decision-making are weak.' The ad hoc nature of the M&E is reflected, in practical terms, in the absence of common M&E tools and a framework.

Most agencies in the administration prepare annual reports based on their work programme. However, this information has not been pulled together into a comprehensive report that evaluates the overall state of education. These reports are mainly descriptive and the style in which they are written produces a level of vagueness. Moreover, these reports do not require policy-makers to explain why certain goals and target were not met, presenting another challenge for accountability. This makes it difficult to highlight the main system-level challenges and to communicate policy priorities. On some occasions, international partners provide valuable analysis of education issues by providing thematic reports of policy evaluations. These exercises often consist of situational analysis or feasibility studies in particular areas. During the interviews, the European Commission's yearly progress reports were also briefly mentioned, but more as a tool for determining priorities and detecting the level of fulfilment of technical criteria such legislative alignment, rather than as an accountability tool.

One may argue that part of this situation of weak accountability is not surprising, given the context in which the education administration operates. When leadership changes so often, they cannot be held accountable for their results, and neither can the staff below them. In the same vein, it is difficult to hold units and departments accountable if they are operating with suboptimal human resources. In the interviews, the frequent change of ministers was not seen to result from accountability pressures. It had little to do with the performance of the position holder and more to do with political trade-offs and coalition deals between parties in the government.

The national education strategy, at least in principle, may play a role in strengthening accountability: by coordinating between the different bodies and making sure they work towards a common goal, while outlining what each body is expected to achieve in a given period. However, as discussed earlier, the strategy takes more the form of planned activities, with indicators focused on outputs rather than outcomes. This challenge is not unique to North Macedonia: outcomes can be notoriously difficult to measure, yet they are an important feature because they measure the final results that a system is trying to achieve. An additional challenge with the national strategy is that there is an abundance of goals and targets interspersed through the extensive and detailed strategy document (192 pages). This makes it difficult to identify some of the key targets that the system is trying to achieve and to distil which goals should be prioritised. There is no electronic database to monitor the strategy's implementation. Against these challenges, it will remain difficult for North Macedonia to use the strategy as a means to encourage policy-makers to exercise greater accountability.

At the same time, there are a few positive initiatives that hold great potential for strengthening understanding of the system's performance. The country is currently in the process of establishing a National Assessment Programme (NAP) in primary education, with the NEC being responsible for the overall plan and design, as seen in *Chapter 3*. The pilot assessment of 3rd grade students, for the subjects of mathematics and mother tongue, was completed in 2022. The results from the pilot assessment are expected to be analysed by the end of 2023. Lessons learned from this first assessment cycle will be considered for the assessment of 5th grade students, to be implemented in 2024.¹⁰³ The results of the NAP are expected to increase the currently limited data on student outcomes, provide an accurate snapshot of standards achieved by learners, and establish a reliable baseline against which future progress may be monitored. In this respect, the NAP can help North Macedonia address systemic issues and lead to a better understanding of where and why students are falling behind in their learning.

The country participates in international assessments such as PISA, TIMSS and PIRLS, though not systematically. These assessments provide the country with much needed periodic information to compare learning against international benchmarks. As a good practice, the NEC prepares national reports to elaborate on the performance of the country in these assessments – valuable experience that would help the NEC to prepare the NAP reports in the future.

Notably, PISA results have been one of the few mechanisms that effectively capture public attention, driving discussions on education policies and reforms. Consequently, a decision to abstain from participating in PISA could further diminish the opportunities for such important public debates. From a policy perspective, this would be a missed opportunity to gain crucial insights, particularly regarding the impact of the COVID-19 crisis on student learning. At the time of the pandemic, the NAP was not yet implemented, leading to the absence of a baseline against which students' performance could be measured based on national data. What's more, there is evidence that the lessons learned from COVID-19 have not been well documented, and do not currently feed into better planning or management. The PISA results could therefore serve as a valuable tool in addressing these gaps, facilitating a better understanding of the crisis's effects on education and informing future policies and initiatives. Admittedly, the simple existence of PISA results does not translate into policy change. Participation in PISA needs to be accompanied by constructive debates on what can be learned from the results about the success of different

¹⁰³ See *Chapter 3* for a detailed analysis of learning outcomes using those assessments.

strategies, what policies and practices need to change, and by incentives that encourage such change.

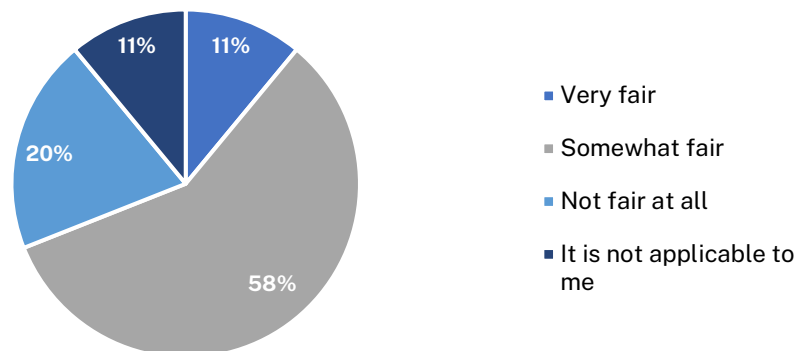
Staff appraisals are ineffective to assess, motivate or develop staff.

A further indication of the incomplete focus on accountability is how the staff appraisal system works. The evaluation of the work of employees in the public administration is regulated by the Labour Relations Law, and in more detail by the Law on Administrative Civil Servants. In principle, each employee is evaluated twice a year, once in the middle of the year and once at the end of the year. The rating system uses a scale from 1 to 5.

The survey findings show a range of perceptions regarding the fairness of the yearly appraisal process (Figure 5.5). When asked, ‘How fair do you feel the yearly appraisal is in evaluating your job performance?’ the majority of respondents (58%) felt that the yearly appraisal was somewhat fair in evaluating their job performance. However, it is worth noting that a significant portion (20%) believed that it was not fair at all, while only a small percentage (11%) considered it to be very fair.

According to several participants whom we interviewed, the entire appraisal process ‘is implemented as a formality. In practice, there is no real assessment of the work.’ In addition, there are reasons to believe that much of the assessment offers wide scope for subjectivity and the individual discretion of supervisors. In this respect, the grades that one gets do not necessarily reflect the performance of the employee. In some cases, interviewees claimed that, at least to some degree, it is used as a political punishment – so political belonging can play a role. An additional issue is that those who conduct the appraisal are not provided with appropriate training and instructions. Finally, the process is not enhancement-driven: when people are performing well, there is little reward.

Figure 5.5. Perceptions about the fairness of the yearly appraisal process, 2023



Source: Survey with staff from the education administration. N=65.

The functional analysis of the MoES from 2019, conducted with support of UNICEF, recognised several issues that we have underlined above, ‘The performance evaluation system in the MoES does not reflect the real situation in terms of the quality of work, promotion and motivation of employees. In the process of assessment, the provisions of the Law on Administrative Civil Servants are formally followed without essentially delving into the purpose and effects that should emerge from the assessment process. There is insufficient awareness of aspects of management’s staff assessment. Support from the department for human resource management in the process of evaluating employees is only administrative-technical.’ Despite these findings, the MoES has not taken action, almost five years after the functional analysis, which is a significant cause for concern.

The EMIS is not effectively used as a tool for accountability and evidence-based policy-making. The EMIS today remains fragmented and is producing some information that is not fully reliable.

A good quality information system can play several critical roles. It can enhance evidence-based decision-making, facilitate policy development and evaluation, enable better monitoring, reporting and accountability, foster research and analysis and promote collaboration and coordination. It could also enhance the efficiency, effectiveness and transparency of education administration processes, ultimately leading to improved governance and better outcomes. This section explores more closely the extent to which the EMIS is adequate and serves these purposes in North Macedonia.

In 2010, the MoES developed and implemented an EMIS with a goal of supporting key MoES activities. The system covers a wide range of information on schools, students (including out-of-school children and student absenteeism), teachers and other school staff, programmes and courses, among others. However, as noted in a recent UNESCO report, 'The EMIS is not linked with human resource management systems, financial management systems and learning management systems within the education sector.' Most of the data in the EMIS is collected for primary and secondary education, while for pre-primary education the collected data is more basic.

While the EMIS has increased the volume and availability of data, and serves as a good basis on which to develop further efforts, several gaps can be observed. Firstly, not all schools are captured by the EMIS, which limits the potential for a system-level overview. In the schools captured by the EMIS, there is a notable absence of quality assurance and data verification measures, raising concerns about the accuracy and reliability of the information, which makes it of little practical use for schools or the education administration. Many interviewees from the education administration were not confident about the correctness of the EMIS data and did not see it as a trusted and reliable source. In fact, almost as a rule, administrators preferred to collect their own data directly from schools or use other sources such as SSO, rather than relying on the EMIS – which leads not only to duplication of efforts, but also increased workload for schools, municipalities and administrators. The following quotation is illustrative: 'The EMIS data, while it may be accurate for certain schools, is not reliable across the board. What adds to the problem is that the ministry does not validate the data properly. For sampling, I prefer to use the BDE data rather than the EMIS.' This preference also stems from a prevailing belief in the administration that schools do not accurately populate the EMIS due to the burdensome nature of the process and inadequate staffing. An associated concern revolves around timing, as schools do not always enter the data in a timely manner, thereby preventing administrators from accessing the necessary information when they need it. To address this challenge, one of the interviewees suggested outsourcing the data collection process to enhance its reliability and timeliness. All these things undermine the potential role of the EMIS as a critical tool for planning, and M&E of the performance of the education system. If the data in the EMIS is unreliable, it can lead to inaccurate assessments of educational performance, which can, in turn, affect accountability.

Secondly, the EMIS is not sufficiently used as a tool that can, by improving the flow of information and data, increase coordination and unity among the different bodies of the education administration. There is no framework to ensure that all actors have a harmonised approach in data collection – leading at times to fragmentation, duplication, inconsistencies and redundancies. Several bodies, such as the AEC and NEC, have their own independent databases which are not integrated into the EMIS. This is a missed opportunity for a more comprehensive national database on education. For instance, the exam results from the Matura exam are not entered into the EMIS. Similarly, the SEI has access to the EMIS and collects further information (often qualitative, too), but does not upload data to the EMIS: 'the EMIS is very quantitative, we prefer to collect and base our observations on qualitative information'. However, the SEI does not have its own database for registering the main findings of each inspection and actions taken. The AEC has its own database. Data collection is done regularly, but encounters different challenges, mainly because data have to come from a wide range of providers, and these have to be verified. The AEC is now developing a new data collection system, but that is not yet operational. Furthermore, even when departments

within the MoES and agencies are duplicating efforts to collect the same school-related data, the results are inconsistent – different databases arrive at different results; and because of the use of different data protocols and coding, the collected data cannot be easily reconciled or linked with SSO or budget data. A final issue is that access to the EMIS is not shared with all actors. Certain bodies, such as the BDE, must request data from the Ministry, rather than accessing it directly from the EMIS. Similar access limitations were reported by employees in other parts of the education administration. In the survey, less than half (48%) of all respondents reported having access to EMIS. In fact, improving access to the EMIS was highlighted by survey participants as the single most important resource that needs to be improved.

Thirdly, data analysis poses an even greater challenge than the data collection process. While more data is now available compared to a decade ago, there is notable dearth of analysis and its subsequent transition into policy advice. In the interviews, there were very few references to the use of information, either from the EMIS or other sources, to guide any kind of decision-making (be it connected to planning, implementation, evaluation, or something else) or to change policy. The following two quotations from our discussions with individuals outside of the education administration encapsulate this issue: ‘There is little awareness of the importance and potential of evidence-based policy-making. There is no such thinking in the ministry. They do not fully utilise the existing data or feel the need to collect additional data’, ‘Data exists, but the challenge lies in translating this data into actionable insights. Numerous policies lack a foundation in scientific analysis and rely instead on anecdotal evidence, devoid of a rigorous process. They are often grounded more in personal perceptions than in empirical evidence’.

Evidence-based decision-making in education is made difficult for several reasons.

1. First, as one of the quotations above illustrates, there appears to be a general lack of recognition of the importance and potential of evidence. There is also a challenge in regard to the lack of internal demand for data and the prioritisation of evidence-based policy-making from the ministry’s leadership. To a certain degree, it appears that there is a preference for anecdote-based decision-making rather than decision-making grounded in firm evidence. One potential explanation could be that anecdotes are more susceptible to manipulation compared to empirical evidence, allowing for greater ease in shaping them to suit personal agendas or as a justification for a change of policy.
2. Second, ‘the functionality of the EMIS is also currently limited, which means that users are not able to take full advantage of this data’ (OECD 2019a: 41) and some of the data in the EMIS is not what the administration need on a day-to-day basis.
3. Third, the urgency of addressing certain issues (‘Sometimes the system is pressured to produce an immediate solution to something. And there’s really just not enough time to conduct any proper analysis’) can also lead to hasty decisions that may not be well informed or evidence-based.
4. Fourth, the lack of research as a core function in the administration is another limiting factor. Institutional expectations regarding research are notably low, resulting in sporadic research activities that often suffer from resource constraints (human and financial). As the OECD report (2019: 44) notes, ‘while the agencies around the ministry, such as the BDE, the NEC and the SEI have some research responsibilities, they lack clear mandates, resources, capacity and stable leadership’. Although the recently established analysis unit within the Department for Strategic Planning at the MoES was intended to assume responsibility for research and data analysis, the limited human capacity within the Department (currently only one person is in charge of the EMIS) has hindered its effectiveness in carrying out this critical function. Even when parts of the administration undertake research initiatives, the outcomes are not widely discussed or shared within the administration circle. More such activities should be promoted. The opportunity to increase the evidence base through external contributions is significantly constrained by the fact that the EMIS platform is not open-source or publicly accessible. In other words, the closed

nature of the system restricts the ability of external researchers, experts and stakeholders to directly engage with the data and contribute to the evidence-building process.

5.4 Partnerships

Cooperation with and inclusion of social partners such as teachers, parents, students, civil society organisations (CSOs), and international partners in policy-making, particularly in contexts with weak administrative capacities, can bring numerous benefits. First, their involvement enhances the representation of diverse stakeholders, ensuring that a broader range of perspectives and expertise are considered. Second, social partners provide valuable on-the-ground insights and bring practical knowledge, drawing from their direct experience and expertise. Their input helps to shape policies that are contextually relevant, feasible and responsive to the needs of students and of society as a whole. Third, their participation promotes transparency and accountability in the policy-making process, as social partners can act as watchdogs, monitoring implementation and advocating for the effective and accountable use of resources. Lastly, collaborating with social partners builds ownership and trust, fostering stronger partnerships between the administration and the wider community.

This part identifies the partners that can play a role in education policy formulation, planning and management; it examines their role in the design and implementation of major reforms and analyses the quality of their relationships with the educational administration. It also looks into the exchange of information, collaboration and coordination, including whether coordination structures exist and how they function. It makes a distinction between two main groups: domestic partners such as parents, teachers, students, CSOs and the business community, and the international partners.

This analysis encompasses the past two decades, with a particular emphasis on recent years. During this period, the ministry and the government were perceived to be more receptive to partnerships, compared to the government in power between 2006 and 2016, as indicated by the interviewees and external sources (see European Commission, 2018; European Commission, 2021). While some differences over time are considered, the focus of the analysis is on the current situation.

5.4.1. Domestic partners

Exploring domestic partners: Roles and contributions

Before digging deeper into the relationships between the education administration and the domestic partners, it is worth mentioning that representatives of the education administration rarely mentioned the collaboration with domestic actors as an important aspect in any of the phases of the policy-making process. The limited emphasis on collaboration with domestic actors may stem from a combination of factors that will be further explored in this section. We first present an overview of who these partners are and what are their main roles.

Parents' associations

No parent representative organisation exists at national level – parents are vocal in their local environment.

At the moment, there is no formal representative body of parents at national level, such as a parents' association. Because of the absence of such a body, the diverse viewpoints and feedback from parents across the country are *currently* not effectively gathered and considered.

Parents, however, intervene at school and municipal level. This happens mainly in two ways:

1. First, there is systemic involvement at school level, through the school boards: three of the seven members are parents' representatives. The school boards have strong mandate in

several areas, including proposing candidates for teachers and selecting the candidate for school director, which the mayor appoints, and voting on alterations of teachers' employment status, transitioning them from a limited term to a permanent position.

2. Second, many parents also interact in their individual capacity with the municipality, on matters regarding the policies and practices of the school that their children attend. The proximity to the main beneficiaries makes the municipalities a buffer zone between the schools and the national authorities. This puts them in a difficult position as their mandate in the field of policy-making is very limited.

This position can be frustrating for the municipalities, as one person explained: 'When parents are unhappy, they first go to the school director, and then they come to the municipality. Many call municipal staff in charge of education. They are to solve the problem with the director because their responsibility is not to go and to fix the problem with each individual parent and student in the classroom. Parents do not hold the ministry accountable, but instead the municipality.' While parents have an impact on schools in this way, it does not translate into systemic involvement in national policy-making, in part because there is no national body that brings together representatives from school boards.

This creates space for the rise of unofficial or unregulated groups claiming to represent parents' interests, potentially resulting in inadequate representation and ineffective decision-making processes. Recently, there have been such examples with the emergence of a few parents' groups linked to a global conservative ideology and religious platforms. These organisations have actively voiced their opinions on certain reforms to elementary education, including the introduction of digital textbooks, the proposed 'Concept for elementary education' and the inclusion of a subject addressing gender-sensitive matters, specifically sex education. Information about these organisations, including details about their members, leadership and decision-making processes, is currently very scarce. Consequently, it is challenging to ascertain their representativeness in any significant manner. In times of vocal social pressure coming from different sides, it is difficult to assess the impact of a particular group. It is noteworthy that, when discussing national partners with staff from the administration, they did not refer to these groups. However, based on secondary sources (including social media), the role of these non-formal movements in shaping some of the key education policies in the country was found to be important. They played a role in shaping negative sentiments among the public towards the policies described above. In 2021, for example, the MoES paused the introduction of these innovations (though some of them are already back on the political agenda).

Teachers' unions and students' organisations

Teachers' unions focus on particular issues, such as salaries and collective agreements.

Unions have a longstanding tradition in North Macedonia. Their roots can be found in the workers' movements in the socialist system the country was part of until its independence in 1991. Currently, there are five **teachers'** unions in North Macedonia, with all but one specialising in the field of higher education, encompassing educators from various levels of education. Teachers in North Macedonia can be members of one or more unions simultaneously. The Trade Union for Education, Science and Culture in the Republic of Macedonia (SONK) is the union that has existed the longest and, at the moment, has the widest membership base (i.e. at least 20% of the teachers are members of this union).

From a brief analysis of the information presented on the websites of three unions, their main activities **focus** on improving the financial and material conditions of the teachers, mainly through improving collective agreements. **In practice, the primary focus of the unions lies in exerting their influence over teacher salaries, while their involvement in other areas of policy-making is comparatively limited.** None of the interviewees spontaneously referred to them as an important partner in policy formulation or planning, and, after some prodding, confirmed that they intervene mainly, if not uniquely, in the negotiations on collective agreements.

In terms of influence on policy formulation, the teachers' unions play a limited role and demonstrate predominantly reactive behaviour, which is not unexpected, given that some of them maintain close ties with the ruling parties. A few teachers are at times consulted in their individual capacity, for instance regarding curriculum development, and some are involved in the writing of textbooks.

Student representative organisations are yet to exploit their full potential. Until recently, student representative organisations (i.e. unions) were only modestly engaged in the realm of policy-making. Often, they lacked a critical angle on the policies promoted by the MoES, due to their informal ties to the political parties in power. As there has been a recent change in the status and governance structures of these organisations, it is currently challenging to assess their involvement and influence on policy formulation and implementation. However, based on the available information, we can conclude that no national student representative organisation is visibly active at the moment. The university representative organisations practise their impact at institutional level. The role of the non-formal (student) movements in the country's policy processes is further explored in the section on communication and collaboration with domestic partners.

Civil Society Organisations (CSOs)

CSOs have limited capacity to influence policy-making. Currently, only 0.8% of all registered CSOs in North Macedonia specialise their activities in the field of education (Government of North Macedonia, 2021) and **only a few have long-term experience in education. Those that are active in education usually have a broader scope of work than only education;** the education component is embedded in an agenda of activities targeting young people, or the inclusion of marginalised communities in society. With regard to both national and local-level CSOs, the majority face challenges in terms of human and financial capacities, limiting their ability to operate effectively (Public, 2018; Centre for economic analyses, 2018). This, in turn, reinforces reliance on international funding and focusing on their priorities, potentially restricting the opportunity for sustained grassroots action with impactful pressure on policy-makers. One senior expert gave a specific example of the dependency by CSOs on international funding: 'When a significant cut from the major education programme in the country, led by the Open Society Foundation, happened, vocal CSOs became weakened. Some of them even lost interest in continuing to work in the field. We used to have a lot of CSOs working on education, especially with the schools. But now it is different'.

The fragility of funding is not the only factor that affects the continuity of CSOs' efforts to influence policies, but also the changing priorities of partners. This point was made in particular by those CSOs active in the design and implementation of policies that challenge societal norms, cultural beliefs, and power dynamics (such as gender-sensitive education): 'Many of the developed countries now have conservative political parties in power, or recently have. Consequently, our main international partners, many of them being embassies, have to follow the general policies of their governments. They are not as open to some matters as they used to – for example, once upon a time, it was by default that that particular embassy will support an introduction of curricula tackling reproductive health education. Now they are more cautious; they ask that these ideas are first written in a national strategy before they support the policy'.

CSOs' role is primarily a watchdog one, through research and analysis of the policies and stakeholders' opinions. However, during the interviews, none of the interviewees from the administration referred to these analyses as a valuable source of information. This is a missed opportunity for staff at the administration who could obtain useful data and qualitative feedback on their policies. However, only a small number of CSOs are involved in the implementation of policies. This is mainly for policies that are intertwined with project requirements and in response to a request by international partners, rather than the ministry itself. In these organisations, staff are motivated, engaged and knowledgeable, although enthusiasm has been declining recently. Some of the factors include negative public perceptions of the NGO sector, the frequent change of ministerial leadership, leading to constant efforts to rebuild the partnership with the ministry

(‘we feel like every year we need to restart the collaboration with the ministry from zero, explain again our work and activities and push the new minister for their support’), the increased attractiveness of other sectors (e.g. the IT industry), as well as brain drain. In view of this, it is not surprising that one administration staff member shared the following when discussing the influence of the CSOs over the work of the ministry: ‘Civil society should play the role of keeping us accountable, but they are not sufficiently doing so. Civil society should be more focused on criticising us so we can do a better job, but we do not always feel this pressure’. This illustrates the general feeling that the CSOs are not exercising a strong influence over policy-making.

The private sector

The untapped potential of collaboration with the business community.¹⁰⁴

The engagement of the business sector in education policy-making is a relatively new occurrence in North Macedonia. The recent implementation of a project that focuses on the integration of dual learning into the vocational education system enhanced their participation. Currently, the involvement of the business sector is focused on curriculum development, organising traineeships for students in vocational education and, less frequently, funding school-level initiatives (e.g. opening a sensory room for children with disabilities). One interviewee who closely follows the involvement of the business sector found that there is still much room for improvement in this area: ‘Our general remark is that consultation with the private sector is very often missing. While consultations are done more frequently now than before, it often works in theory only. In practice, currently not many of the suggestions are taken on board’.

A positive example of a locally bred initiative for collaboration with the business sector is the establishment of local economic councils by the municipalities. These bodies bring together representatives from the local companies and the municipality. A municipality representative described how the meeting with their local council also covered topics related to education, in particular tackling the shortage of skills at local level, (vocational) school admission quotas, and the intake of students for practical training provided by companies.

Communication and collaboration between the education administration and domestic partners

Collaboration with domestic partners is characterised by limited involvement in policy formulation and implementation. Collaboration with the domestic partners in the policy cycle in North Macedonia takes two forms: 1) Involvement in policy formulation through wider consultation processes on strategies and legislature (e.g. the creation of the Law on Higher Education in 2017); and 2) As co-implementors of projects, which is mainly the case for CSOs. In principle, domestic partners, and CSOs in particular, could support the administration in various domains, and in this way make up for the weak implementation capacity. In other sectors, such as social protection, some services (for instance care for the elderly) have been delegated to CSOs and private providers while the ministry takes care of quality assurance and monitoring. So far, this potential is still untapped. However, there are, in any case, two risks to this. First, it may lead to more inequity, especially if private providers look for profit. Second, it may diminish trust in the public administration and the common public good.

While the education administration is more open than before to consulting domestic partners, four challenges can become points of blockage:

1. First, **without formal mechanisms that guarantee involvement from all relevant sides, who gets a seat at the table can be a matter of subjective judgement by the minister.** For example, one representative of an international agency pointed out that: ‘Now, more so than before, state institutions are more open to involving CSOs in the process of decision-making and in developing policies. But who gets invited is still complicated to answer, because not all CSOs will get equal treatment, even if they have similar or comparable

¹⁰⁴ See also Chapter 4, Sections 4.3.2 and 4.5, for additional insights.

experience in the field. There will be objective and more subjective reasons for this: who knows who, and also, if they're in open opposition to the government's rhetoric. I would like to think that this has changed a bit, and maybe the playing field is a bit more level than it was before'.

The CSOs' interviewees explained that, though they have recently been more frequently invited to the consultation processes, the quality of the relationship with the administration still depends on the minister in power and their perceptions of the role of the partners. As one international expert explained, 'One previous minister really took into account the opinion of the CSOs, was proactive with establishing consultative committees and was inviting some CSOs for frequent meetings. However, this has not always been the case'.

In the absence of meaningful communication, the collaboration is at times perceived as tokenism, which further affects enthusiasm among the domestic partners: 'Every time there is a new minister, we do pay them a visit. We talk to them about our research, the problems of students, the things that need to be done. One minister kept on saying yes to everything we proposed and promised to follow up on the ideas every time we met. Unfortunately, that never happened'.

2. A second aspect worth exploring, brought up by several interviewees, **is the absorption capacity of the administration to incorporate feedback in policy formulation**. While several partners submit comments on the draft laws (for example, through the electronic platform Unique Electronic Registry of Regulations of the Republic of North Macedonia – ENER, or through direct communication with the ministry), they rarely find their pleas heard. This causes additional frustration. The low absorption capacity stems from various factors. Several have been discussed earlier in the chapter: the absence of internal mechanisms for adequate management of information, including for handling feedback effectively; communication gaps between different levels within the institution; and a lack of organisational culture that values feedback. In addition, obstacles that hinder the timely processing of feedback, resistance to change, and a lack of transparency and accountability, can all contribute to institutions' limited ability to incorporate valuable insights and perspectives into their work, potentially hindering their responsiveness and adaptability to partners' input.
3. A third challenge relates in particular to youth groups, though it may also be relevant to CSOs, as many of them are supported by and representative of young people. Evidence points to the **low level of civic participation by young people, which also reduces the opportunity to keep authorities accountable as there is no real pressure**. A recent study (Galevski and Gjorgjioska, 2021) showed some of the following results. Less than 10% of young people describe themselves as socially active. About two thirds (65%) of young people think that the authorities are not familiar with their problems, while only 27% believe that they are. Young people have little confidence that they can influence authorities, with 58% believing that they cannot influence them at all. Finally, 85% of young people have never been consulted by local or national authorities.
4. The fourth challenge may be due to the **centralised management of partnerships**, in particular with the civil society sector. The council for collaboration between the Government and the civil society sector is in charge of drafting national strategies and supporting projects of the public administration and CSOs. One mechanism for steering collaboration are activity-specific grants that the government is giving to CSOs and that may lead to greater collaboration with public administration bodies, including the MoES. Between 2018 and 2022, the council supported six projects where the MoES was involved as a partner. According to the council's reports (2018, 2020, 2021) collaboration in the field of education mainly occurs in the field of civic education, preventing discrimination and, to a lesser extent, strengthening the skills of young people. While this mechanism has the

potential to facilitate collaboration, there is a risk that it might convey the message to administrative bodies that partnerships should only focus on executing specific activities within the remit of the council for collaboration between the government and the civil society sector. To address this concern, the mechanism should be designed so that it fosters a culture of comprehensive collaboration and inclusivity. It should be viewed as a supplementary tool rather than a sole means for collaboration.

Lack of frequent and structured communication with domestic partners leads to the use of other tools to influence policy-making.

Currently, the education administration does not have systemic coordination mechanisms that enable periodic meetings and consultations with domestic partners. Communication with domestic partners is mainly bilateral and initiated by the partners themselves. For instance, some ask for a meeting with the newly appointed ministers, to introduce them to their activities and plans. Some meetings take place in the framework of projects or are requested by the international partners. According to the interviewees, many such meetings are limited in scope, as they focus on a particular project activity, while others are generic, without any specific call for action or outcome.

The lack of such systemic and regular exchange results in the absence of continuous and meaningful involvement in policy-making by domestic stakeholders. In response, they attempt to influence the policy agenda through other tools, such as petitions, protests or social media pressure. Several examples illustrate this:

1. In 2007, the Law on Higher Education was amended to improve the work of student representative bodies after a petition was signed by 11,000 students. The initiative was led by a national civil society organisation (Youth Educational Forum, n.d.).
2. In 2009, after high school students organised protests in Skopje opposing the implementation of external testing (i.e. the final exam or Matura), the MoES decided not to proceed with the testing for that school year.
3. The emergence of the informal student movement 'Student plenum' in 2014, which opposed the introduction of an external exam implemented by an external body (i.e. the agency for quality assurance in higher education), marked a significant turning point for agenda-setting in the field of higher education in recent years. One of the main priorities of the newly elected government in 2017 was to draft and adopt a new law on higher education to address the concerns raised by the movement and the wider higher education community. The legislature, adopted in 2018, was drafted through a broad consultation process, including representatives from the student movement. The legislature led to a reformed student representative body at university level: student unions were given the status of a body within the university's organisational structure, leading to more accountability mechanisms being introduced in the work of student representative organisations. Prior to this, student representative organisations in the country were mainly CSOs and this significantly limited the possibility for students and other stakeholders to hold universities accountable for their work.
4. In 2021, an informal group of parents organised protests and blockades of school classes at national level, after the MoES announced new legislation on the textbooks that envisioned a switch to digital textbooks and reforms to the content of the subjects. In addition, the group launched a petition for a national referendum to provide an opportunity to all citizens to express their opinion on the (then draft) legislation and requested that the legislation be subjected to wider public discussions and consultations. The same year, the government retreated from discussing the legislation. In 2023, the MoES restarted the work on the legislature, but only after strong public reactions due to factual mistakes in some textbooks.

Such tools to influence policy-making can be of great value, particularly for relatively young democracies like North Macedonia, if they allow representative public participation in policy debates.

Domestic stakeholders' role in shaping accountability: realities and opportunities

In the context of North Macedonia, where accountability within the public administration is weak, where parents are well educated, and where there is a democratic regime, one may expect the existence of strong social accountability. However, all interviewees painted a relatively dark and pessimistic picture of the state of social accountability. In the words of one experienced policy-maker: 'In this country, nobody is accountable for anything except during the pre-election period. No one is accountable, not just in the field of education, there is no accountability for any issue in general'.

The gap between policy decisions and the diverse needs of stakeholders leads to a breakdown in trust in public institutions, which further hampers the creation of an accountability relationship. According to the Balkan Barometer conducted by the Regional Cooperation Council (2022, 2023), Macedonians exhibited the highest degree of scepticism towards public institutions when compared to citizens of other Western Balkans countries. The survey revealed that over 70% of respondents tended to harbour a sense of distrust towards the government in both 2022 and 2023.

However, there are some exceptions to this bleak picture. At national level, as discussed earlier in this section, **non-formal movements of stakeholders do exercise pressure over the education administration.** One benefit of these non-formal movements is the spillover effect they could have to other areas and actors in education, and beyond. One example is the movement 'Student plenum' which inspired the creation of two other (non-) formal organisations (i.e. the higher education teachers' union and the movement of high school students) that exercised influence over certain policies. In this regard, the teachers' union managed to push the ministry to sign the first collective agreement to deal with the rights of the academic staff in 2021. The union of high school students has affected the content and the form of external testing (i.e. the final exam or Matura) several times in the past few years.

These actions can be powerful in shaping policies and holding the administration accountable. However, they have their limitations. Their focus is often limited in scope (i.e. a particular policy) and, unless institutionalised in the later stages (e.g. through establishing a union or joining or reforming an already existing representative organisation), they don't become an ongoing mechanism for holding the administration accountable beyond the current action. Moreover, they tend to be reactive, coming into play once the policy is already formulated and in its final stages, reducing the chances of influencing the earlier stages of policy development. Consequently, these actions are often aimed at blocking or opposing policies rather than the creation of new ones. Finally, such actions can be undertaken by different groups with different agendas, progressive as well as conservative, as we saw earlier.

The situation is more promising at local level: parents, teachers and, lately, local businesses tend to express their opinions and dissatisfaction regarding educational policies to the mayors and the municipal administration. The proximity between the local communities and the municipalities holds big potential. However, as discussed earlier, municipalities are at times held accountable for results over which they have little control. Arguably, if the central government proceeds with the decentralisation of the mandates and permits expansion of the municipalities' competences in the field of education, local partners' demand for accountability could cover a broader field of functions and have a more beneficial impact, as municipalities could take action where local partners have expressed dissatisfaction.

While domestic partners are still limited in holding the education administration accountable, the situation is slightly different with international partners.

5.4.2. International partners

International partners' advice is found useful, neutral and is cherished.

One way in which international partners influence policy-making is through their expert advice. Ideas originating from these partners are seldom subjected to questioning and rarely encounter significant opposition within the education administration in North Macedonia. Furthermore, according to some of the interviewees, it is often the case that international partners are the ones steering innovation and coming up with new ideas. One of the main reasons for the meaningful influence of these actors is that the **international partners are considered a valuable repository of information regarding practices in other countries during the policy formulation phase.** According to one representative: 'The Ministry finds it quite useful when we provide data and share experiences from other countries, especially because we have quite a big network. I haven't seen much hesitancy or not embarking on an idea if you give them good evidence that a policy works in other contexts'.

A second source of influence is through the framework of projects. In this case, their involvement centres on providing funding for a specific intervention and offering technical assistance to the administration but is not limited to this. Even when departments or institutions seek assistance for immediate and smaller endeavours, there is space for international partners to offer policy support. According to one representative, precisely because these departments and institutions often lack a long-term vision, the international partners guide and sometimes define the national long-term strategic approaches.

The role of international partners has been described as pivotal for policy-making in recent times. Several examples, from both the education administration and the international development community, showcase the involvement of international partners:

'The reforms we did, we did them with our international partners. Without them we would have just continued the status quo' [former senior level staff in the administration]

'In all honesty, the goals from our internal strategic plan and the national strategy for education would not have been achieved without the support from the embassy and their long-term project' [official in the education administration]

'The indicators that we currently use are developed with help and guidance from consultants. We also made a self-evaluation of our work that later fed into the improvement of the indicators through a project aided by one of the leading donor organisations.' [official in the education administration]

However, the above quotations should not give the impression that all ideas coming from international partners are passively absorbed. Just as on almost any other matter in the education administration, the minister can play an important role in accepting or rejecting ideas coming from these partners. This was described by one representative: 'Whether our visions or plans are found compelling depend on three factors: the strength of the evidence you present, how aligned it is with the government priorities, and on the Minister and their openness for collaboration. Usually we don't have big disagreements, but sometimes the ministry has other priorities and seeks support in that direction only'.

The delicate tango between national policies and project goals.

Communication between the international partners and the education administration was described as regular and initiated by both sides. The communication usually takes place either with the minister or the heads of the units responsible for the specific field covered by the project. The administration, on its side, contacts an international partner when it has an idea on a policy or an activity. One of the interviewees from the administration explained that the decision of whom to contact depends on the domain of work of the partners ('for example, we would address UNICEF if we want to work on inclusive education, OSCE on security etc.'), signalling that staff understands the work and the importance of collaborating with these partners. **The international partners, on**

their side, approach the education administration when creating their mid- and long-term strategies. There is a structured engagement in setting priorities. All of the bigger international partners have signed some kind of contract with the government regarding the areas of work and their activities in the country over the next several years. These agreements come in different forms: partnership grant agreements, memorandums of understanding, and country partnership frameworks. In times of unstable leadership and frequent changes of decision-makers, these serve as a mechanism for ensuring stability.

Looking further into the essence of the collaboration between the education administration and the international partners, several interviewees described the process as a 'process of negotiation' in which both sides present their ideas and plans, and see which areas are of common interest. Therefore, there is a feeling, especially within the smaller agencies, that there is regular consultation, that they are appreciated by international partners, and that the majority of international partners' programmes do incorporate the national policies and goals.

Due to this, sometimes it is hard to distinguish between organic ideas and activities coming from within the administration, and project goals, defined by international partners. On the one hand, this could be perceived in a positive light as an indication of strong cohesion with these partners. On the other hand, it could be interpreted as a threat: because these activities come from projects, proposed and/or led by external entities, there is little feeling of ownership within the administration, which threatens the implementation and sustainability of the policies.

A few interviewees, both from the education administration and from the partners, voiced the **concern that policies are adopted that are inspired by other systems which are not always fully aligned with national needs and priorities, or compatible with the local context.** The reasons for this include the lack of project synchronisations and continuity, the fragility of the long-term vision by the MoES, and system openness to ideas coming from abroad. At times, this causes confusion and uncertainty for the stakeholders, and hinders the development of a cohesive national educational vision and identity, as the system becomes fragmented with disparate policies from different countries. As expressed by one senior officer, 'We implemented policies from Germany, Finland, Scotland and who knows where else. Maybe that's why the system in Macedonia is as it is now – many things do not make sense. We keep on taking other countries' policies just because they work somewhere else'. Another interviewee from an international agency added, 'The educational policies are too strongly influenced by examples from other countries that may not be fully relevant, because they do not have the same environment, nor the same way of thinking'.

Lack of systematic coordination of international partners by the MoES leads to the creation of parallel communication and coordination structures.

While the education administration has frequent communication with individual international partners, currently there is no coordination structure established by the MoES. As a result, coordination meetings covering all international partners are rare. In the words of one representative: 'I can't remember the last time the ministry asked all the donors to come to one place and talk about our priorities. I think it was an online meeting during COVID, but before and after that, I don't think there was anything happening'. One possible reason for this is that the development community is small and described as a sector in which 'everybody knows everyone'. Therefore, it has space for informal coordination, not only among themselves but also with domestic partners, especially CSOs. The international partners have more frequent communication with the education administration than domestic stakeholders, but also more stable channels of communication with some domestic partners. In this regard, some domestic partners present their views and place their requests through the international partners. According to the views of a civil society worker, 'If you want something done in the education in North Macedonia, you go to the donors'.

One formal coordination structure exists, but it focuses on a particular theme and was established at the initiative of the EU delegation, namely the Sector Working Group for Education, Employment and Social Policy. The group, coordinated jointly by the MoES and the MLSP, brings

together high-level representatives from the ministries, civil society organisations and international partners (such as UNICEF, UNDP, UN Women, USAID, World Bank). It usually meets twice a year and aims to provide space for intersectional communication leading to identifying the priorities related to EU accession. The platform also envisions overall foreign aid coordination. In the interviews with the MoES, this platform was referred to as one main mechanism for coordination with international partners. The platform was found particularly useful for exchanging information on the (future) activities of different actors, though some interviewees described the meetings as ‘overly generic’. Arguably, if the MoES had created a coordination structure for the education sector as a whole, there may not have been a need to create this alternative working group, or it could have been created within the broader structure, together with other thematic or operational groups. This point was made by some interviewees, who saw the need for committees that include employees from the whole education administration: ‘Currently there is an empty space below the system-level groups (such as the Sectoral Group). We are missing meetings at operational level, with agencies where the expert dialogue is going on and that will finalise and make the politicians’ decisions more concrete.

The overall coordination role could be played by the Unit for Strategic Planning within the MoES. Strengthening their competences in this area could guarantee better synergies between the projects, avoid duplication of efforts, and guarantee the sustainability of the project results.

The influence of international partners in holding the education administration accountable is notable, yet it is not without limitations.

International partners have influence over developments in education in North Macedonia, as they act as either a complementary or an alternative source of funding that is highly appreciated by the administration, and especially the autonomous agencies. In principle, this opens space for them to hold the administration accountable, for instance for the implementation of the programmes and projects that they finance. However, their influence could be limited in several ways.

1. Firstly, **their advice is external and does not derive from a national broader political consensus** (sometimes not even within the coalition partners in government) that will facilitate the longevity of the policy. When the administration does not feel full ownership and shows little inclination to implement a project, international partners are in a challenging position. They have the choice between two options. On the one hand, they can take over some of the processes. For example, they can create and support units for project implementation within the ministry, such as the unit for implementation and coordination of the Instrument for Pre-accession Assistance (IPA) at the MoES, or they can request that a CSO take over the implementation part, as is the case with some activities implemented through the ongoing Swiss embassy project for the introduction of dual education. The downside of this approach is that the education administration does not develop its own capacity and is continuously dependent on external support. On the other hand, they can leave it to a unit within the administration, but with the risk that the project will not be implemented. The lack of ownership can also lead the administration to perceive a reduced sense of accountability when issues arise. This was demonstrated by a national official who, when asked about the critical aspects of a strategic document, said: ‘Yes, the document is broad and sometimes lacks concrete actions. But the text was produced by an external (foreign) consultant, not us. They should have known better I guess’.
2. This relates to a second limitation: **when the projects initiated in collaboration with the administration are primarily agreed upon by top leadership without consulting staff in charge of implementing the activities, the latter may not feel accountable for the outcomes** and perceive the assigned tasks as an additional burden, and not part of their usual tasks. The following example comes from a civil society organisation which implemented a project with the administration ‘We felt blocked during the project by some of the administrative workers in charge of the task. When we tried to address this with them, they asked us to pay them royalties. They saw the assignment as part of a project

rather than part of a national policy'. In the words of a senior-level employee at one of the institutions, 'managing projects and project-related activities can be such a headache. It requires that we work extra hours and during the weekends'.

3. Thirdly, **international partners' mechanisms for holding the education administration accountable are based on project funding tied to achieving specific indicators.** The implementation could be superficial or even deceptive, intended to give the impression of adherence to the policy without genuinely addressing the underlying issues. An example is the creation of units and bodies within the education administration, in response to advice by an international partner or as a project requirement, that are not given sufficient resources and personnel, and therefore cannot fulfil their tasks.
4. Lastly, **the influence of international partners on the ministry can be constrained by the time-limited nature of their projects, which hampers their ability to exert sustained pressure and demand for accountability.** Even in cases where projects have a longer duration, the impact can still be limited if there is a lack of internal drive, interest or capacity within the ministry to foster accountability. Without a genuine internal commitment to cultivating a culture of accountability, the potential impact of international partners' endeavours to promote transparency and responsibility within the ministry may be less pronounced.

5.5. Key takeaway points

Public Sector Management

There is broad consensus that the public sector in North Macedonia performs poorly, and that this is as true for education as for other sectors. However, this belief does not translate into a shared sense of crisis, which weakens the potential for successful transformation. The fragility of genuine political will, combined with a lack of administrative capacity, explain the status quo.

The core cause of this underperformance is the politicization of the civil service. Politicization is combined with other factors: scarcity of competencies, lack of attractiveness of the civil service, rapid changes in leadership, and the absence of professional development. This has a detrimental impact on the competence, internal functioning, and performance of the educational administration.

Usually, when confronted with undue political influence on the civil service, reformists propose stronger regulatory frameworks, for example in terms of recruitment procedures and criteria, and numbers of staff. However, such well-designed frameworks exist already. The problem is that informal processes, which are more difficult to regulate, intervene. There are a few examples of apparently neutral interventions that have limited the damaging impact of politicization, which could inspire broader reforms.

Therefore, a change in mentality needs to precede structural changes. This may require the creation of a mechanism through which 'beneficiaries' and partners can hold the public administration accountable for its performance, combined with a professional development programme to train and motivate staff.

The design of policies in education

The recognition that the education system is in crisis has led to some reform initiatives from three sources: the Minister and Cabinet; the Strategy 2018 – 2025; and international agencies. The Strategy was prepared through an open, consultative process, contributing to a sense of ownership by the administration. It is aligned with the national development plan and offers a comprehensive picture of sector-wide reform.

However, its implementation has suffered from two broad challenges. First, it was not accompanied by relevant laws, due in part to its disconnect with ministers' initiatives and to the lengthy process of law creation. Second, it was not translated into operational terms, mainly because of the lack of a strong M&E framework, and the absence of a 'champion' within the administration. The ineffective implementation of the strategy, and of other reforms, reflects a lack of consensus on the direction of the education system. While externally promoted reforms could build such a consensus, they may lack political buy-in.

Decentralization in education

Municipalities play a key role in the management of pre-primary, primary, and secondary schools and teachers. This has not led to more effective management, as is most evident in the problematic area of teacher management. The ineffectiveness of many municipalities has three immediate causes: few have sufficient competent staff, most have insufficient financial resources, and mechanisms for collaboration between municipalities are weak, notwithstanding the praiseworthy efforts by ZELS.

However, there are many differences between municipalities, with some being more competent and effective than others. The fact that these municipalities are also constrained, is an indication of the existence of two 'structural' factors. Firstly, the absence of genuine financial decentralization results in various misalignments, between responsibility and source of funding, accountability and funding, and accountability and autonomy. Secondly, the weakness of the regulatory and support framework means municipalities receive little guidance from central authorities and there is insufficient monitoring of how they use their funds. Any reforms in this area must take into consideration that decentralization was originally introduced for political reasons and that political considerations remain paramount in many decisions. The over-recruitment of teachers by municipalities is the result of a range of incentives, and fits within the use of the decentralization policy as a tool to temper political and ethnic tensions.

Structure of the administration

The educational administration has a complex structure, though with a mostly clear mandate and a solid understanding of this structure across the entire administration. Although the administration has increased in size and complexity over time, the rationale for the existence of each body is clear, and there is little overlap. One challenge relates to the level of autonomy of several bodies, in terms of finances and setting policy goals.

The greater challenge lies in the deficiency in coordination and communication between the various bodies, reflected in the lack of set processes to support structured debate on policy formulation, planning, management, and implementation. Quality of coordination depends more on the eagerness of specific individuals than on a system-wide strategy. The ongoing discussion of potential mergers is not necessary to solve this. Introducing mechanisms and protocols for improved communication and coordination is possible without restructuring.

Strategic planning is not well embedded in the day-to-day functioning of the administration. The recently formed Department for Strategic Planning has not yet assumed the key planning role which motivated its creation.

Human resource management

Human resources pose a challenge, both in terms of numbers and competencies. This threatens the design and implementation of reforms. The paucity of professional development opportunities, notwithstanding legal provisions mandating such opportunities, demonstrates the lack of interest in this area, and calls into question the effectiveness of the appraisal for which professional development is a precondition. While there are enthusiastic individuals in the administration eager to make a change, overall, motivation is fading, due, among other issues, to a lack of career prospects and low salaries.

Accountability

The administration does not feel accountable – and is usually not held accountable – for the state of the education system. The internal demand by the Ministry's leadership to evaluate performance is weak. Moreover, the EMIS is not used effectively as a tool for accountability and evidence-based policy making. EMIS today remains fragmented and produces information that is not fully reliable. Demand for accountability comes mainly from development partners.

The lack of culture of accountability makes it difficult to evaluate progress, to identify the main system-level challenges, and to communicate policy priorities. There are a few positive initiatives that hold potential for strengthening understanding of the system's performance, particularly in terms of measuring student outcomes through national and international assessments.

Domestic partners

Due to their limited scope and resources, formal representative organizations such as teachers' and student unions and civil society organizations have little impact on public policy. Some stakeholder groups, like parents, are not formally represented, which further limits their influence. Communication problems and a lack of participation in policymaking drive the use of alternative tactics such as protests and social media pressure. The potential of local communities' proximity to municipal authorities is promising, with multiple stakeholder groups voicing their concerns to the municipal administrations.

International partners

International partners' advice is valued. Priorities are established by a systematic collaboration between the donor community and the education administration. Although significant, the ability of international partners to hold the education administration accountable is limited by the time constraints of the projects, the administration's lack of full control over donor-proposed policies, and the likelihood for policies to be implemented ineffectively or in a superficial manner. The strong involvement of the donors in policy making may create a limited sense of ownership within the administration. The execution and long-term viability of such policies are therefore at risk.

The MoES' lack of systematic donor coordination leads to creation of parallel communication and coordination structures led by the international partners. Important discussions regarding policy making, however, typically take place on a bilateral level or through informal channels.

Chapter 6. Cost and financing of the education sector

The purpose of this chapter is to analyse and compare education spending both at the global level, that of financial aggregates (e.g. budgets), and at the more micro level, e.g. that of spending per pupil, including in its various components (salaries, goods and services, social spending). At both levels of analysis, we consider the amounts spent for the most recent period (2022), as well as changes over time. Parliament-approved budgets are spending intentions which, for various political and technical reasons, may differ from actual expenditure. We will focus on the latter type of expenditure, considering actual budgets in most of the analyses. The analysis focuses on public education, which in North Macedonia is the most developed at the various levels of the education system, both in terms of the number of establishments and the number of students and students enrolled (see *Chapter 2*).

A variety of data and sources were used to conduct the analysis, including the final account reports from the Ministry of Finance (MoF), the budget shared by the Ministry of Education and Science (MoES) and the Ministry of Labour and Social Policy (MoLSP), as well as the MoF's online open-source budget, through which budgets at both central and municipal level were captured. We also had access to the MoES school-level staff payroll and to the State Statistical Office school-level data. Published reports from the MoF, World Bank (2023a and 2023b), UNICEF (2022b), and Mitevski et al. (2020) were also reviewed.

The consolidation of information from different sources has been difficult, following a series of issues related to the fact that i) different coding was used in different data sets (budgetary school IDs were totally different from the State Statistical Office school ID¹⁰⁵) making linkages difficult; ii) financial data are available at the level of the main school (independent or central school, not at satellite school level)¹⁰⁶; iii) the extraction of data from the open-source budget proved to be tedious, with a risk of double counting and of omitting budget lines; and iv) central and municipality budget information is not consolidated in the budget books.

6.1. Education financing levels in North Macedonia

6.1.1. Education financing mechanism

Overall, the initial funding for state education in North Macedonia comes largely from the **MoES**, to which autonomous entities are attached.

1. The **Bureau for the Development of Education (BDE)**, which is responsible for pedagogical activities relating to educational content, textbooks, and teacher training.
2. The **Vocation and Education and Training Centre (VETC)**, which falls under the BDE, as a sub-account, although the institution is independent.
3. The **State Education Inspectorate (SEI)**, which is responsible for the educational supervision of teachers and schools.
4. The National Agency for European Programmes and Mobility.

They cover various levels of education with all dealing with primary and secondary education.

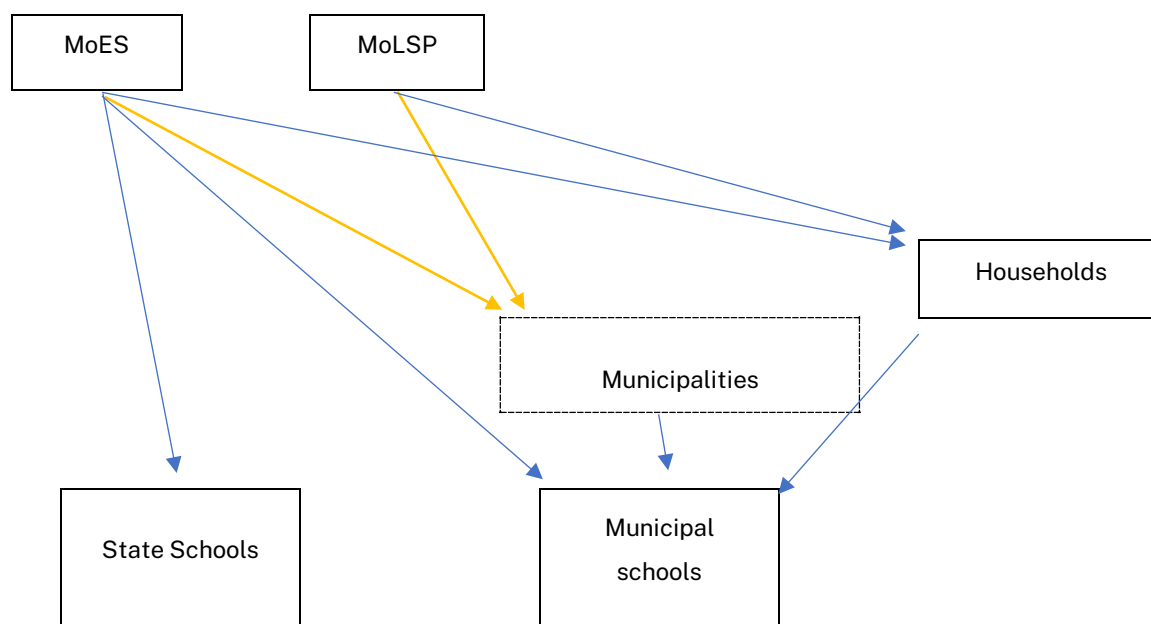
¹⁰⁵ Although a correspondence key was provided to us to allow the two databases to be linked, it was sufficiently different that combining the different files has been a perilous exercise, often requiring checks on the names of the schools.

¹⁰⁶ For primary schools, many of which operate with satellites, financial data are available at the level of the main school (whether an independent school or central school), whereas enrolments are available at the level of each school (distinguishing central from satellites schools). A central school with satellites shares the same budget identifier, preventing a refined analysis of unit cost per school type (e.g. central, satellites).

The **MoLSP** is responsible for pre-primary education and for covering part of the social protection costs associated with education.

Education is managed on a decentralised basis, with the two ministries providing municipalities with global funds to cover salaries and the running costs of schools (block grants with yellow arrows as displayed in Figure 6.1). The state directly covers the costs of state schools (which are very much in the minority), special schools and public universities. The state also directly covers the grants paid to students and part of the running costs of boarding schools, which also charge variable fees, depending on the situation of the students. Municipalities covers a small share of education spending from their own resources (1.3% in 2022, as shown in Table 6.12).¹⁰⁷

Figure 6.1. Main financial public education and training flows in North Macedonia



Source: Authors.

6.1.2. Global level of financing for the education and training sector

Table 6.1 below shows the consolidated amounts for the central departments responsible for education (MoES and its three entities, MoLSP) over the period 2012-2022, excluding the municipality budget. However, the low level of direct funding from the municipalities (1.3% in 2022) means that the amount of consolidated national funding from the two ministries represents almost all public spending on education in the country.

Over the 2012-2022 period, the total (realised) state budget for education increased in both nominal and constant terms, to reach close to MKD 32 billion in 2022. Education budget increased by an average of 4.0% per year in current Macedonian denars (MKD) (or 48% over the period), but by only 0.8% per year in constant MKD (2022 prices) (or 8% over the period). The dynamic of the two ministries responsible for education has been different over the period: the MoES has seen its funding grow in real terms by around 0.5% per year on average between 2012 and 2022,¹⁰⁸ while the MoLSP, which manages a level of education that is still expanding today,

¹⁰⁷ Education and training financing also includes non-public sources, including: i) schools and higher education institutions (HEIs) raising some funds through income-generating activities, ii) households (estimated at less than 1% of total education and training expenditure in 2022); and iii) donors.

¹⁰⁸ Table A6.1 in Annex 6.1 shows the structural distribution of the education budget among its four components. One can observe that the funding trend of the various entities is broadly in line with that of the MoES, with the exception of the National Agency for European Programmes and Mobility (NAEPM), which has seen more sustained growth over the period. Over the period as a whole, the MoES manages the vast majority of the funds allocated to education from primary to higher

has seen its budget grow by 5.3% per year in real terms. However, budget growth in constant MKD has stalled over the last 3 years due to the drop in attendance at this level of education as a result of the COVID-19 pandemic (see *Chapter 2* for more details).

Over the 2012-2022 period, the share of the total budget managed by the MoEs has dropped from 94% to 91%.

Table 6.1. Trend in the education and training public realised budgets in North Macedonia, 2012–2022

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | AAGR |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| Current, million MKD | | | | | | | | | | | | |
| MoES | 20,355 | 21,166 | 20,619 | 22,126 | 22,233 | 22,663 | 22,991 | 24,066 | 25,363 | 26,804 | 29,169 | 3.7% |
| MoLSP | 1,250 | 1,277 | 1,251 | 1,285 | 1,390 | 1,492 | 1,645 | 1,971 | 2,573 | 2,648 | 2,868 | 8.7% |
| Total current | 21,605 | 22,443 | 21,870 | 23,411 | 23,624 | 24,155 | 24,636 | 26,037 | 27,936 | 29,452 | 32,036 | 4.0% |
| Constant, million MKD 2022 prices | | | | | | | | | | | | |
| MoES | 27,827 | 27,695 | 26,594 | 27,977 | 27,171 | 26,940 | 26,297 | 27,290 | 28,371 | 28,950 | 29,169 | 0.5% |
| MoLSP | 1,709 | 1,670 | 1,613 | 1,625 | 1,699 | 1,773 | 1,882 | 2,235 | 2,878 | 2,860 | 2,868 | 5.3% |
| Total, cst | 29,536 | 29,365 | 28,207 | 29,602 | 28,870 | 28,713 | 28,179 | 29,525 | 31,249 | 31,811 | 32,036 | 0.8% |
| MoES (%) | 94.2 | 94.3 | 94.3 | 94.50 | 94.1 | 93.8 | 93.3 | 92.4 | 90.8 | 91.0 | 91.0 | |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: The budget refers to consolidated MoES and MoLSP realised budget, excluding municipalities' budget.

The bulk of the overall MoES education and training budget revenue comes from tax revenue itself, whose share of the MoES's overall budget rose from 83.5% to 87.1% over the period, as seen in *Table 6.2* below. At the same time, a relative increase in donations and various aid support – which partly reflects the process of gradual integration into the EU – was observed. This can also be seen in the *Table A6.1* in *Annex 6.1*, with the growth in the role of the National Agency for European Programmes and Mobility. Over the period under review, there has been an overall decline in the weight of income-generating activity revenues as a proportion of the total. **Borrowing is still a relatively modest source of revenue, though it has clearly accelerated recently** (e.g. projects to improve the quality of primary education, financing of sports facilities, etc.).

Table 6.2. Trend in the distribution of the MoES realised budget by sources of financing, percentage, 2012–2022

| % | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|----------|------|------|------|------|------|------|------|------|------|------|------|
| Treasury | 83.5 | 83.9 | 85.6 | 83.1 | 84.7 | 85.4 | 84.9 | 84.2 | 86.9 | 86.3 | 87.1 |
| IGA | 14.9 | 14 | 12.4 | 14.3 | 12.3 | 11.7 | 11.4 | 10.9 | 9.4 | 9.5 | 9.2 |
| Grants | 1 | 1.5 | 1.6 | 1.7 | 1.9 | 2.3 | 2.7 | 2.6 | 2.1 | 2.8 | 2.5 |
| Loans | 0.6 | 0.6 | 0.5 | 1 | 1.1 | 0.6 | 1.1 | 2.3 | 1.5 | 1.4 | 1.1 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: The budget refers to MoES realised 2022 budget.

education, even though its share of overall funding has dropped slightly from 99.0% in 2012 to 97.4% in 2022 as a result of the empowerment of the various entities. From 2015 onwards, the SEI budget began to be singled out.

6.1.3 Education and training spending by spending categories

Table 6.3 below presents the disaggregation of expenditure by broad spending categories, including:

1. Wages and allowances for administration staff at central level, as well as emoluments for staff at state schools and higher education institutions.
2. Block grants to municipalities, used to finance the running of schools (mainly salaries and current expenditure, but also some capital expenditure related to equipment) – for pre-primary, primary and secondary municipal schools.
3. Operating costs (recorded only at MoES). Includes debt payment, pedagogical spending to schools and other operating costs for the central administration.
4. Social expenditure including grants, boarding, transport (for MoES) and grants for pre-primary, primary and secondary students from disadvantaged families (for MoLSP).
5. Capital expenditure.

Table 6.3. Trend in the allocation of education and training spending by spending category, 2012–2022

| % | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | AAGR ** |
|---------------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------------|
| Wage & allowances | 20.0 | 19.2 | 19.1 | 20.5 | 20.5 | 20.8 | 20.0 | 19.6 | 18.6 | 20.1 | 20.0 | 0.8% |
| Block grant | 62.3 | 60.3 | 62.7 | 59.9 | 60.0 | 59.5 | 62.2 | 62.4 | 65.5 | 61.8 | 61.1 | 0.6% |
| Operating* | 8.2 | 8.9 | 7.6 | 9.2 | 9.2 | 10.8 | 10.4 | 9.7 | 7.6 | 7.7 | 7.5 | -0.1% |
| Social | 4.6 | 4.4 | 4.9 | 5.0 | 5.3 | 5.0 | 4.3 | 4.0 | 4.3 | 5.3 | 7.0 | 5.1% |
| Capital | 5.0 | 7.2 | 5.7 | 5.3 | 5.1 | 3.9 | 3.1 | 4.3 | 4.0 | 5.2 | 4.4 | -0.4% |
| Total % | 100% | 100% | 100% | 100.0 | 100% | 100% | 100% | 100% | 100% | 100% | 100% | |
| Total (Billion MKD 2022 prices) | 29.5 | 29.4 | 28.2 | 29.6 | 28.9 | 28.7 | 28.2 | 29.5 | 31.2 | 31.8 | 32.0 | 0.8% |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: The budget refers to consolidated MoES and MoLSP realised 2022 budget, excluding municipality budget. * MoES only. ** Computed over constant realised budget over 2012-2022. See Tables A6.2 and A6.3 in Annex 6.1 for details by Ministry.

Most of the consolidated expenditure on education and training concerns block grants (BGs) to municipalities to finance the running of schools. The share of these grants amounted to 61.6% (billion MKD 19.59) of the total expenditure over the period (60.0% and 87.0% for MoES and MoLSP respectively), with some slight fluctuations observed from one year to the next. Yet, the dynamic of the evolution of pre-primary education BG within the total pre-primary 'budget' displays a different pattern, witnessing a major drop over the period, from 88.7% in 2012 to 81.9% in 2022 (See Table A6.3 in Annex 6.1). This situation is partly due to the significant growth in capital expenditure, which has risen sharply since 2019 with the opening of large classes, but also to social protection expenditure (e.g. grants for pre-primary, primary and secondary students from disadvantaged families).

However, it should be noted that allocations to municipalities grew, in real terms, at a lower average annual rate than the total budget (0.6% compared with 0.8%).¹⁰⁹

The highest average annual growth in expenditure is seen in social expenditure, at 5.1% per annum in real terms, followed by wages and allowances (0.8% per annum). The evolution of wages differs across ministries. For the MoES, salaries have increased in real terms by 0.8% per year over the period, a level slightly above the level of growth of all MoES education expenditure,

¹⁰⁹ Respectively 0.2% and 0.5% for the MoES, and 4.5% and 5.3% for the MoLSP.

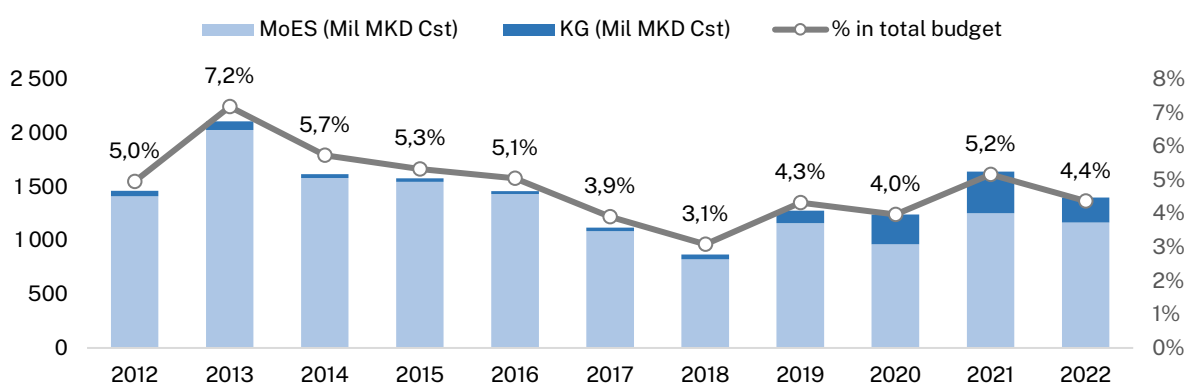
at 0.5% per year. This positive trend takes the form of a late catch-up, with the increase being very recent and concentrated in the last two fiscal years. A reverse trend can be observed in the MoLSP, where the level of wages, in real terms, has dropped by 1.3% over the 2012–2022 period (See Tables A6.2 and A6.3 in Annex 6.1).

Table A6.2 in Annex 6.1 provides additional insights related to MoES operating costs. **Payments of debts following court rulings have fallen sharply in recent years.** The accumulation of court rulings is linked to situations where the central administration has underfunded certain activities (transport, boarding costs, etc.). The decline observed can therefore be considered a positive result, provided it does not result from a transfer of the problem to the municipalities. Other current expenditure (related to the functioning of the administration, but also some pedagogical material including textbooks and e-diaries) have globally remained stable over the period, at around 8%-11% % of total MoES expenditures.

Capital spending is somewhat recovering but remains low in comparison to countries in the region, at 4.4% of total expenditure in 2022. Even when adding BG's capital expenditure¹¹⁰ (mainly directed to equipment), this is less than the average of 7% for regional peers that are at a higher level of development and likely have fewer immediate needs for reconstruction but still invest more, as highlighted by the World Bank (2023b). While recent growth in capital spending has mainly been stirred by investments made by the MoLSP to expand its pre-primary school network, growing investment efforts have also been made by the MoES since 2018, with the construction of new school buildings (10), the reconstruction and rehabilitation of schools (153), and equipping schools with didactic materials and resources for teaching and laboratories.

Nevertheless, a significant part of infrastructure projects is funded by donations or programmes supported by international institutions, as well as by donations from companies or individuals, not always coordinated nor centralised (Mitveski et al., 2020). It is worth noting that there is currently no central registry of capital investments, which prevents the process of fair and objective distribution, not only of transfers from central to local government, but also the distribution of funds by local government to municipality schools. Going forward, it would be useful if any plans for investment or network optimisation include these schools, so that they are either rehabilitated or repurposed under a network optimisation plan.

Figure 6.2. Trend in the evolution of capital spending (million MKD, 2022 prices) and its share of the total consolidated education and training budget, 2012–2022



Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: The budget refers to consolidated MoES and MoLSP 2022 realised budget, excluding municipality budget.

¹¹⁰ This figure does not include capital spending from block grants (BG). If we include BG's capital spending, the overall capital share rises to 5.7% in 2022.

6.1.4 Breakdown of central public education expenditure by level of education and category of spending

Education and training spending is mainly directed to primary education.¹¹¹ In 2022, primary education, which in North Macedonia includes lower secondary education, received the biggest share, with 45.7% of total education spending, followed by public higher education, consisting mainly of six universities, receiving MKD 7.5 billion, or 23.4% of total expenditure. Secondary education, all levels and types combined, receives 21.2% of the total, while pre-primary absorbed 8.5% of the total budget (up from an estimated 5.9% in 2017).

In addition to these traditional cycles of education, central funding for education also covers adult training at only MKD 20.6 million, and support for scientific research at MKD 377 million, i.e. 0.1% and 1.2% respectively of overall public spending on education, excluding direct funding from municipalities, which is very limited (see *Table 6.4* below).

Table 6.4. Distribution of the consolidated education and training central budget by education level, 2022

| Level | MKD | % |
|-----------------|----------------|--------|
| Adult education | 20,599,200 | 0.1% |
| Pre-primary | 2,723,062,207 | 8.5% |
| Primary | 14,624,796,247 | 45.7% |
| Secondary | 6,804,841,969 | 21.2% |
| Higher | 7,486,229,833 | 23.4% |
| Science | 376,841,838 | 1.2% |
| Total | 32,036,371,293 | 100.0% |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: The budget refers to consolidated MoES and MoLSP 2022 realised budget, excluding municipality budget.

Compared to other countries, North Macedonia invests slightly more in basic, upper secondary and tertiary education, as shown in the *Table 6.5* below. Despite recent efforts, investments in ECE are still low and lagging behind other countries. Current efforts need to be pursued to allow North Macedonia to catch up and ensure all children have access to quality pre-primary education.

Table 6.5. Regional comparison of the distribution of the education and training expenditure, by main education level, 2022 or MRY

| | Pre-primary | Basic | Upper sec. | Higher* |
|------------------------|-------------|-------|------------|---------|
| Western Balkans | | | | |
| Albania | 8% | 49% | 19% | 21% |
| North Macedonia | 8% | 46% | 21% | 23% |
| STEE7 | | | | |
| Bulgaria | 22% | 40% | 20% | 18% |
| Croatia | | 43% | 21% | 22% |
| Estonia | | 46% | 10% | 21% |
| Latvia | 19% | 40% | 18% | 18% |
| Lithuania | 18% | 44% | 10% | 21% |

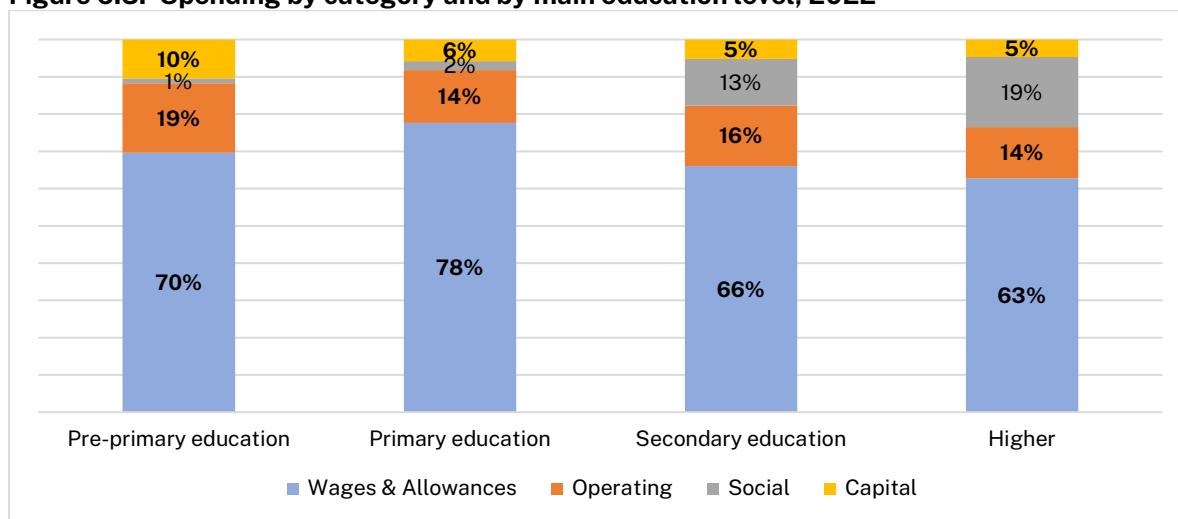
¹¹¹ A thorough analysis of block grants has assessed the share of resources going to primary and secondary education (distinguishing between gymnasiums, mixed schools (gymnasium and VET), and VET) and by categories of spending. MoLSP expenditure on social protection has been divided between the various education levels in proportion to the number of students, as with other MoES and MoLSP non-earmarked spending, including operating costs.

| | | | | |
|---------------------|-----|-----|-----|-----|
| Slovenia | 11% | 44% | 18% | 21% |
| Other Europe | | | | |
| Hungary | 16% | 36% | 20% | 18% |
| Poland | 16% | 43% | 17% | 24% |
| Romania | 11% | 33% | 20% | 22% |
| Average (sample) | 15% | 42% | 17% | 21% |

Source: Table 6.4 (North Macedonia) and UIS, 2023 (other countries). * Exclude Science.

Staff costs are the main driver of education expenditure at all education levels – ranging from 63% in higher education (excluding science) to 78% in primary. **Social spending is particularly high in higher education** (19% of total spending) and to a lesser extent in secondary (13%) while being relatively marginal in pre-primary and primary education. Operating costs that include administrative costs as well as utilities and pedagogical expenditure range from 14% in primary and higher education to 19% in pre-primary. **Capital spending is generally low, as already seen earlier**, but remains high in pre-primary (at 10%), illustrating the willingness to expand the sector.

Figure 6.3. Spending by category and by main education level, 2022



Source: Authors' calculations based on Ministry of Finance, 2023.

Note: The budget refers to consolidated MoES and MoLSP realised 2022 budget, excluding municipality budget. Tertiary education excludes Science. See Table A6.4 in Annex 6.1, which provides the related amounts.

6.2. Recurrent expenditure per pupil (unit costs)

6.2.1. Global analysis

Table 6.6 shows the average recurrent expenditure per pupil (also referring to recurrent unit costs (UC)) estimated at the aggregate level for the main levels of education.¹¹²

Average expenditure per pupil at this level of aggregation increases with the level of education, ranging from an average of MKD 67,583 in pre-primary education, through to MKD 74,421 in primary education, and MKD 93,858 in secondary education (all streams combined), and MKD 180,606 in higher education.

Differences in costs per pupil for pre-university levels appear relatively modest: the ratio of the different UCs to that estimated for primary education varies from 0.9 for pre-primary to 1.3 for

¹¹² Non-earmarked spending has been divided between the various education levels and types of schools in proportion to the number of students.

secondary education. **However, state schools tend to single themselves out, displaying unit costs that are 2.4 (secondary) to 5 times higher (primary) than municipality schools.** It is important to recall that state primary schools are mainly schools for students with disabilities where educational processes are specific, and the expenses are higher. The same applies to musical states schools.

Table 6.6. Recurrent expenditure per pupil and its components, by main education level, 2022

| | Rec. Public spending (mil MKD) | Enrolment | UC (MKD) | UC as % GDP/capita* | Multiple of UC in primary |
|-----------------------------|-----------------------------------|-----------|-------------|------------------------|---------------------------------|
| Pre-primary | 2,439 | 36,082 | 67,583 | 16% | 0.9 |
| Primary | 13,783 | 185,207 | 74,421 | 17% | 1 |
| State schools | 266 | 672 | 396,468 | 91% | 5.3 |
| Municipality schools | 13,517 | 184,535 | 73,249 | 17% | 1 |
| Secondary | 6,451 | 68,659 | 93,958 | 22% | 1.3 |
| State schools ** | 847 | 3,913 | 216,421 | 50% | 2.9 |
| Municipality schools | 5,604 | 64,746 | 86,557 | 20% | 1.2 |
| Higher Education *** | 6,933 | 38,386 | 180,606 | 42% | 2.4 |
| It Science Ohrid | 48 | 271 | 177,193 | 41% | 2.4 |
| Goce Delchev Shtip | 797 | 5,506 | 144,713 | 33% | 1.9 |
| Mother Theresa Skopje | 193 | 1,203 | 160,369 | 37% | 2.2 |
| St. Cyril And Methodius | 4,316 | 21,282 | 202,800 | 47% | 2.7 |
| St. Kliment Ohridski Bitola | 623 | 3,254 | 191,486 | 44% | 2.6 |
| Tetovo | 956 | 6,870 | 139,144 | 32% | 1.9 |

Source: Authors' calculation based on Ministry of Finance, 2023a and State Statistical Office, 2023a.

Note: * GDP per capita estimated at MKD 433,910 in 2022. ** Including the 3 new regional VET centres (1,490 students). *** Public-private partnership spending removed from higher education.

Average expenditure per student is relatively variable across universities, ranging from around MKD 140,000 (or 1.9 times the UC of primary) for the University of Tetovo and for Gorce Delchev University in Shtip, to MKD 200,000 for the University of St. Cyril and Methodius in Skopje (2.8 times the UC of primary). Looking at the data in Table 6.7, which show the proportion of students enrolled in scientific subjects in the six universities, these differences in unit costs do not appear to be directly linked to this dimension, which generally explains the differences in unit costs in higher education. On average, taking all universities together, more than 60% of students study a scientific degree course in Northern Macedonia, with slight variations, with the notable exception of St. Kliment Ohridski University in Bitola.

Table 6.7. Share of students engaged in scientific field among the six public universities, 2022

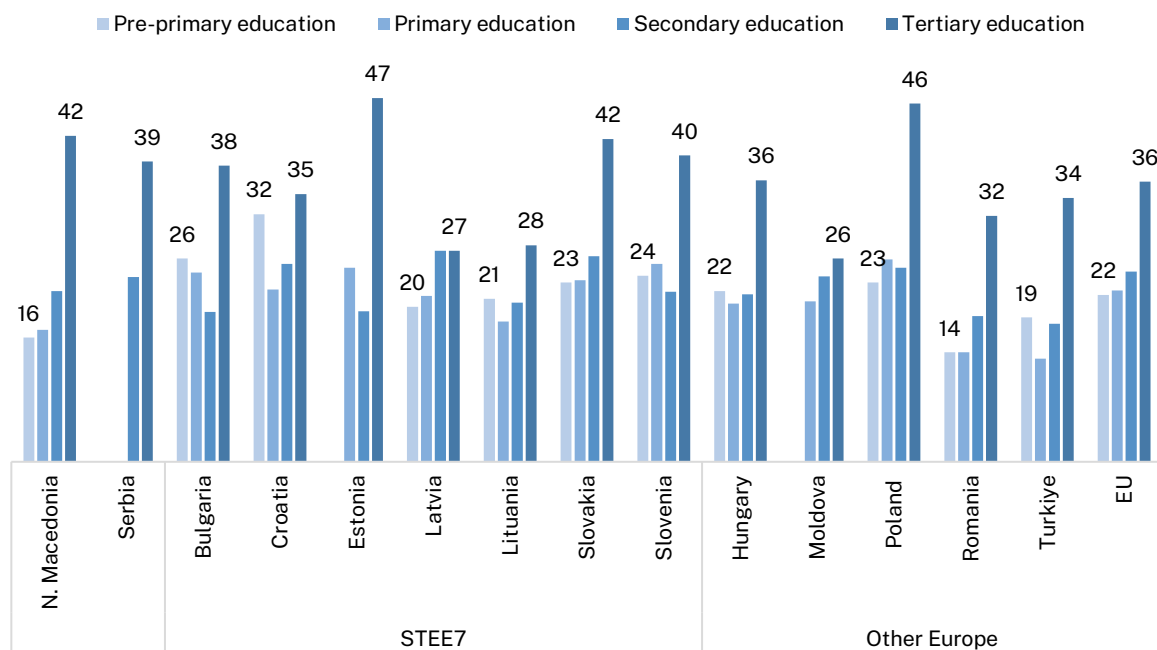
| | Number of students enrolled in scientific sections | Ratio to total enrolment |
|---|--|--------------------------|
| University 'St. Cyril and Methodius' - Skopje | 13,843 | 65% |
| University 'St. Kliment Ohridski' - Bitola | 1,104 | 34% |
| University 'Goce Delcev' - Shtip | 3,627 | 66% |
| University for Information Science and Technology - Ohrid | 271 | 100% |
| University of Tetovo | 4,191 | 61% |
| Mother Teresa University | 706 | 59% |
| Total number / % of students enrolled in scientific sections | 23,742 | 62% |

Source: State Statistical Office, 2022p.

Expressed in terms of GDP per capita, average recurrent expenditure per pupil corresponds to 16% of this reference point for pre-primary, 17% for primary, 22% for secondary and 42% for higher education. The following graph compares these values with those observed for relevant reference countries.¹¹³

Spending per pupil on pre-primary and primary education in North Macedonia is relatively modest compared with most of the reference countries, with only Romania showing a lower figure in pre-primary and Romania and Turkey in secondary. **While recurrent expenditure per pupil in upper secondary education in North Macedonia is more in line with the high average values on the list** (seven countries (including EU countries) have a higher value, while two of them achieve virtually the same result). On the other hand, **in higher education, spending per pupil in North Macedonia clearly places the country among the highest spenders at this level of education**, second only to Estonia (47%) and Poland (46%).

Figure 6.4. UC as a percentage of GDP per capita by level of education, 2022 or MRV



Source: Eurostat, 2023b and 2023c.

6.2.2 The main determinants of recurrent expenditure per pupil

The unit cost (annual recurrent expenditures by student) is made up of three main factors:

1. Teacher salaries (main expenditure item for all education systems).
2. Student-teacher ratio (the fewer the number of students per teacher the higher the cost).
3. Other recurrent expenditure (salaries for personnel other than teachers, educational materials, administration operating costs, social spending, etc.).

Awareness of each of these components is necessary, to see where any possible leeway might lie. In this section, we will focus on the first two factors (e.g. teacher salaries and STR) and part of the third factor (e.g. non-teaching staff and social spending). The review of the other items has been already addressed in the previous sections. Most of the analysis will be conducted at primary and

¹¹³ In particular, Western Balkans countries, the seven Small Transition European Economies (STEE7), and countries close to continental Europe (three of which belong to the EU). While these countries share a common neighbourhood with North Macedonia, apart from the five Balkan countries and Bulgaria, they have a higher level of economic wealth than North Macedonia, measured by GNP/capita.

secondary levels, using payroll data shared by the MoES (October 2022), and limited to those two levels, based on lack of access to payroll data for pre-primary schools and universities. Table A6.5¹¹⁴ in Annex 6.1 summarises the key information discussed below and Annex 6.2 summarises data-related issues.

Salaries and their determining factors

Most teachers are women, while the majority of school heads are men, although parity is close. Three quarters of primary school teachers and two thirds of secondary school teachers are women, with an average experience of 16.6 years. Most of these teachers have permanent contracts, although close to a quarter of them are contract-based.

The proportion of women is even higher among support staff (other staff), who on average have less experience than teachers and are more often recruited on short-term contracts (particularly in primary education). School heads (head and deputy) are, by a small majority, male (although close to parity), experienced, and 90% of them have permanent contracts.

Relatively similar pay structures are observed at both primary and secondary education levels. On average, secondary school teachers receive a gross monthly salary of MKD 46,980 that is 2.8% higher than that of primary school teachers (MKD 45,711) (and statistically significant); the difference for administrative staff is 5.6%, again in favour of secondary school teachers, and that for headteachers is 4.9%, but not for deputy heads.

For both levels of education, a clear salary hierarchy emerges, with administrative and maintenance staff (admin) at the bottom of the scale, receiving average gross salaries of between MKD 31,000 and MKD 33,000 per month, followed by teachers and support professionals and school managers (deputy and head), whose salaries are much higher, ranging from MKD 55,000 to MKD 65,000 per month.

Table 6.8. School-level staff monthly gross salary in MKD by staff category, October 2022

| | Primary | Secondary |
|----------------|---------|-----------|
| Head | 61,523 | 64,537 |
| Deputy | 55,157 | 54,860 |
| Teachers | 45,711 | 46,980 |
| Other staff | 44,467 | 46,008 |
| Administrative | 31,295 | 33,054 |
| Average (MKD) | 43,344 | 44,910 |

Source: Authors' calculations based on MoES October 2022 payroll data for primary and secondary education.

Average salaries for teachers (and other support staff) serving in public schools are relatively close to the national average gross monthly salary in 2022 in North Macedonia, at around MKD 49,585. Experience is well remunerated, but with diminishing returns over the course of a career. The new human resources reform aims to bring additional career prospects, with the introduction of a mentor teacher and adviser teacher position, to tackle this issue.

Nominal growth in gross monthly salaries for teachers at both levels of education has been significant over the last 10 years (between 3.3% and 3.5% per annum) and slightly above the inflation rate observed over the period (around 2.6% per annum since 2010). Relative to the GDP per capita, average teacher salaries have fallen, despite some catching up in recent years, entailing a drop in the relative cost of teachers.

¹¹⁴ Table A6.5 in Annex 6.1 shows the average gross and net monthly salaries for the various categories of primary and secondary school staff. For each of these categories, the data also includes average professional experience, the proportion of short (fixed-term) contracts and the proportion of men. These average salaries were calculated for all staff who were not on secondment on the date in question (October 2022).

Compared to neighbouring Western Balkans countries, the average cost of primary (ISCED 1) teachers in 2021/2022¹¹⁵ was relatively higher in North Macedonia, entailing a relative higher cost of teachers in North Macedonia. In all the other reference countries, the average annual teacher salaries, recorded at different career stages, and expressed in GDP per capita, are much lower, except for Montenegro, where end-of-career salaries are in par with those of North Macedonia. It is worth noting that, in **North Macedonia, the ratio of 'entry-level teacher salary/GDP per capita' is the highest of all the countries considered** (1.14, compared with an unweighted average of around 0.66 for the STEE7 and 0.58 for the other European countries).¹¹⁶

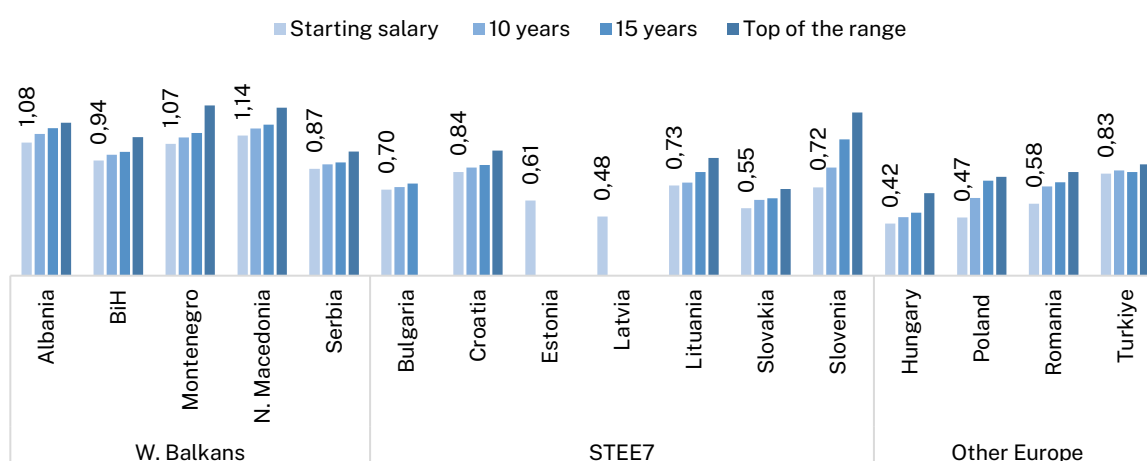
Table 6.9. Current and constant (2022 prices) monthly gross teacher salaries for primary and secondary education, in MKD, 2010–2022

| | 2010 | 2014 | 2018 | 2019 | 2020 | 2022 | AAGR (2010-2022) |
|------------------------------------|--------|--------|--------|--------|--------|--------|---------------------|
| Primary | | | | | | | |
| Gross monthly salary, current MKD | 29,140 | 30,309 | 30,309 | 31,983 | 36,942 | 42,980 | 3.3% |
| Gross monthly salary, constant MKD | 39,425 | 37,268 | 36,439 | 38,159 | 43,553 | 42,980 | 0.7% |
| As % of GDPpc | 13.0% | 11.0% | 8.7% | 8.7% | 10.2% | 9.9% | - |
| Secondary | | | | | | | |
| Gross monthly salary, current MKD | 29,491 | 31,642 | 33,225 | 35,064 | 38,573 | 44,358 | 3.5% |
| Gross monthly salary, constant MKD | 39,900 | 38,907 | 39,945 | 41,835 | 45,475 | 44,358 | 0.9% |
| As % of GDPpc | 13.1% | 11.5% | 9.5% | 9.5% | 10.7% | 10.2% | - |

Source: Authors' calculation based on MoES 2010–2022 wage files and State Statistical Office, 2022a, 2022k, 2022l, 2022w.

Figure 6.5 also shows that **Western Balkans countries, and North Macedonia in particular, lag well behind the other countries, with end-of-career salaries only 20% higher than entry salaries.** For the STEE7, the end-of-career to end-of-career ratio is around 40%, reaching 85% in Slovenia, and around 46% in the other countries (unweighted average).

Figure 6.5. Regional comparison of primary (ISCED 1) teacher salaries at different career stages, expressed in GDP per capita, 2022 or MRY



Source: Authors' calculation based on Eurostat, 2023c and European Commission, 2023a.

¹¹⁵ This refers to the average annual primary (ISCED 1) teacher salary expressed in GDP per capita.

¹¹⁶ See also Tables A6.6 and A6.7 in Annex 6.1 for additional insights.

These comparisons show that **the level of teaching salaries in North Macedonia, while relatively generous at the start of a career in relation to national wealth, changes little over the course of a career (and there is little differentiation between levels of education).** The recent creation of the posts of mentor teacher and adviser teacher, as mentioned above, goes some way to alleviating this problem by offering opportunities for internal promotion in addition to those of headteacher. The position of mentor corresponds roughly to an increase in the average monthly salary of MKD 5,000 compared with the basic teacher's salary (i.e. an increase of around 11%), as does the position of adviser, compared with the mentor's average salary.

Teacher salary determinants

A more analytical way of accounting for the determinants of wages in the public education sector is to estimate Mincer-type earnings models, relating the level of individual earnings obtained to the various characteristics of the employees in question.¹¹⁷ The results can be shown in *Annex 6.1 (Tables A6.8 to A6.10)*.

In line with the previous discussion, the estimated models for primary school teachers showed the following results:

- Professional experience has a positive and significant effect on salary levels, but its effects decrease over time,¹¹⁸ in line with what we have observed earlier.
- Secondary school graduates receive lower salaries than other graduates, all other things being equal. Yet the positive and increasing effect of level of education on salary is greatly reduced when the position held is considered. The functional hierarchy is clearly visible for a given level of education and experience.
- The temporary nature of a job (compared with open-ended jobs) has a significant negative effect on the level of gross salary, as it deprives the staff concerned of access to responsibilities and the higher salaries and bonuses associated with them.
- There is a very small but significant negative effect of being male rather than female.

The same results can be observed at secondary education level, in particular a very low valuation of secondary diplomas, a real positive effect of professional experience on earnings (here again with a decreasing return) and a negative effect of a short contract compared to a fixed-term contract. For both levels of education, by varying the reference position in identical models, we find that, in terms of pay, teachers differ significantly from other positions located in the lower and upper categories of the hierarchy. On the other hand, teachers' salaries are not significantly different from those of support professionals (other staff).

A joint analysis of salaries within the two levels of education shows that the salaries of primary school teachers are slightly but significantly lower than those of their secondary school counterparts and support staff at both levels.

Overall, these analyses confirm the existence of a pay policy based on the duties performed, which places a premium on higher education qualifications, including at primary level. Experience is statistically significantly remunerated, but with diminishing returns over the course of a career (as has already been pointed out in previous international comparisons of pay at different career stages).

¹¹⁷ Among these characteristics, the data available allow us to consider the level of education of staff, their experience (in a quadratic form which allows for non-linearity in the effect of this variable on earnings), gender, type of contract (fixed-term or open-ended) and the position held. The coefficients obtained show the differences in earnings compared with the reference situation for the categorical variables, and the effect on earnings of one unit for the continuous variables (mainly experience). The t of student statistics provides information on the statistical significance of the differences associated with the different modalities of the variables considered. The model constant here represents the average monthly wage associated with the reference situations, to which the different coefficients are applied in relation to their value.

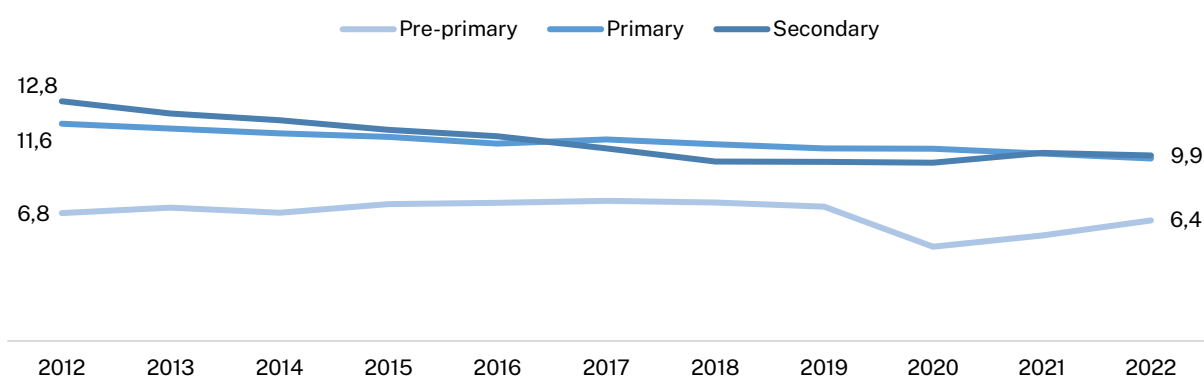
¹¹⁸ The concomitant significance of the two coefficients relating to this variable with the value of experience in years positive and its square negative, indicates that earnings increase with experience at a decreasing rate over time.

Student supervision

Student-teaching ratios (STRs) in primary and secondary education have been steadily dropping over the years, since teachers have continued to be recruited despite the significant drop in students, as already highlighted in *Chapter 3*. In 2022, there were, on average, one teacher for every 9.8 students in primary schools and one teacher for every 9.8 students in secondary schools, against 11.6:1 and 12.8:1 respectively one decade earlier. At pre-primary level, after years of continuous increases, the STR plummeted in 2020 to 5:1, having recovered since. In 2022, it stood at 6.4:1, still behind its 2012 level at 6.8:1.

Figure 6.6. Evolution of student-to-teacher ratios by education level, 2012–2022

Number of students per teacher

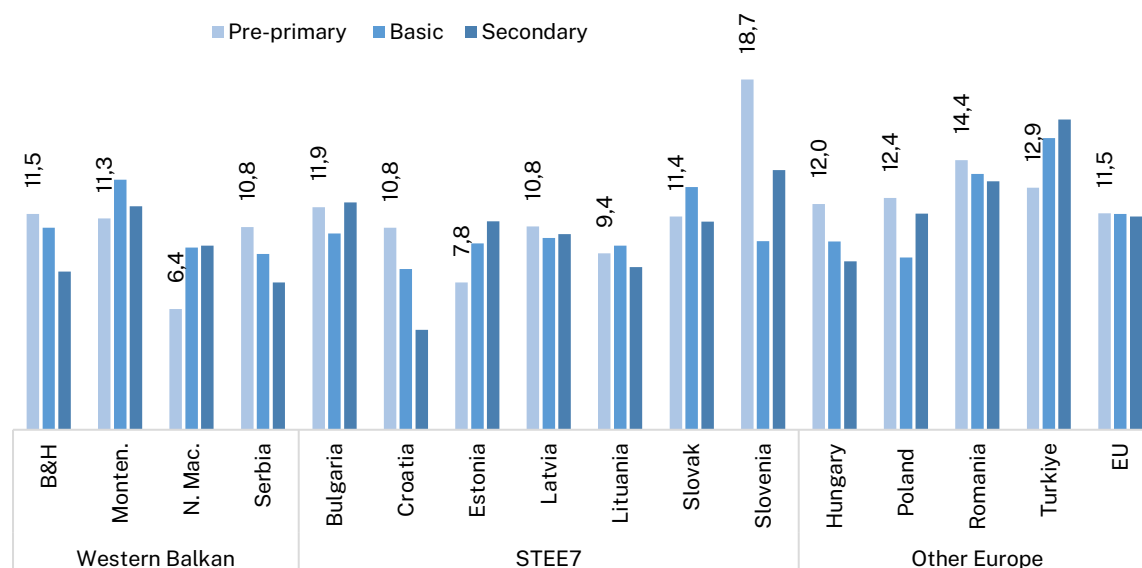


Source: Authors' calculation based on State Statistical Office, 2022d, 2022l, 2022o, 2022s.

Note: 2022 data refers to 2021/22 school year. As such, the figures slightly differ from Figure 3.10 in Chapter 3, which refer to data from 2022/23 school year.

The average STR in North Macedonia is among the lowest observed in the Western Balkans region and the other reference countries. The difference in the number of primary school teachers compared with the average for the other Western Balkans and STEE7 countries for which data is available is roughly 8.5% (9.7/10.5), which means that at comparable salaries, North Macedonia could theoretically save 1/10th of its current expenditure on teaching staff or use the equivalent of this amount for other interventions. At pre-primary level, the difference is even larger, with STR being lower by 77.5%.

Figure 6.7. Regional comparison of student-to-teacher ratios by education level, 2022 or MRY



Source: Figure 6.6 (North Macedonia) and UIS, 2023a, 2023b (other countries).

As seen in *Chapter 3*, half of primary schools operate with fewer than 10 students per teacher, while 13% have fewer than five students per teacher, which makes the running of schools very costly, while not warranting higher learning outcomes.

Other recurrent costs: social spending

MoES social expenditure includes grants, state funding of part of the cost of boarding (homes and dormitories) and the cost of transport for some students. The national budget includes grants and boarding costs. Most transport costs are included in block grants to municipalities.

Support for pupils and students is presented in the budget under the standard pupil and standard student programmes shown in *Table 6.10* below. Overall, these two programmes received MKD 1,702 million in 2022, mainly for higher education students (82%). In addition to these two programmes, a sum of MKD 155 million is earmarked for postgraduate grants (master's and PhDs) for scientific research, while MKD 11.5 million is earmarked for specific support for Roma students.

Table 6.10. Students' standard funding by beneficiaries and source of funding, million MKD, 2022

| Source | Pupil standard (secondary) | Student standard (higher education) | Total |
|----------|-------------------------------|--|----------|
| Treasury | 289.8 | 1,327.10 | 1,616.90 |
| IGA | 13.9 | 70.6 | 84.5 |
| Grant | 0.2 | | 0.2 |
| Total | 303.9 | 1,397.70 | 1,701.60 |

Source: Authors' calculation based on Ministry of Finance, 2023, MoES realised 2022 budget.

The student aid budgeted under the student standard and scientific research headings covers both studies in North Macedonia and abroad. We do not have the data to separate the two envelopes. Furthermore, the sums in question are not limited to grants paid to students and their families. They also include the state's contribution to boarding costs. At this level, it is difficult to separate the different envelopes, insofar as the statistics on boarding school attendance and costs show significant variations linked to the COVID-19 protocol, which has had a negative impact on boarding school attendance (50% drop).

In 2022, there were 5,516 beneficiaries of the homes and dormitories, including 3,566 higher education students and 1,533 primary and secondary students, almost all of them secondary school students. Primary and secondary school beneficiaries are fully covered by the state. The situation for tertiary students is more mixed, with exemptions and partial and full payments. Over the period studied, the proportion of students covered increased steadily, before stabilising recently (70%). Skopje accounts for the most boarding students (56%) in its four boarding schools, out of the 13 in the country.

Although it is necessary to consider the particular nature of the period observed due to the pandemic, boarding schools appear to mobilise a fairly large number of staff in relation to the number of beneficiaries. For 2020/21, the number of boarding places for secondary school students was 2,559. There were 2,196 beneficiaries supervised by 311 people (a supervision rate of 1 person for every 7 students). Another source gives details of the duties of these supervisors: the majority were supervisors (61%), but there were also teachers and some education professionals (19%), and 20% administrative and service staff.

Table 6.11. Home and dormitories staffing and student beneficiaries, 2016–2023

| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21* | 2021/22 | 2022/23 |
|-----------------------------------|---------|---------|---------|---------|---------|----------|---------|---------|
| Number of employees | | | | | 346+ | 546 | 524 | 486 |
| Number of students | 7,469 | 7,011 | 6,581 | 6,238 | 5,919 | 3,996 | 5,516 | 5,877 |
| In primary | 115 | 107 | 92 | 84 | 76 | 2,196 | 67 | 63 |
| In secondary | 2,003 | 1,923 | 1,876 | 1,825 | 1,753 | | 1,886 | 1,899 |
| In higher ed. | 5,351 | 4,981 | 4,613 | 4,329 | 4,090 | 1,800 | 3,563 | 3,915 |
| % in higher ed. | 72% | 71% | 70% | 69% | 69% | 45% | 65% | 67% |
| Number of students who do not pay | 3,142 | 3,302 | 3,829 | 4,001 | 3,942 | 3,126 | 3,794 | 3,985 |
| % who do not pay | 42% | 47% | 58% | 64% | 67% | 78% | 69% | 68% |

Source: MoES, unpublished data. * COVID-19 period.

6.3. Education expenditure at school level

To study the financing of education at decentralised level, and in accordance with *Figure 1*, showing financial flows in the public education sector, it is useful to continue the investigations carried out at national level by examining the education budget of municipalities from a national accounting point of view (the final financier benefiting from an overall national allocation). In fact, while the central allocation is the result of the application of a complex formula based on pupil numbers, population density and an attempt to compensate for economic inequalities, in theory the municipalities remain the final arbiters of actual expenditure, and it is important to understand how this is directed.

In the absence of municipal accounts relating to education, a relatively complete database of school expenditure has been made available to us. This database records school income and expenditure and enables us to study educational spending and its determinants at a finer level than that considered in the previous two sections of this chapter. These investigations will be able to go even further, as we have linked the financial file to that of the characteristics of the schools, particularly in terms of staffing levels.

6.3.1. School revenue and expenditure

In this section, we will look at education financing from a different angle, by taking the school as the unit of observation.¹¹⁹

School revenues come from two main sources (funder): central government, for a very small proportion (1.6%) and municipal government (98.4%). In this context, it is the final funder that is considered insofar as, of the MKD 20.95 billion in 'municipal expenditure', MKD 19.32 billion comes from the government grant to municipalities via the block grants¹²⁰ (*Table 6.12*). In theory, the budget consists of:

- The **basic budget** that comes from the municipalities' own resources. The MKD 319 million of the basic budget financed directly by the central government largely concerns the salaries of the Plasnica schools (MKD 45.7 million) and all expenditure corresponding to the three secondary schools recently converted into regional technical and vocational education centres (MKD 219 million).

¹¹⁹ All figures refer to the 2022 realised municipality budget extracted from the Ministry of Finance open-source budget in November 2023.

¹²⁰ The amount of the block grants paid to schools by the municipalities is slightly different to the amount displayed in the national database. In the former, block grants amount to MKD 19.32 billion (*Table 6.12*), while in the latter it reaches MKD 19.59 billion in the national budget (MoES and MoLSP). One assumption to explain this discrepancy could be that municipalities withhold some of the resources to pay debt-related education expenses (e.g. including, for instance, heating spending for dorms and school, and dorms staff are often underfunded). This discrepancy concerning completed budgets highlights the limits of the data triangulation exercise in the absence of municipal accounting data.

- The **budget for donations** that corresponds to the income that schools receive directly in the form of donations or generated by the school through activities.
- The **budget for self-financing activities** that corresponds to income received by schools, most often from parents.
- **Income from block grants** that refers to resources derived from the block grants.

School expenditure by source of funding and category

Table 6.12 shows the overall 2022 budget for schools at all education levels (from pre-primary to secondary), with details on both revenue sources and spending categories.

The overall school budget comes largely from the subsidy budget (e.g. the block grants) granted by the state to the municipalities, making up 92.2% of schools' budget. Direct funding by the municipalities is limited to MKD 271 million, corresponding to the basic budget financed at municipal level. This sum, which is extremely modest in a context presented as decentralisation, represents 1.3% of overall school revenue.¹²¹ However, this result does not include resources allocated by the municipalities to the administrative and financial management of the schools.

The schools' overall budget is mainly made up of staff-related costs (78% of total school funding), followed by expenditure on goods and services (17% of total school budget). It should be noted that the budget for donations and self-financed activities is used mainly for the purchase of goods and services. As noted above, capital expenditure is modest (2.4% of total school funding), as most capital expenses are borne by the state. They consist mainly of construction (58%), and equipment and furniture (42%).

Table 6.12. Municipal schools' budget by sources of financing and spending category, million MKD, 2022

| | Wage and allowances | Operating | Social | Capital | Grand total | % |
|--------------------------------------|---------------------|--------------|-------------|-------------|---------------|--------------|
| Central | 216 | 52 | 74 | 1 | 343 | 1.6% |
| Basic budget | 216 | 30 | 71 | 1 | 319 | 1.5% |
| Budget for donations | - | 10 | - | - | 10 | 0.0% |
| Budget for self-financing activities | 0.1 | 11 | 3 | 0.1 | 15 | 0.1% |
| Revenues for the subsidy budget | - | - | - | - | - | 0.0% |
| Municipal | 16,046 | 3,456 | 606 | 494 | 20,603 | 98.4% |
| Basic budget | 7 | 220 | 19 | 25 | 271 | 1.3% |
| Budget for donations | 18 | 303 | 5 | 8 | 333 | 1.6% |
| Budget for self-financing activities | 28 | 621 | 4 | 25 | 678 | 3.2% |
| Revenues for the subsidy budget | 15,995 | 2,312 | 578 | 436 | 19,321 | 92.2% |
| Total (million MKD) | 16,263 | 3,508 | 680 | 495 | 20,946 | 100% |
| Distribution % | 77.6% | 16.7% | 3.2% | 2.4% | 100% | |

Source: Authors' calculation based on Ministry of Finance, 2023a, realised 2022 municipality budget.

School expenditure by category and by education level

The following two tables show the structure of revenues and expenditure by level of education. As shown above, income from state subsidies (i.e. block grants) accounts for an average of 92% of school budgets. This proportion is lowest for pre-school (80%), where a significant proportion of the budget – much higher than for the other levels – comes from family payments (16%) (e.g. self-

¹²¹ This level is close, but somewhat below what Herczyński (2019, p.45) and the World Bank (2023b) found, to a level of financing from own revenues by municipalities – close to 3%. This discrepancy could be related to the difficulty mentioned earlier of adequately capturing municipality-level expenditure in the absence of municipal accounting data.

financing activities). The basic budget is particularly large at VET level (9%), largely due to the state's contribution to the operation of regional VETs.

Table 6.13. Municipal schools' budget by source of financing and level of education, 2022

| | Pre-primary | Primary | Gymnasium | VET & Gymnasium | VET | Total |
|--|-------------|---------|-----------|-----------------|-------|--------|
| Basic budget | 3.5% | 1.7% | 0.2% | 2.3% | 9.3% | 2.8% |
| Budget for donations | 0.4% | 1.3% | 3.3% | 3.4% | 2.3% | 1.6% |
| Budget for self-financing activities | 16.1% | 0.5% | 0.4% | 1.9% | 5.3% | 3.3% |
| Revenues for the subsidy budget (block grants) | 79.9% | 96.5% | 96.0% | 92.4% | 83.0% | 92.2% |
| Total % | 100% | 100% | 100% | 100% | 100% | 100% |
| Total (Million MKD) | 2,814 | 12,461 | 895 | 2,372 | 2,404 | 20,946 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 municipality budget.

The structure of the school budget by type of expenditure highlights the importance of staff salaries in the cost of running schools (78% on average, and up to 85% for primary schools). The large share of social spending in the three secondary modes is partly explained by the fact that expenditure on pupil transport is included. Expenditure on pupil transport appears to be significant, amounting to almost MKD 626 million in 2022, of which around MKD 184.4 million is spent on primary education and MKD 441.5 million on secondary education.

These transport costs are almost entirely financed by block grants to municipalities. For primary schools, the SSO website indicates that 14,836 benefited students in 2022. For this level of education, school transport affects a limited number of students (8%), at an annual unit cost of around MKD 12,400. Unfortunately, we do not have the number of beneficiaries of school transport in secondary education. However, it is clear, given the amounts involved, that it would be significantly higher than in primary education. Assuming that transport expenditure per pupil is comparable to that at primary level, it can be estimated that almost one secondary school pupil in two would benefit from school transport.

Table 6.14. Municipal schools' budget by spending category and level of education, 2022

| | Pre-primary | Primary | Gymnasium | VET & gymnasium | VET | Total |
|----------------------------|--------------|---------------|------------|-----------------|--------------|---------------|
| Wage and allowances | 64.10% | 85.10% | 65.20% | 70.90% | 66.20% | 77.60% |
| Operating | 33.70% | 11.70% | 22.50% | 18.00% | 19.40% | 16.70% |
| Social | 0.00% | 1.50% | 6.50% | 6.90% | 11.30% | 3.20% |
| Capital | 2.20% | 1.70% | 5.80% | 4.20% | 3.10% | 2.40% |
| Total (%) | 100% | 100% | 100% | 100% | 100% | 100% |
| Total (Million MKD) | 2,814 | 12,461 | 895 | 2,372 | 2,404 | 20,946 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 municipality budget.

The relatively partial nature of this data makes it impossible to assess the relevance of this expenditure, which cannot be reduced either to its cost or to its scope in terms of beneficiaries. In fact, school transport is one of the levers that can be used to improve the efficiency of school provision, alongside the grouping of students (single/section classes), the grouping of classes (central schools vs satellite schools) and the provision of accommodation for students (boarding schools).

In addition to this potential benefit, the grouping of schools to achieve relatively reasonable class sizes must often take into account the transport costs necessary for a relatively comfortable

school attendance. The widespread use of mixed classes, or even one-class schools, is an alternative to grouping schools and, in addition to the savings in teaching staff obtained in both cases, makes it possible to avoid transport costs for students. **With a view to improving the efficiency of school provision, it would therefore be more appropriate to carry out an analysis of school mapping rather than an examination of each of these elements and their costs** (transport, grouping of students, organisation of schools) by studying whether, for each situation (geographical, demographic, ethnic), an effort has been made to combine these different levers as effectively as possible with a view to reducing costs without losing educational effectiveness.

6.4 Unit cost analysis by school type

With the availability of school-level financial data, it was possible to do a more in-depth funding analysis at school level by considering not only spending intentions (initial budgets, allocations to municipalities), but also the reality of spending.

Box 6.1. Lack of compatibility between source files restricts evaluation and reporting.

For each school, we have combined available financial data, pupil and teacher numbers and contextual information on the municipality and region to which the school belongs.

These operations, which are theoretically simple, turned out to be quite complex because of the nature of the files and the relative unsuitability of the observation identifiers. The pre-school sector was not analysed in detail because of the unavailability of enrolment data for each kindergarten.

For primary schools, of which many are operating with satellites, financial data are available at the level of the main school (independent school or central school), whereas enrolments are available at the level of each school integrated into the various satellites, which then share the same budget identifier as the central school.

The budgetary school IDs were totally different from the SSO school ID, and although we were provided with a correspondence key, it was sufficiently different from the files in our possession for 2022 that combining the different files has been a perilous exercise, often requiring checks on the names of the schools.

A key lesson to be learned from this exercise would be to recommend building an architecture of compatibility between the different sources of physical (EMIS, SSO) and financial data, so that the financial analysis of education at school level becomes the tool for an external (routine) evaluation of decentralisation and for the accountability that characterises a transparent and responsible administration.

6.4.1. School-level costs in public primary education

Level and dispersion of costs in public primary municipal schools

Macedonian public primary schools are made up of around 1,010 establishments, 120 of which are independent, mainly urban, schools, and 234 central schools, which in turn comprise 656 satellite schools. The number of *municipal schools, for which both pupil and teacher numbers are known*, is 983.

Independent schools have, on average, the largest number of students (616), with an average number of teachers at 47.7, leading to a relatively low STR of one teacher for 12.9 students per school. They are often found in urban settings.

Table 6.15. Basic municipal primary schools characteristics by school type, 2022

| | Total number of establishments | Number of municipal schools w/ complete information* | Average number of students | Average number of teachers | Students to teacher ratio |
|----------------------|--------------------------------|--|----------------------------|----------------------------|---------------------------|
| Independent schools | 120 | 110 | 616 | 47.7 | 12.9 |
| Central & satellites | 890 | 873 | 134 | 15.7 | 8.5 |
| Central schools | 234 | 227 | 394 | 38.2 | 10.3 |
| Satellite schools | 656 | 646 | 39 | 7.6 | 5.2 |
| Total | 1,010 | 983 | 188 | 19.3 | 9.8 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office 2022y, 2023a.

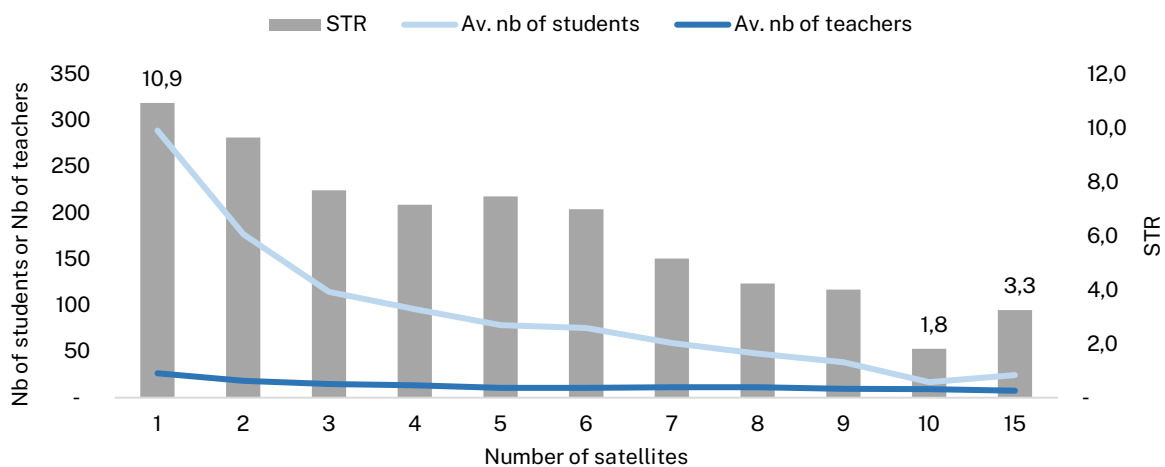
Note: * For which both the number of students and the budget are known. ** Central and their satellites considered as one unit.

The 227 central schools, for which data could be collected on both students, teachers and budget, have an average of 394 students and 38.2 teachers, resulting in a STR of one teacher per 10.3 students. There are 646 satellite schools attached to these central schools. Each has an average of 39 students and 7.6 teachers, corresponding to a STR of one teacher per five students. One third of these satellite schools have fewer than 10 students (and two thirds have fewer than 32 students).

The average number of students per school decreases sharply as the number of satellites increases (Figure 6.6). From 289 on average, when the central school has just one satellite, to 48, when the central school has eight satellite schools and down to 17 students when the central school has 10 satellites. At the same time, the number of teachers is relatively stable, resulting in a major drop of STRs from 1:11 to 1:2.

Clearly, in the most dispersed areas, and even in those where linguistic heterogeneity leads to a large number of schools, there are few measures to help reduce the number of teachers (and therefore costs) and keep the STR at a reasonable level.

Figure 6.6. Average number of students and teachers by satellite school in relation with the number of satellites, municipal primary education, 2022



Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 municipal budget and State Statistical Office, 2023a.

Each central school has an average of 2.8 satellite schools and therefore accommodates, by aggregation, just over 500 students ($394 + (2.8 \times 39)$). The pupil-teacher ratio rises to 1:8.5 in this configuration, compared with 1:12.9 for independent schools. This level of aggregation, between the central schools and their satellites on the one hand, and the independent schools on the other, is the one used for financial analysis, since the central schools and each of their satellites share a single financial account (and identifier).

Table 6.15, which combines physical (enrolment) and financial data, considers the 337 public primary municipal schools for which we have all the data for 2022. **Central schools and their satellites tend to be more expensive to run than independent schools.** While the unit cost for independent schools averages MKD 55,407, it reaches MKD 72,373 for central schools and their satellites (for an average unit cost of MKD 66,151 for municipal primary schools as a whole). As already noted, the **average subsidy per school makes up the largest part of the school budget.**

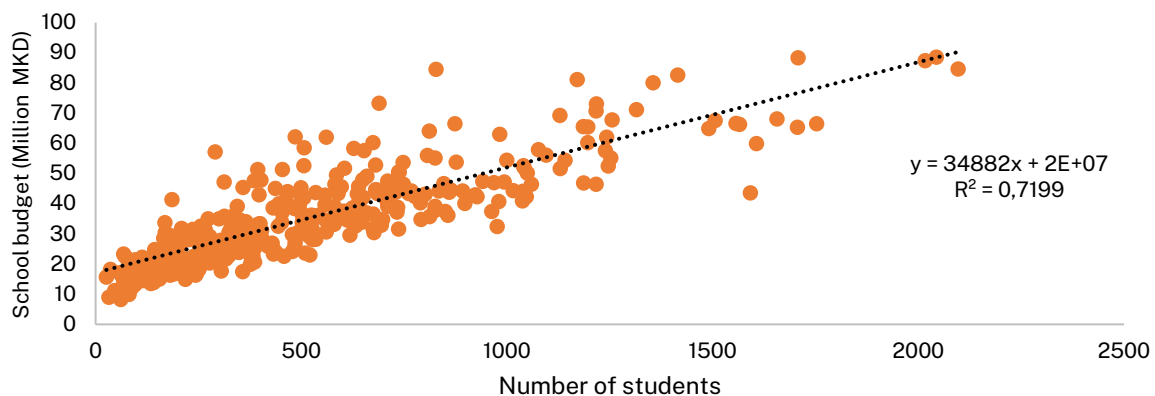
Table 6.2. UCs of municipal schools in primary education, MKD, 2022

| | Number of schools | Average number of students | Average school budget (mil. MKD) | Average school subsidy (BG) (mil. MKD) | Average Unit cost (MKD) |
|--------------------------|-------------------|----------------------------|----------------------------------|--|-------------------------|
| Central schools (w/ Sat) | 227 | 515 | 37.3 | 36.4 | 72,373 |
| Independent schools | 110 | 616 | 34.1 | 32.1 | 55,407 |
| Total | 337 | 548 | 36.3 | 35.0 | 66,151 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a.

Figure 6.7 shows each school's budget as a function of total pupil numbers. **The relationship between the size of the school and its budget, while being positive, leaves room for a high degree of randomness,** which is reflected in a low coefficient of determination (**R² of 72%**). This is easily verified by the fact that, for the same number of students, the budget can vary greatly (large differences around the straight line for each level of student numbers), which is largely due to the differences in staffing levels between schools.

Figure 6.7. School budget (Million MKD) according to school size, municipal primary education, 2022

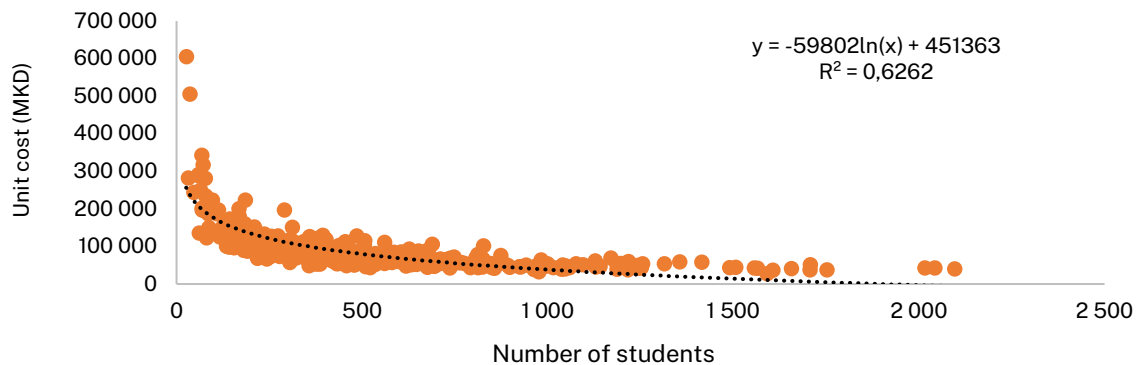


Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a. Each dot is a school.

Figure 6.8 below, which complements Figure 6.7 as a traditional analysis of economies of scale, shows changes in unit cost as a function of school size. The same randomness as observed previously is visible, with unit costs varying significantly from one school to another for a given school size.

There is a wide variation in school-level unit costs, ranging from MKD 27,445 to MKD 605,777 (22 times higher). Unit cost decreases as the size of the school increases, and stabilises at around 350 students, which could be an optimal size under the current conditions of primary school organisation. There are nearly 120 schools below this level, where it would be useful to implement real strategies to reduce costs, particularly staffing costs, by significantly increasing the number of consolidated classes, and/or increasing the multi-skilling of teachers.

Figure 6.8. Unit cost (MKD) according to school size, municipal primary education, 2022



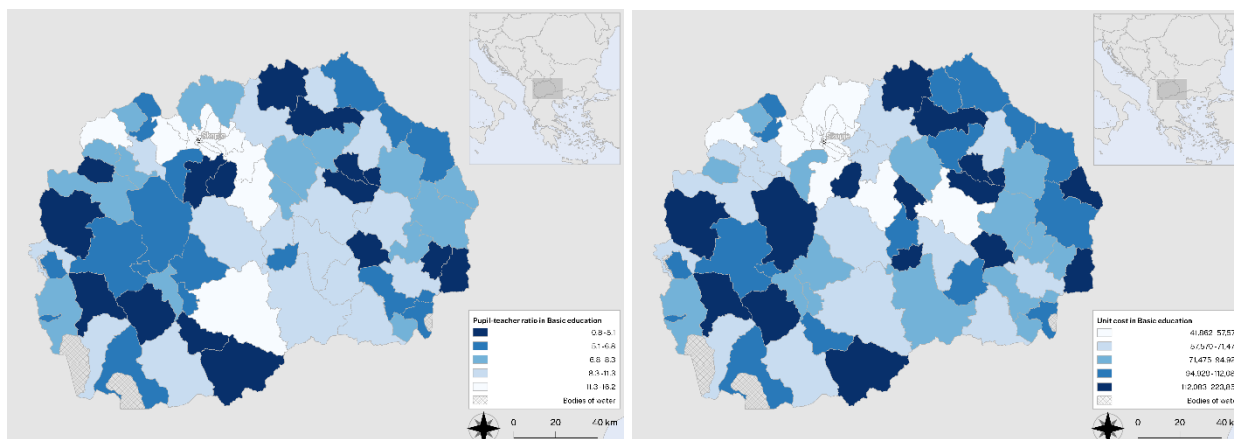
Source: Authors' calculations based on Ministry of Finance, 2023, realised 2022 school-level budget and State Statistical Office, 2023a. Each dot is a school.

Important disparities in school unit costs are observed across municipalities, with municipality unit costs ranging from MKD 41,862 to MKD 223,853 (a dispersion ratio of 1 to 5).¹²² This is strongly correlated with STR – as illustrated by *Map 6.1* below: **in general, the lower the STR, the higher the unit costs.** This pattern raises major equity and efficiency issues.

The lowest average unit costs are found in municipalities located in the largest cities, particularly those in the capital Skopje (highlighted in orange in *Table A6.11* in *Annex 6.1*). The 10 municipalities in the capital, which have 55,820 of the 184,768 students at this level of education, together have an average unit cost of MKD 51,678 (and a STR of 13.7). The highest UC is recorded in the municipality of Debartsa (a single school with 10 satellites, and an incredible STR of one teacher per 1.8 students). If these figures are correct, Debartsa municipality would be an example of a situation in which each satellite as well as the central school could rely on a contingent of nine teachers, demonstrating little effort to rationalise staff costs. There are 27 municipalities where the annual UC for primary education exceeds MKD 100,000, in all cases due to a particularly high number of teachers.

¹²² See also UNICEF 2021 for complementary analyses.

Map 6.1. Student-teacher ratio (STR) (left), and Unit cost (recurrent expenditure by pupil in MKD) (right), by municipality, Primary education, 2022



Source: Authors' calculations based on Ministry of Finance, 2023, realised 2022 municipal level budget, and State Statistical Office, 2023a. National administrative boundaries from Agency for Real Estate Cadastre, 2023. International boundaries from UN Geospatial, 2023. See Table A6.11 in Annex 6.1 for details.

Determinants of expenditure and unit costs of municipal primary schools

Several multivariate analyses have been conducted and the results presented in *Table A6.12* in *Annex 6.1* to further explain the variation observed in the budget allocated to municipal primary schools. The focus is on the overall school budget, which, as highlighted above, is almost entirely dependent on the funds from the block grant endowment.

Results show that **the allocation to schools, by municipality, is a fairly accurate reflection of the criteria used to estimate the overall budget provided to them by the government, with three key dimensions – enrolment, population density, wealth of the region (all present in the formula for calculating the allocation to municipalities) – accounting for 76.5% of the variance in the budget allocated to schools.** The budget for each municipal primary school is:

- an increasing function of the number of students;
- a decreasing function of the population density (measured directly or via the opposition between independent schools and central schools); and
- negatively affected by the wealth of the region.

However, the unexplained variance is relatively large (33.5%), entailing considerable individual variation in allocations to schools around this average relationship; further questioning the role and use of the block grant formula. See *Box 6.2* below on some highlights on block grants and *Annex 6.3* for a detailed presentation and discussion on the BG formulas.

The second model includes the categorisation of central schools in opposition to independent schools by considering a non-linear effect of the number of satellites. By limiting ourselves to the categories offering the greatest number of observations in order to construct dichotomous variables representing the central schools, we can see that, **for schools of comparable size, increasing the number of satellites generates higher costs** (the coefficient of the various variables increases, and increasingly intensely, as a function of the number of satellites).

This result shows that **the creation of satellite schools has serious limitations in terms of economies of scale, which could justify a serious analysis of alternative, less costly organisations (one-class schools, an increase in mixed classes, localised decoupling of the primary and lower secondary sections, pupil transport, etc.).** This variable alone makes a non-negligible contribution to explaining the variance in budgets, as shown by the clear increase in R^2 compared with the previous model (80.7% versus 76.5%).

Model 3 takes into account the distribution of languages spoken in the different municipalities. This variable indicates that the budget increases significantly, all other things being equal, as the proportion of Macedonian speakers increases. Conversely, the budget is lower as the proportion of Serbian and Bosnian speakers increases. Interpretation of these sensitive results requires detailed knowledge of the country's geo-ethnic disparities, which we do not have. It should be noted, however, that this variable has relatively little effect on the other variables in the model, which seems to rule out a hidden effect of other dimensions, justifying further, more detailed analysis.

The fourth and final model takes into account the regions to which the different schools belong (which led to the exclusion of the regional GDP variable from model 1). **The introduction of regions reveals statistically significant contrasts between the southeast (but also Pelagonija and Skopje) and the other regions.** In this respect, as in the previous one, we will simply note that **there are significant contextual differences, for a given school size and structure, in the variation in budgets allocated to the various schools in the region.**

6.4.2 School-level costs in public secondary education

Secondary education comprises 97 municipal schools, three of which have recently been converted into regional VET centres (one classified as VET and gymnasium and two former VET schools). After filtering these three schools and eliminating those for which physical and/or financial data was not available, we ended up with a sample of 93 secondary schools.

Mixed schools (VET and Gymnasium) are the most numerous (46) but also those with the fewest students on average (583) and the lowest STR (9.7:1).

Table 6.17. Basic secondary municipal schools characteristics by school type, 2022

| | Number of schools | Number of municipal schools w/ complete information* | Average number of students | Average number of teachers | Students to teacher ratio (str) |
|-----------------|-------------------|--|----------------------------|----------------------------|---------------------------------|
| Gymnasium | 17 | 16 | 735 | 59 | 12.5 |
| VET & Gymnasium | 46 | 45 | 583 | 60 | 9.7 |
| VET | 34 | 32 | 848 | 74 | 11.5 |
| Total | 97 | 93 | 700 | 65 | 10.8 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a. * For which both the number of students and the budget are known.

On average, schools in our sample offering technical and vocational education (VET) have 848 students and one teacher for every 11.5 students. Gymnasiums, which provide general secondary education, are the least numerous;¹²³ they have an average enrolment of 735 students and the highest STR (1 teacher for 12.5 students).

Mixed (gymnasium and VET) schools have the highest annual unit cost (MKD 88,915). While in many countries, mixed schools are a relatively 'economical' organisational solution, allowing teachers (especially general subject teachers) to be used more fully, in North Macedonia there seems to be more of a juxtaposition of the two types of education with no economies of scale, similar to what we have seen in primary education with the proliferation of satellite schools.

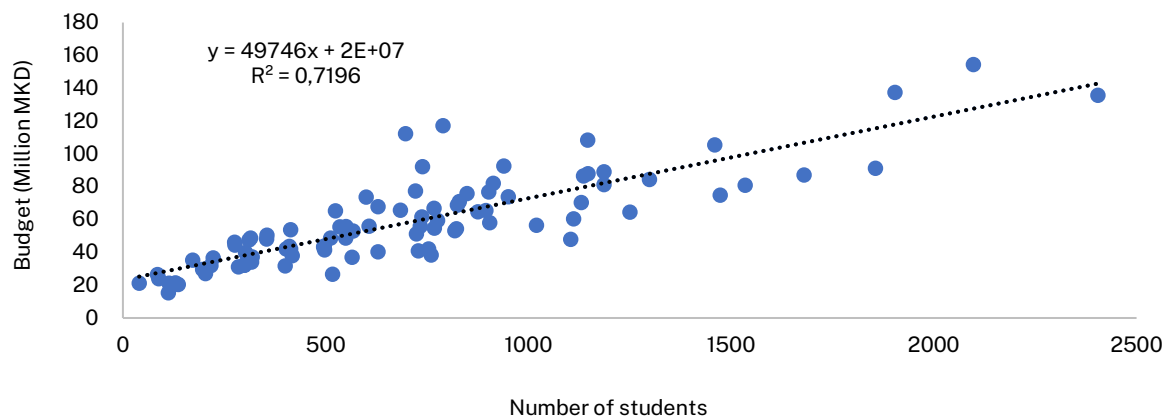
¹²³ 17, and 16 in our working sample.

Table 6.18. Unit costs of municipal schools in secondary education, 2022

| | Average number of students | Average school budget (mil. MKD) | Average school subsidy (BG) (mil. MKD) | Average school wage & allow. (mil. MKD) | Average Unit cost (MKD) |
|------------------|----------------------------|----------------------------------|--|---|-------------------------|
| Gymnasium | 735 | 54.6 | 52.4 | 35.6 | 74,250 |
| VET et Gymnasium | 583 | 51.8 | 48.7 | 36.5 | 88,915 |
| VET | 848 | 68.5 | 62.4 | 44.8 | 80,738 |
| Total | 700 | 58 | 54 | 39.2 | 82,858 |

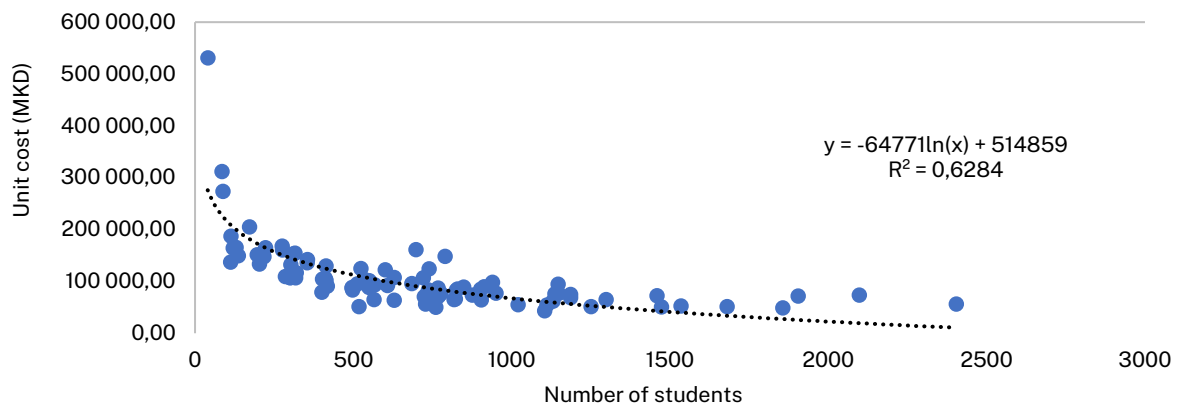
Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a.

As in the case of primary schools, the relationship between the budget and the size of the school shows a high degree of randomness (R^2 of only 0.72), which reflects the fact that for the same number of students, the average budget of schools differs significantly (correlatively, the same budget means that a very different number of students can be accommodated).

Figure 6.9. Budget (Million MKD) according to school size, secondary education, 2022

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a. Each dot is a school.

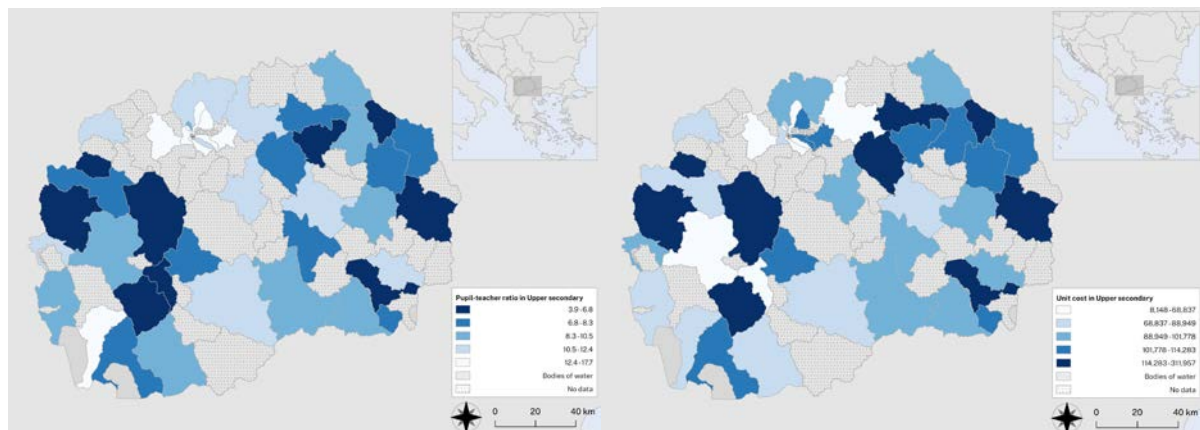
There is wide variation in school-level unit costs, ranging from MKD 43,400 to MKD 531,453 (12 times more). As for primary, we can analyse the unit cost curve in search of possible economies of scale. As in the case of primary education, the curve decreases rapidly and then stabilises at around 500 students, which could be the optimum size for secondary schools in the current Macedonian context. **However, rather than searching for an optimal solution, it is clear from the situation of the various schools that substantial savings could be obtained by further rationalising the allocation of resources (particularly teachers) in relation to the needs of the various schools (size).**

Figure 6.20. Unit cost (MKD) according to school size, secondary education, 2022

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 school-level budget and State Statistical Office, 2023a. Each dot is a school.

Table A6.12 in Annex 6.1, equivalent to the one proposed for primary education, highlights the structure of the sector by municipality. Thirty-five of the 80 regions have no secondary schools. The Skopje region has 24 of the 93 schools (26%) but 35% of the total number of students at this level of education.

Important variations in unit costs across municipalities are also observed, with a ratio of 1 to 5, with the municipality of Kisela Voda (MKD 50,899) in the Skopje region recording the lowest unit cost (one VET school with 1,473 students taught by 101 teachers), and the municipality of Makedonski Brod recording the highest costs (MKD 311,957) (one mixed school with 85 students taught by 22 teachers)

Map 6.2. STR (left), and UC (recurrent expenditure by pupil in MKD) (right), by municipality, secondary education, 2022

Source: Ministry of Finance, 2023a (realised municipal level budget), and State Statistical Office, 2023a. National administrative boundaries from Agency for Real Estate Cadastre, 2023. International boundaries from UN Geospatial, 2023. See Table A6.13 in Annex 6.1 for details.

The search for the determinants of secondary education expenditure in North Macedonia is made tricky by the small size of the sector (93 observations), which should encourage us to exercise moderation in considering different explanatory variables simultaneously. Three models were studied and are presented in Table A6.14 in Annex 6.1. The main observations are the following:

- In secondary education, the budget is heavily dependent on the number of students (with the significant randomness we commented on above). In all the regressions carried out, this

is clearly the only explanatory variable for the level of overall expenditure that is significant.

- Vocational and technical education are more expensive to run than general education, as is often the case.
- Regional density and wealth show the expected and confirmed indications seen for primary education, but their respective effects are not statistically significant. Taking into account the regional situations by means of dichotomous variables does not add any further explanatory power to the model.

In fact, the funding of secondary education appears to be less responsive than that of primary education to the imperatives of equity that theoretically guide the calculation of LGU allocations (e.g. number of students, density, correction of disparities in wealth, etc.).

Given the size of the country, it is difficult for this level of education to aim for equity by ensuring a balanced distribution of establishments across the country¹²⁴. It is more in terms of external efficiency that the location of technical and vocational schools should be assessed, judging their relevance to the national and regional labour markets.

Box 6.2. A few words on block grants

Over the years, the government has stopped adhering strictly to the rules of the funding formulas it had defined. The result is that funding formulas are not consistently followed, and the funding is not allocated on the basis of objective and transparent criteria. The amount of public money that each municipality receives today reflects, to a large extent, historical trends (in most cases, last year's budget volume). The consequence of this is that there are no incentives in place that would push for a more optimal and efficient use of resources.

The way municipalities transfer funding to schools is also non-transparent. The MoES transfers its budgetary funding by means of block grants to the municipalities. These funds transit through the municipalities, which then allocate them to schools. The block grant calculation is not specified in the legislation, so the actual calculation is not clearly defined.

The process of decentralisation has not resulted in a significant shift in how municipalities take ownership of education funding. While municipalities are allowed by law to supplement education funding with their own resources, they seldom do so in practice, except for school employee salaries. This reluctance stems from two main reasons related to the fiscal capacity of municipalities and their perceived role in financing education.

The allocation of funding is more or less disconnected from any performance indicators that would motivate municipalities and/or schools towards a more efficient and accountable management of funds.

The MoES and MLSP, being very aware of these shortcomings, have begun reviewing formulas for all education levels, starting with primary and secondary.

See Annex 6.3 for details.

¹²⁴ However, room for improvement exist as there here are schools that are relatively close to each other and offer the same or similar occupations in VET (especially mixed VET and Gymnasium).

6.5. Key takeaway points

The analysis of costs and financing does not, in itself, lead to many recommendations, but instead complements the physical elements of the diagnosis (enrolment, quality, etc.) and gives them a new dimension. It is therefore by returning to the elements already noted in the previous chapters that the financial diagnosis becomes more relevant, and this is what we will focus on in this conclusion.

However, one direct recommendation emanates from this chapter on financing costs: the lessons learned from the exercise itself and what it says about national practice in terms of the management, evaluation and the monitoring of education policy.

The most obvious recommendations relate to the conditions for mobilising data specific to the management and evaluation of programmes. In this respect, improvements are desirable, considering the difficulty encountered in combining files which are insufficiently demarcated, which says a lot about national practices for analysing education-related data in North Macedonia

- Physical data (number of students, staff, schools, etc.) that are difficult to obtain through simple means.
- Financial data that are not immediately compatible with physical data. This is possible, but not optimal (identifiers of limited use, slight differences in date, content (new schools/closed schools) which do not guarantee a perfect match ... numbers easily managed manually, etc.).
- Little possibility of triangulation.
- Incomplete and/or different information depending on the source.

Most of the other elements, including the indicators specific to this financial chapter, such as the measurement of the education funding effort or the level and composition of costs per pupil, only become relevant in relation to the operation and performance of the system revealed in the other chapters:

- Too many teachers, leading to too low STRs especially in rural areas and too many satellite schools (pushing unit costs up), following the continued recruitment of teachers despite the decline in enrolment.
- Low quality of learning, especially in VET schools (despite high unit costs).
- Many schools with inadequate resources to cover their basic running costs, and for investing in improvements in the teaching and learning environment; many schools and dorms have debts.
- Quantitative progress yet to be confirmed (pre-school, life-long learning), requiring more efficient use of existing resources.
- Difficult geography and demography (low numbers, even in urban areas).
- Higher education students receiving a disproportionate share of social spending – despite coming from relatively richer backgrounds.
- Relatively radical choices in terms of languages of instruction (language of the community) and teacher use (multi-subject-based).
- External effectiveness of this choice in educational terms (availability, quality of teachers), political terms (creating a nation through common languages) and economic terms (promoting integration at national level).
- Accounting and financial techniques designed to facilitate programme management and evaluation.

This somewhat favourable framework in North Macedonia is regularly criticised in studies of its education system, insofar as this corresponds to a maintenance, or even an increase, of the number of teachers despite a steady decline in the number of students that has continued for several years.

This trend has a strong institutional dimension, particularly decentralisation, which takes the form of third-party payment, with the state's overall allocations to municipalities covering the salaries of locally recruited teachers. This is a management method that we know does not generally help

to achieve efficiency. Indeed, municipalities do not have much control over their education budget, which comes mainly from the block grant (transparency and incentive issues), while the monitoring of municipality and school level expenses is made difficult by the lack of consolidation of data and the lack of synergies between the various databases (budget and school data).

One of the avenues for reform mentioned is for municipalities to take responsibility for their own expenditure on teachers, based on an increase in their own resources (VAT rates in particular), which would undoubtedly limit the perverse effect of a decoupling between funding and needs that is encouraged by the current system. In terms of needs, the situation observed also has a structural dimension around the management of sparsely populated areas, but also to the provision in multiple languages of instruction. The issue of languages of instruction, which is enshrined in law and justified by a sensitive political situation, deserves to be managed in the same way as the geographical constraints, by systematically organising classes into sections (up to and including one-class schools), in situations where pupil numbers are low, and by giving priority to multi-skilling teachers for subjects where a limited number of hours means that teachers cannot be fully utilised in a single (small) school. Also, careful selections of occupations that are offered in vocational schools - especially in mixed schools (VET and Gymnasium) - would deserve further attention.

Chapter 7. North Macedonia education sector analysis policy orientations

This section provides a recap of the various policy orientations that have been discussed.

7.1. Schooling patterns

| | Short-term | Medium-term |
|---|---|--|
| SCHOOL RATIONALISATION AND SCHOOL MAPPING ACTIVITIES | | |
| <i>Foster school rationalisation and strengthen school mapping to tackle the shrinking school-age population.</i> | <p>Strengthen and consolidate teaching in multiple-grade classrooms (combined classes) for students from grades 1-3 so that schooling is available to students close to their homes. Use the spatial capacities of regional schools to increase the coverage of children in pre-school education. Staff with the necessary re-training can be retained in pre-school.</p> <p>Organisation of workshops by the Ministry of Education and Science, with representatives of the municipalities that work on the organisation of transportation for students, to request accurate analyses of how transportation is organised and whether every child has the opportunity to use it.</p> <p>Free transportation for all students.</p> | <p>Following comprehensive dialogues with relevant stakeholders, conduct a school rationalisation exercise to help keep unit costs under control in the face of a declining school-age population (to be harmonised with the new funding formula).</p> |
| INTERNAL EFFICIENCY AT UPPER SECONDARY | | |
| <i>Address low transition rates into upper secondary and high drop-out rates before completing the cycle to improve internal efficiency.</i> | <p>Strengthen coordination between all relevant institutions (MoES, MLSP, SEI, municipalities, schools), since the EMIS does not have an early warning system, nor can it consolidate information from municipalities, schools and the SEI. A way needs to be found for coordinated input, data analysis and decision-making, with recommendations for each child at risk.</p> | <p>Improvement of the EMIS system and electronic entry so that it can give access to all relevant parties involved in the short-term goal of entering specific and accurate information about children at risk. The software should provide timely notification to the competent authorities for the adoption of solutions and support for these children.</p> |
| ROMA POPULATION | | |
| <i>Strengthen strategies to keep Roma children in the education system.</i> | <p>Hire and strengthen the availability of mediators, social workers, tutors and other professionals from Roma communities. The aim is for these professionals to together be in charge of following up with families and serving as a bridge between the education system and the communities, to ensure that students do not leave school, and that those who do leave come back.</p> <p>Reinforce and expand conditional cash transfer (CCT) schemes, such as the current achievement-based scholarship programme, to also incentivise families to take their</p> | <p>Develop the document that will succeed the 2022-2030 Roma Inclusion Strategy.</p> <p>Using targeted scholarships, Roma teachers and trainers can be integrated into the teaching workforce to help tackle issues of discrimination and increase the Roma communities' level of trust in the education system.</p> <p>Conduct policy evaluations on the effectiveness of the CCT schemes currently in place and those started during the short term to adjust and strengthen this.</p> |

children for regular medical check ups (in cooperation with the Ministry of Health and the Institute of Public Health).

CHILDREN FROM POOR FAMILIES

Use education to break the cycle of poverty in the poorest families in the country.

Increase the number of unconditional scholarships for poor families, making sure to target and prioritise the poorest families and those from communities where the drop-out rate is highest.

The CCT scheme originally proposed for Roma children can be expanded to all poor families, with the same conditions of school attendance and medical check-ups (in coordination with the Ministry of Health and the Institute of Public Health). This will have the double benefit of guaranteeing an income for families with children at risk of leaving the education system and incentivising them to keep children at school and to have a healthier lifestyle.

EARLY CHILDHOOD EDUCATION AND PRE-PRIMARY

Continue expanding access to quality ECE and pre-primary education, to ensure more children arrive ready for school.

Move forward with the implementation of a compulsory year of pre-primary education to strengthen early childhood development.

Promote pre-primary education enrolment within poor areas and with Roma communities to bridge potential preparedness gaps when entering basic education.

Prepare a special law for pre-school education and development.

Work on a legislation to move towards three compulsory years of pre-primary education (for ages 3 to 5).

Provide adequate quality training for all staff in pre-school institutions according to the competences for educational staff and to improve the standards for early childhood standards and to comply with the programmes of primary education.

Make provision for the necessary special and educational resources accordingly.

CHILDREN WITH DISABILITIES

Boost the current inclusive education concept at all education levels.

Reinforce the training of teachers on inclusive education and increase the number of special educators on staff across all schools and all levels.

Ensure all schools have adequate pedagogical or didactical resources for children with disabilities.

Strengthen the capacities of schools with a resource centre to ensure adequate support for inclusive education in basic and upper secondary education.

Develop a system and genuine support for parents, through professional psychological help.

Amend the Law on Secondary Education to ensure the structuring and provision of inclusive education for this level.

Ensure that all schools are physically accessible to children with disabilities.

Integrate approaches for inclusive education at teaching faculties.

The state should include in its Inclusion Laws appropriate care for mental and physical rehabilitation (therapies, physical exercises and care for the health of every child with disabilities), in cooperation with all competent institutions.

Amend the Law on Higher Education to ensure the structuring and provision of inclusive education at this level.

Develop a system for the professional development of teachers so that children with disabilities receive the same quality education as students without disabilities, with modified curricula that are in accordance with the needs of the labour market.

7.2. Quality

| | Short-term | Medium-term |
|--|---|--|
| ASSESSING THE LEVEL OF LEARNING OUTCOMES | | |
| <i>Promote strong and independent institutions that rely on comprehensive data analysis data, to contribute to effective and efficient assessment and evaluation.</i> | <p>All evaluation and assessment agencies (SEI, NEC, BDE) need to have an independent voice and established system for institutional cooperation, to serve as a backbone for quality in education, with mandatory implementation of recommendations from international and national measurements.</p> <p>Revising the indicators for self-evaluation and holistic evaluation for quality assessments in primary and secondary education and strengthening the capacity of inspectors/advisers.</p> <p>Improve coordination and institutional cooperation between institutions responsible for quality in education (the BDE for the curriculum and teacher training, the NEC for national testing and international assessments, the SEI for evaluation, and the MoLSP for ECE).</p> <p>Strengthening procedures for conducting exams in secondary education and separating exams according to the type of education.</p> <p>Establish mechanisms to provide reliable and objectively verifiable data on the standards of achievements of students at all levels starting from ECE, primary and secondary education.</p> <p>Improve the system and capacities for functional and effective data collection and analysis in a harmonised manner (at school, local/municipal and national levels). This can be done by upgrading the EMIS, along with dedicated research staff for data management and analysis that can contribute to evidence-based policy-making.</p> <p>Foster school access to their own data to allow them to analyse and monitor their performance and compare themselves to others.</p> | <p>Strengthen the evaluation and assessment agencies (SEI, NEC, BDE) in order to contribute effectively to policy-making and implementation. To accomplish this, they need to be properly staffed and resourced (i.e. human and financial resources and equipment).</p> <p>Defining national priorities for participation in international measurements and setting targets.</p> <p>Create effective feedback mechanisms between institutions responsible for assessment and evaluation, on the one hand, and schools on the other, with a particular focus on developing competencies and defining responsibilities in the evaluation process. Competencies for using feedback to improve practice are also vital, to ensure that evaluation and assessment procedures are effective.</p> <p>Improve and systematise the use of national assessments that are more akin to the experiences of international assessments (assessment questions from TIMSS, PIRLS and PISA could serve as an example for improving national testing and Matura exam testing).</p> <p>Creation of an interactive educational map (with all data relevant to the specific school – the number of students, reports, budget, activities, staff, etc.).</p> |
| LOOKING AT LEARNING OUTCOMES THROUGH AN EQUITY LENS | | |
| <i>Decrease gaps and specify measures to address identified factors that influence student achievement.</i> | <p>Address factors (gender, urban-rural settlement, language of instruction, etc.) in curricula, teaching and assessment, schooling conditions, etc., in order to overcome existing gaps in students' achievement and prevent these becoming more pronounced as students progress through the system.</p> <p>Provide support to students from families with a lower socioeconomic background in the</p> | <p>Introduce specific measures for learning recovery. This needs to start with identifying students with the highest learning loss and helping understand what students are missing, so that teachers can teach at the right level and cater to the specific learning needs of students (especially for key competencies such as literacy and mathematics).</p> |

| | |
|--|--|
| <p>form of scholarships, free meals, school supplies, etc.</p> <p>Establish an effective model for supporting low-achieving students to avoid children and students being left behind.</p> <p>Provide teachers with specific training to support students with learning loss through tutoring and one-to-one activities.</p> | <p>Enrolment and quality education for the most vulnerable groups of students (Roma, SEN students, students from rural areas and low socioeconomic backgrounds, etc.) need to be a high priority for all relevant institutions with additional incentives (scholarships).</p> <p>Preparation of strategies by teachers for compensating gaps in students' knowledge.</p> |
|--|--|

FACTORS AFFECTING LEARNING & SKILLS DEVELOPMENT

Deepen the analysis of factors influencing learning and development needs and strengthen coordination across all levels of education.

Curricula, materials and teaching methodologies need more detailed and in-depth analysis in order to determine and prioritise measures to improve students' performance.

Learning approaches to language, literacy and communication, numeracy and motor skills at pre-school level to be more child-centred, of sufficient substance (e.g. rich in opportunities to develop language and numeracy skills) and enable key opportunities to strengthen children's holistic development and learning.

Introduce new mechanisms for developing textbooks and provide all students with textbooks in all languages of instruction as they are enrolled at the beginning of the school year.

Nurture a positive school climate and monitor the implementation of the introduced mechanisms to decrease violence in schools, since these influence student well-being, mental health and achievement.

Introduce specific measures for developing positive attitudes towards teaching and learning for teachers and students.

Increase teaching and learning time at the same time as improvements in the teaching and learning process, with more project and real-life problem-based learning, elective subjects and better connections between subject areas.

In increasing quality, the emphasis should be on equipping students with high-level cognitive and socio-emotional skills, while ensuring that the learning process is enjoyable and engaging for students so that they become lifelong learners. As part of this effort, the curriculum must be delivered in a way to help students develop into critical and reflective thinkers, as well as active and relevant participants in social and political life.

SCHOOLING CONDITIONS

Optimise the school network and secure equal learning conditions everywhere.

Provide small rural schools, especially district schools, with appropriate access to resources, a sufficient number of teachers available, and employ teachers according to the norms for teachers for each subject.

Minimise existing differences in infrastructure and other working conditions in small rural primary schools compared with those in larger cities.

Optimise the current school network to keep pace with demographic and enrolment trends. due to the significant drop in students enrolled and prevent further rises in the number of teachers and classes.

FOCUS ON TEACHER MANAGEMENT

Improve teacher pre-service and in-service education and training, provide support and ensure a merit-based

Introduce measures (for example scholarships) to increase interest in studying at teacher education faculties, specifically for subjects like mathematics, languages, science, ICT, etc. in order to prevent the

Introduce specific criteria for the accreditation of teacher education programmes and adequate guidance for probation appraisals and mentoring in order to prevent weak selection and

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|---|---|---|
| system for hiring and promoting teachers. | <p>country facing challenges in recruiting teachers.</p> <p>Improve the continuous support provided to teachers and principals and empower their autonomy, boosting the opportunity for capacity building and providing continuous professional development so that they can better identify and understand the learning needs of students, especially those at risk.</p> <p>Enable teachers and school leaders to provide inputs into educational policy analysis and development in key areas through the implementation and use of the teaching and learning international survey (TALIS). This will provide valid, timely and comparable information on education resources to help the country review and define policies for developing a high-quality teaching profession.</p> | <p>quality assurance mechanisms for entry into teaching. This will reduce the risk of new teachers entering the profession without a sufficient level of knowledge and skills to be effective in the classroom.</p> <p>Streamline the teacher hiring process to avoid over-recruitment while making teaching an attractive career choice.</p> <p>Strengthen the preparation of i) school leaders by including an emphasis on feedback mechanisms; ii) NEC and SEI to engage in modelling and dissemination of good practices in areas of school assessment and teacher appraisal.</p> |
| ENSURING CHILDREN ENTER PRIMARY READY | | |
| Continue expanding access to quality ECE and pre-primary education, to ensure more children arrive ready for school. | <p>Move forward with the implementation of a compulsory year of pre-primary education.</p> <p>Promote pre-primary education enrolment within poor areas and Roma communities to bridge potential preparedness gaps when entering basic education.</p> <p>Develop programmes for parental involvement in activities for early learning and language and maths development.</p> | <p>Work on legislation to move towards three compulsory years of pre-primary education.</p> <p>Pre-school education from ages 3 to 5 to become part of the education system and under the authority of the Ministry of Education and Science</p> <p>Use the school rationalisation strategy to transform former basic schools into ECE and pre-primary centres to guarantee access to public pre-primary education.</p> |
| Promote good nurturing and stimulation activities at home. | <p>Enable more efficient parent involvement in education through activities they are interested in, and which fit their schedule, which they are comfortable with and feel benefit their child.</p> <p>Provide support to parents to adequately support their children's learning experience at home through various services: home visit services, helplines, community services and ensuring an equity approach in making support available to all parents and families with children, especially young parents and families in vulnerable situations.</p> | <p>Ensure all personnel in ECE and pre-primary centres have appropriate, quality training.</p> <p>Support and promote the implementation of the 2022-2030 National Parenting Strategy and look at a range of services for families facing challenges and requiring long-term support, and on investment in new parenting programmes and policies.</p> |

7.3. Relevance

| | Short-term | Medium-term |
|--|--|---|
| LINKAGES BETWEEN EDUCATION AND LABOUR MARKET INSTITUTIONS | | |
| <i>Improve institutional set-up in the education system and strengthen linkages between education and labour market institutions.</i> | <p>Undertake a functional analysis and mapping of state institutions involved in education policy-making to diagnose potential areas of overlaps and/or gaps in designing and implementing policies. Consequently, propose a need for changes in the responsibilities, etc. in order to make the system more efficient.</p> <p>Establish and enhance the linkages and coordination mechanisms between all relevant stakeholders in order to develop an effective education and training system that produces relevant skills. Reinforce the current linkages with true, real cooperation and involvement rather than formality, and sharing good practices and experiences. Measure the performance and effectiveness of the linkages.</p> <p>To continue increasing and strengthening the capacities of local governments and institutional leaders in schools and the business community through social dialogue to conduct a market analysis of the skills needs of local companies, as well as to review the readiness for practical training of students at local level.</p> <p>Support the implementation and effectiveness of the National Qualifications Framework (NQF), which can be an effective tool for promoting coordination and aligning education and skills with the needs of the labour market.</p> | <p>Reorganisation and rationalisation of existing human resources based on existing analyses.</p> |
| NEW SKILLS REQUIREMENTS | | |
| <i>Improve the quality of education to meet new skills requirements locally and globally.</i> | <p>Strengthen the system of quality assurance in higher education by conducting regular external institutional evaluations of HEIs. Practical learning and the inclusion of higher-order cognitive skills should be an integral part of the evaluation efforts.</p> <p>Introduce financial incentives for VET schools and HEIs to be innovative and efficient.</p> <p>Introduce new funding formulas at vocational secondary and tertiary levels with performance elements, to improve efficiency. It is important to include incentives.</p> <p>Tracer study in secondary and higher education to monitor the career development of pupils and students.</p> | <p>Further reform educational programmes and curricula (in both secondary and higher education) to place an emphasis on developing higher-order cognitive and socioemotional skills of students, including communication skills, critical thinking, time management, people skills, teamwork skills and similar.</p> <p>Create an analysis of the effects of education reforms.</p> <p>Improve the quality of VET education with a focus on enhancing the practical training component of VET programmes, to provide students with relevant skills and work experience.</p> <p>Emphasise partnerships with employers to facilitate workplace-based learning, internships, and dual education.</p> |

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| | | Continuously monitor and evaluate the effectiveness of these programmes to ensure their quality and relevance. |
| EMPLOYERS' ENGAGEMENT IN EDUCATION | | |
| Encourage active employer engagement in education. | Recognise and promote best practices for employer engagement in education and highlight the benefits for both employers and students. | Foster partnerships between educational institutions and employers to ensure that educational programmes incorporate practical skills and knowledge that meet industry requirements. |
| LABOUR MARKET POSITION OF YOUTH AND NEETS | | |
| Improve the labour market position of youth and reduce NEETs, especially among young women. | <p>Develop new and improve the targeted programmes and interventions to address the high youth unemployment rate and reduce the NEETs rate. Implement comprehensive and effective ALMPs with a specific focus on youth.</p> <p>Evaluate and improve the existing ALMPs to enhance their impact and reach. Continue to implement and improve the Youth Guarantees programme and further strengthen the internship programmes for youth.</p> <p>Introduce/expand 'second chance' programmes for inactive youth to improve the flexibility of the education system for inactive young individuals (NEETs) and develop measures to bring them back either to education or to the labour market. Pilot and assess the 'second chance' programme of the Employment Service Agency.</p> <p>Establish a system for validation of informal and non-formal learning (i.e. recognition of prior learning).</p> <p>Address gender gaps in activity and employment rates by implementing policies and initiatives that support women's participation in the labour market. Provide support for childcare, eldercare and other domestic responsibilities to alleviate the burden on women and encourage their participation in the workforce.</p> | <p>Provide quality information and counselling for students and youth. Data from the education information management system (EMIS) should be used to improve the information available to youth for making informed choices about their education and career paths, as well as for the betterment of careers guidance services.</p> <p>Promote gender-sensitive vocational guidance and counselling to challenge traditional gender roles and stereotypes.</p> <p>Implement and use the results from tracer studies to further improve the Occupational Outlook website, and to expand the content and services offered by the Skills Observatory.</p> |
| DATA COLLECTION AND ANALYSIS | | |
| Strengthen data collection, management and evidence-based policymaking. | Create a solid data collection/information management system and immediately overcome all the challenges related to the EMIS. The EMIS should ensure the availability of accurate and up-to-date data for policy analysis and decision-making, including data on job placements of graduates. | <p>Build a culture of evidence-based policy-making by promoting research, data sharing and monitoring and evaluation practices. Foster collaboration between government institutions, researchers and policy-makers to promote the use of data in policy formulation and implementation.</p> <p>Set up monitoring and performance evaluation plans for all new initiatives and programmes. Strengthen the</p> |

capacity of the Skills Observatory and build the capacity of the staff.

Regularly evaluate the effectiveness and efficiency of existing programmes and initiatives aimed at reducing unemployment, improving education quality and bridging the skills gap. Invest in capacity-building measures for policy-makers, educators and employers.

7.4. Governance of education and the effectiveness of the educational administration

7.4.1. Institutional architecture and arrangements

| | Short-term | Medium-term |
|--|--|---|
| PUBLIC MANAGEMENT | | |
| <i>Ensure that the management of the public sector is more supportive to the effective functioning of the educational administration.</i> | <p>Examine the 'systematisation' document, where it addresses education administration, in terms of numbers of posts and profiles, to ensure that it is relevant to current needs. Develop, where needed, detailed profiles. The examination can be best done in collaboration between the MISA and MoES, with participation by relevant senior staff from MoES departments and agencies.</p> <p>Launch a study to identify where changes to existing rules and regulations, particularly on staff selection, could limit the influence of politics.</p> | <p>Produce a brief yearly analysis of the staffing situation at the educational administration, in terms of numbers and profiles, as compared to the revised systematisation document. The analysis can be prepared by the HR department of MoES, in collaboration with MISA and shared with senior staff in the education administration.</p> <p>Review salary scales to ensure that posts in the educational administration remain attractive, especially when compared to other posts in the education sector. If salary differences cannot be addressed, examine other incentives to improve the attractiveness of posts in the educational administration.</p> |
| EDUCATION STRATEGY: DESIGN AND IMPLEMENTATION | | |
| <i>Strengthen stability in terms of policy and strategy.</i> | <p>Develop a high-level education strategy, building on the 2018-2025 strategy, with major goals and reforms up to 2030. The strategy will contain a monitoring, evaluation and learning (MEL) framework and Key Performance Indicators (KPIs).</p> <p>Organise public consultations during the strategy development process and public information sessions after the strategy's completion.</p> <p>Use the development of the strategy as an opportunity to create a team that will form the nucleus of the 'policy unit'. The Department for Strategic Planning will coordinate the drafting of the strategy, which will be the responsibility of a broader team.</p> | <p>Set up a high-level 'policy unit', with a mandate to define education policy and strategy. This can consist of experts from different backgrounds and competencies, from within and outside the ministries, including, for instance, national academia, international experts and civil society. The unit members will be appointed for eight years.</p> |

Improve linkages between planning and implementation.

Develop a MEL framework, with clear and measurable KPIs on the achievement of national goals, defined by the strategy up to 2030. The KPIs are linked to the performance of various departments and agencies.

Produce a short yearly report on the state of the education system, based on the evolution of KPIs, and share the report with the public.

Use the development of KPIs and the production of the yearly report as an opportunity to create the team that will form the nucleus of the 'delivery unit'.

Ensure that operational plans of agencies and departments are clearly linked to the national goals and to the KPIs, by providing support in terms of training and tools.

Set up a high-level 'M&E unit', with a mandate to monitor and evaluate the performance of the educational administration, and especially the quality of service delivery. It can consist of experts from different backgrounds and competencies, from within and outside the ministries, including, for instance, national academia, international experts and civil society. The unit members will be appointed for eight years.

DECENTRALISATION OF EDUCATION

Strengthen the capacity of municipalities.

Promote collaboration between municipalities in education management and delivery, including by strengthening ZELS.

Examine the potential of gradually transferring capital spending on education to municipalities. Analyse different scenarios, for instance, transferring only to municipalities with the required capacity for financial management, or transferring funding to groupings of municipalities, to ensure that small municipalities are not overburdened.

Design, in collaboration with ZELS, a capacity development programme for municipalities to ensure they can better take care of their education responsibilities.

Agree on the funding formula for spending on primary schools by municipalities and ensure that all municipalities are aware of its rationale.

Design a plan for the gradual implementation of the new funding formula, to ensure that municipalities are prepared for the changes

Organise a review of the decentralisation policy to examine, in particular, how a diversified policy that takes into account the characteristics of municipalities can take shape and whether some responsibilities (in particular the management of capital spending) can be transferred to groupings of small municipalities, with school management remaining the responsibility of each single municipality.

Depending on the conclusions of the study, transfer capital spending to municipalities.

Implement the funding formula for spending on primary schools.

Improve monitoring of municipalities.

Clarify the responsibility and accountability of municipalities and of central authorities in regulations and standard setting, financing, and service delivery, and ensure that all relevant actors are fully aware.

Organise systematic meetings between municipalities and central-level staff on education policies and programmes, to ensure that municipal staff are well aware of their role and that of the central level.

Develop a monitoring framework on the performance of municipalities in education, in order to better monitor and support the various municipalities.

Ensure regular monitoring of the funding that each municipality receives, its relationship to the funding formula and how funds are used. Summarise the findings in a short public report.

7.4.2. Effectiveness of the administration

| | Short-term | Medium-term |
|--|--|--|
| MANDATE AND FUNCTION | | |
| Secure the financial and policy-making independence of several bodies, in particular the NEC, AEC and VETC, and eliminate mandate overlaps. | Initiate a (functional) analysis to assess ways to ensure greater autonomy in parts of the education administration and to eliminate mandate overlaps. The process should be inclusive and involve discussions with all relevant parties impacted by potential changes. | Ensure the implementation of the recommendations of the functional analysis, by following up on each one in a systematic manner, for instance by identifying who is responsible for which action and through a short six-monthly report on progress. |
| STRATEGIC PLANNING AND MANAGEMENT | | |
| Improve the frequency and quality of communication and coordination processes within the MoES and between the MoES and associated bodies. | <p>Introduce routine coordination forums and discussions, such as an Interministerial Education Committee,</p> <p>Education Sector Forum that brings together all relevant Ministry and agency staff, and a Joint Review of the Education Sector with participation from civil society and development partners.</p> <p>Establish protocols for regular meetings between the heads of departments and employees within the departments/units.</p> <p>Use the various meetings to promote the exchange of good practices, by ensuring that several meetings per year encourage such exchanges.</p> | Develop a bottom-up culture of decision-making. This can take different forms: regular staff meetings; assigning preparation of staff meetings, including identification of an agenda, to team members; and surveys among staff to capture their points of view. |
| Strengthen capacities to plan strategically within the MoES's Department for Strategic Planning and the agencies. | <p>Ensure that the Department for Strategic Planning has the necessary staff to properly exercise its functions.</p> <p>Invest in the capacities of these staff to lead efforts in research, data analysis and evidence-based policy-making, and the monitoring of key indicators on the performance of the education system.</p> <p>Increase the visibility and support role of the Department for Strategic Planning to other key departments.</p> <p>Ensure that each department/agency has a contact person to work with the Department for Strategic Planning. Provide training to these staff as part of the training programme for the Department for Strategic Planning.</p> | <p>Once capacities are strengthened, rethink the position of the Department in the organisational chart of the MoES so that it has a more direct relationship to the leadership of the MoES.</p> <p>Assign the Department for Strategic Planning with an explicit mandate to be the coordinating body for strategic planning and policy formulation.</p> |
| Strengthen institutional memory. | Develop protocols for documentation of processes related to strategic planning, management and implementation. | Introduce recording mechanisms of document official correspondences, discussions and protocols around key policies, to inform future policy based on lessons learned. |
| HUMAN RESOURCES | | |
| Address staff motivation and engage in robust and continuous capacity development for staff in the education | Define a ministry-level strategy for the professional development of staff, with a clear structure for who holds official responsibility for developing and implementing such a strategy. The design of the strategy should incorporate | Secure funding and delivery of continuous professional development for all staff in the education administration at central and local level. |

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| administration. | <p>some of the following core elements: training needs assessments, induction training, the training offer itself, the means of delivery of the annual training programme, and a regular evaluation of the use made of training and how the impact of training can be strengthened.</p> <p>Link staff appraisal and staff development, ensuring that training needs are responded to within two years and, where this is not possible, that staff are informed of the reasons why.</p> | <p>Organise a staff survey every two years to enquire about organisational functioning, staff motivation, training needs and collect opinions on possible changes. Use findings to feed into a staff development programme.</p> |
| Strengthen human resource management. | <p>Introduce more robust employment requirements, with a focus on eliminating discretion and providing a better match.</p> <p>Prepare a recruitment plan based on the revision of the 'systematisation', in order to provide all agencies and departments with the necessary staff.</p> | <p>Transform the role of the human resources department from an administrative-technical role to a substantive role in managing all processes related to employee management.</p> <p>Ensure that all key staff positions are filled by staff with relevant profiles, particularly in the BDE, NEC and SEI.</p> |
| ACCOUNTABILITY | | |
| Set clearer objectives and expectations around the departments' and agencies' performance and initiate better oversight mechanisms to monitor and evaluate the education system. | <p>Develop clear and measurable indicators on the achievement of national goals, which are linked to the performance of various departments and agencies.</p> <p>Introduce a comprehensive report that evaluates the overall state of education in the country, with a clear emphasis on what targets have or have not been met.</p> | <p>Ensure that the KPIs system and the broader indicator framework are used to demand accountability from all parts of the education administration.</p> |
| Develop clear internal policies for governing staff accountability. | <p>Ensure that the evaluation of employees is based on performance-based criteria in line with national legislation</p> | <p>Establish clear links between the appraisal process and staff's career development.</p> |
| Improve the functionality and reliability of the EMIS, including the capacity for collecting, verifying and analysing data. | <p>Improve and standardise data collection tools and EMIS quality assurance mechanisms, including supervision and monitoring standards.</p> <p>Strengthen the skills and capacities of personnel at all levels (including schools), to feed in data and manage EMIS functions effectively and efficiently.</p> <p>Work on the interoperability of the EMIS with other domestic and international databases and prompt data exchanges (e.g. with the State Statistics Office, municipalities' databases, and European Tertiary Education Registry).</p> | <p>Provide system-wide usage of EMIS for data-driven decision-making in all parts of the education administration.</p> <p>Use the EMIS to track the achievement of national education goals.</p> |

7.4.3. Partnerships

| | Short-term | Medium-term |
|--|--|--|
| COORDINATION & COLLABORATION | | |
| <i>Strengthen collaboration with all partners.</i> | <p>Create structured consultative forums where education administration officials, domestic partners (teaching unions, student unions, CSOs), and international partners meet to discuss general policy matters. (The Sector Working Group for Education, Employment and Social Policy provides a relevant example).</p> <p>Create thematic working groups focusing on particular topics where education administration officials, domestic partners (teaching unions, student unions, CSOs), and international partners provide guidance for specific policies. (The former MES Youth group provides a relevant example).</p> <p>Prepare yearly programmes for regular meetings, and ensure that they are properly organised to facilitate open dialogue and exchange of ideas.</p> <p>Identify a department that will have a mandate for coordination with partners (probably the Strategic Planning Department) and prepare a capacity development programme for that department so that it can play that role effectively.</p> | <p>Conduct periodic reviews of the collaboration process with domestic partners to identify challenges and areas for improvement, adjusting policies and practices accordingly.</p> <p>Implement the capacity development programme for the department in charge of coordination, to enable effective partner coordination.</p> |
| PARTNERS' ROLE IN POLICY FORMULATION, PLANNING AND MANAGEMENT | | |
| <i>Capitalise on the assets of partners to improve policy formulation</i> | <p>Invest in programmes for domestic partners to enhance their understanding of the policy-making process, enabling them to provide more informed and constructive input.</p> <p>Develop podcasts and/or use other media tools that will continue conversations on topics related to (the quality of) education, even in the absence of large-scale initiatives in the field. Consider teaming up with partners (e.g. the youth radio 'MOF') and utilising their capacities for developing such content.</p> <p>Establish clear procedures for incorporating feedback from domestic partners into policy documents. Define whose feedback is invited and when; prepare templates for submitting comments by partners; plan sufficient time for submission of comments; build an internal system for processing the feedback, including setting a clear timeline; and communicate with partners regarding the accepted comments and alterations in a transparent manner.</p> <p>In the process of policy formulation, based on</p> | <p>Make greater use of the research capacities and products of domestic partners, through regular examination and discussion of their findings and, at times, through collaboration in joint research exercises.</p> <p>Strengthen engagement in and membership of regional and European-based organisations, including through participation in working groups and projects, staff mobility programmes, designation of a focal point or department responsible for (international) engagement, and reporting on progress and outcomes to the leadership. Continuously assess the impact of international engagement on education policies and initiatives, making adjustments as needed to optimise benefits.</p> |

international advice: incorporate contextual analysis in cases where the policy is borrowed from another education system. Establish mechanisms to assess and compare the political, economic, social and cultural context of the two countries. Consider factors such as the legal framework, governance structures and historical context. Identify the specific challenges, needs and opportunities that the policy aims to address in the domestic context, and practice adaptation to local needs.

POLICY IMPLEMENTATION

Deepen collaboration with partners to strengthen policy implementation.

Promote a collaborative approach to the design of externally funded projects, where the development partner and national administration jointly formulate the details. This should involve the staff responsible for project implementation.

Ensure that each externally funded programme/project includes a clear exit strategy that outlines how the education administration will take over and sustain initiatives once the programme/project concludes.

Provide departments and agencies of the educational administration with information on the advice and support that domestic partners can provide for policy implementation.

Create a database with details on partners – their area of work, joint projects and contact person. Consider using information already available in other public databases, such as the registry of youth organisations led by the Agency for Youth and Sports. The database should be consulted when choosing partners for collaboration. Make sure to continuously update the database with new information and routinise its use in internal workflows.

Encourage international partners to commit to longer-term partnerships and projects in education.

Use the proximity of the domestic partners to the neglected/disadvantaged communities (e.g. Roma children, children with disabilities, youth in poverty, etc.) for more effective policy implementation.

7.5. Costs and financing

| | Short-term | Medium-term |
|---|--|--|
| EQUITY, ACCESS AND QUALITY | | |
| <i>Improve access to school in rural areas.</i> | <p>Review and finalise the secondary school mapping and secondary school network optimisation study.</p> <p>Roll out the planned primary school network activity once finalised.</p> <p>Conduct a study to assess the most cost-effective use of dormitories (e.g. location, functioning, financing, beneficiaries) in terms of transport use for students that live far away from the school.</p> | <p>Use the school mapping/school optimisation results to i) reinforce multigrade teaching/classroom consolidation to accommodate young learners close to their homes; ii) strengthen transportation networks to enable older students to travel to well-resourced schools; iii) strengthen boarding when needed (as a last resort); and iv) rationalise schools' networks (groupings of schools, groupings of classrooms). Evaluate the optimisation of the schools' networks in pre-university education to assess whether it ensures adequate access to all in an efficient and effective way.</p> |
| <i>Foster gender parity among school leaders.</i> | <p>Conduct a study to assess what the barriers are for female candidates to leadership positions at schools and higher learning institutions. May also assess the feasibility of setting quotas.</p> | <p>Set up necessary mechanisms to promote females to school leadership positions, based on the study recommendations, at both pre-university schools and university institutions.</p> |
| <i>Ensure equity and quality in school endowments across municipalities and schools.</i> | <p>Review/refine/finalise the block grant formula/LGU allocations (number of pupils, density, correction of disparities in regional/municipal wealth, etc.) for ECE and secondary/VET, to ensure all schools meet minimum quality requirements. May need to assess the possibility of greater flexibility in the use of BGs to match specific schools' needs by creating more room for manoeuvre.</p> <p>Allocate more own funding (taxes) and thus more latitude to municipalities, so they can address schools' needs in terms of recruitment and other spending when necessary, and better adapt to local situations. Assess whether those receiving support from the MoES do graduate.</p> <p>Set up a central registry of all capital investments made by public and non-public actors, to promote the fair and objective distribution of transfers from central to local government, but also the distribution of funds by local government schools. In higher education, the National Council should adopt a new methodology for financing.</p> | <p>Conduct an external evaluation to assess whether the updated BG formulas allow for more equity, efficiency and quality in schools' service delivery.</p> |
| <i>Ensure social support to higher education students is well targeted.</i> | <p>Assess the equity impact of the social spending targeted at HE students (i.e. boarding, transport, lunch) to ensure it targets students in need. May be combined with an effectiveness analysis</p> | <p>Revise social support to students, as per the recommendations formulated in the study.</p> |

EFFICIENCY & EFFECTIVENESS – SCHOOL AND TEACHER RATIONALISATION

Optimise schools' networks for improved efficiency in the use of financial and human resources.

Roll out the school optimisation plan for ECE, basic and upper secondary schools to allow them to maximise the use of schools and classes (e.g. closing schools, regrouping schools and classes, etc., reliance on online teaching) and target pupils' transportation in an optimal way.

Evaluate the optimisation of the school network in pre-university education to assess whether it ensures adequate access to all in an efficient and effective way.

Roll out the recommendations of the school language study. Amend the school language law accordingly, if needed.

Review the school linguistic policy for more efficient and effective use of teachers and class resources.

Optimise the use of teachers.

Study and calculate the total expenses incurred by multilingual schools up to the Matura exam. The system of minority mother tongues up to Matura level leads to a decline in the quality of education, and prevents external efficiencies, since academic training is decoupled from the Macedonian labour market.

Conduct a study to assess the feasibility of reducing the use of minority tongue teachers, for instance, the use of both Turkish and Serbs as a first language beyond primary school (with for instance, an incremental phase out of mother tongue starting in Grade 3). In areas where there is a low number of minority linguistic groups, classes could be organised online. This could be piloted in a region.

If not possible, assess ways to make this teaching more cost-efficient (including assessing the use of online teaching, which could help group students from different schools for certain subjects at little cost).

Reduce teacher recruitment as soon as possible.

Assess ways to promote multiskilling teachers in two subjects, to maximise teacher use. This would affect the pre-service and in-service training of teachers.

Assess way to encourage young teacher mobility, to maximise Students-teacher ratio (STR) – this could be done by increasing support (bonuses, career progression, etc.) – using the funds saved by reducing the number of teachers.

Maximise the use of teachers and maximise STR, by encouraging young teacher mobility and multilevel/subject teaching. Giving priority to multiskilling teachers in two subjects would lead to a better use of teachers' time, as a limited number of hours means that teachers cannot be fully utilised in a single school.

Encourage teacher mobility when needed and possible.

FINANCIAL ACCOUNTABILITY

Improve reporting and evaluation on the

Use a more transparent and simple coding system that allows for easy cross-referencing of

Prioritise synergies and simplification of the links between budget and education

| | | |
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| allocation of school expenditure. | <p>Ministry of Finance budget codes with municipalities and schools (e.g. clear linkages between budget codes and school codes, including satellite schools) Make sure the same coding is used in the financial monitoring system to help analyse the costs and budget situation in order to increase precision and accountability.</p> <p>Strengthen the EMIS to be able to play its full role (including ensuring accurate, up-to-date and timely data are collected, that quality is ensured, analysed and reported with well-defined responsibility at the various levels involved).</p> <p>Simplify open-source budgeting to avoid double counting of budget lines, which add complexity in extraction and analysis.</p> <p>Ensure transparency and accountability regarding salaries of education staff on elective duty. It is not clear whether teachers on leave (on elective duty) are still paid by the MoE.</p> <p>Assessing the feasibility of setting up a single electronic system for records and salary computations.</p> <p>Conduct a study to assess ways of linking up the allocation of funding to some performance indicators that would motivate municipalities and/or schools towards a more efficient and accountable management of funds.</p> | <p>and put in place a permanent monitoring system for municipality and school spending with reliable indicators to foster accountability and transparency in the use of funding and promote efficiency and equity and its use.</p> |
| EXTERNAL EFFECTIVENESS | | |
| Reinforce external efficiency by adapting the VET specialisation to the regional/municipal labour pool... | <p>(Re)assess the location of technical and vocational schools, based on their relevance to the regional and local labour markets – using the school mapping exercise.</p> | <p>Promote synergies between the private economic sector and VET centres and encourage sponsorship from and partnership with the private sector.</p> |
| ... and ensuring public universities are adapted to national challenges. | <p>Conduct a study to assess ways to promote synergies between the private sector and schooling (investors may have the funds that some schools need).</p> <p>Audit on the public university offer and its suitability for the Macedonian labour market.</p> | |
| ADEQUACY | | |
| Ensure the education and training system is adequately financed to provide quality education and training for all. | <p>Advocate for increased funding and better use of education funding to adequately support: i) the expansion of quality ECE; ii) the upgrading of schools and dorms to meet desired quality and inclusive standards; iii) the adequate training of teachers, school and education leaders; and iv) the promotion of lifelong learning opportunities for adults. Strengthen adult education and lifelong learning.</p> | |

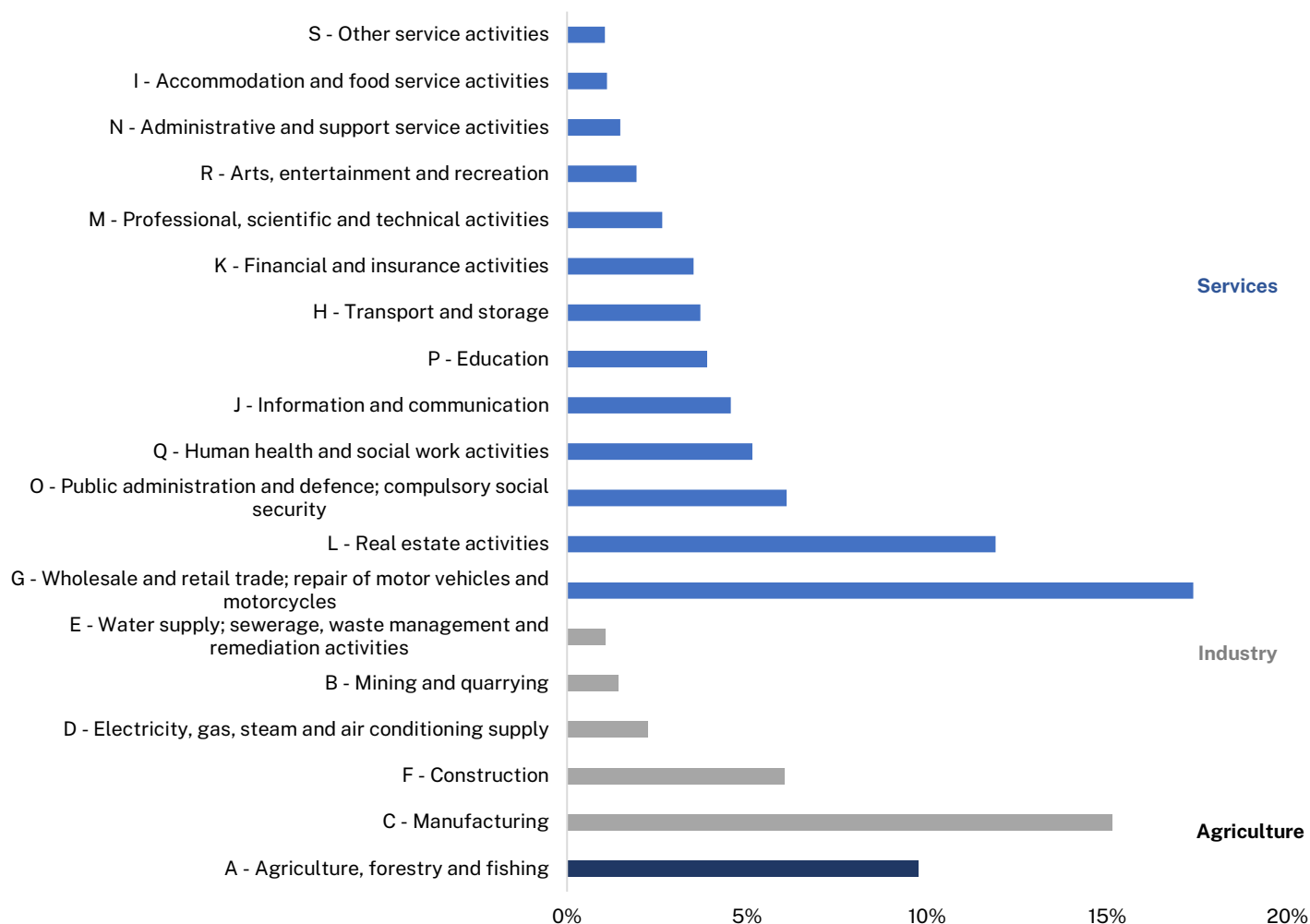
Annex 1. Additional tables

Table A1.1. Change in municipality population, 2002 and 2021

| Municipality | 2002 | 2021 | Absolute change | % change | Municipality | 2002 | 2021 | Absolute change | % change |
|----------------|---------|---------|-----------------|----------|------------------------|---------|--------|-----------------|----------|
| Skopje | 506,926 | 526,502 | 19,576 | 4% | Karbinci | 4,012 | 3,420 | - 592 | -15% |
| Aerodrom | 72,009 | 77,735 | 5,726 | 8% | Kichevo | 30,138 | 39,669 | 9,531 | 32% |
| Butel | 36,154 | 37,968 | 1 814 | 5% | Konche | 3,536 | 2,725 | - 811 | -23% |
| Gazi Baba | 72,617 | 69,626 | - 2,991 | -4% | Kochani | 38,092 | 31,602 | - 6,490 | -17% |
| Gjorche Petrov | 41,634 | 44,844 | 3,210 | 8% | Kratovo | 10,441 | 7,545 | - 2,896 | -28% |
| Karposh | 59,666 | 63,760 | 4,094 | 7% | Kriva Palanka | 20,820 | 18,059 | - 2,761 | -13% |
| Kisela Voda | 57,236 | 61,965 | 4,729 | 8% | Krivogashtani | 6,150 | 5,167 | - 983 | -16% |
| Saraj | 35,408 | 38,399 | 2,991 | 8% | Krushevo | 9,684 | 8,385 | - 1 299 | -13% |
| Centar | 45,412 | 43,893 | - 1,519 | -3% | Kumanovo | 105,484 | 98,104 | - 7,380 | -7% |
| Chair | 64,773 | 62,586 | - 2,187 | -3% | Lipkovo | 27,058 | 22,308 | - 4,750 | -18% |
| Shuto Orizari | 22,017 | 25,726 | 3,709 | 17% | Lozovo | 2,858 | 2,264 | - 594 | -21% |
| Arachinovo | 11,597 | 12,676 | 1,079 | 9% | Mavrovo and Rostusha | 8,618 | 5,042 | - 3,576 | -41% |
| Berovo | 13,941 | 10,890 | - 3,051 | -22% | Makedonska Kamenica | 8,110 | 6,439 | - 1,671 | -21% |
| Bitola | 95,385 | 85,164 | - 10,221 | -11% | Makedonski Brod | 7,141 | 5,889 | - 1,252 | -18% |
| Bogdanci | 8,707 | 7,339 | - 1,368 | -16% | Mogila | 6,710 | 5,283 | - 1,427 | -21% |
| Bogovinje | 28,997 | 22,906 | - 6,091 | -21% | Negotino | 19,212 | 18,194 | - 1,018 | -5% |
| Bosilovo | 14,260 | 11,508 | - 2,752 | -19% | Novaci | 3,549 | 2,648 | - 901 | -25% |
| Brvenica | 15,855 | 13,645 | - 2,210 | -14% | Novo Selo | 11,567 | 6,972 | - 4,595 | -40% |
| Valandovo | 11,890 | 10,508 | - 1,382 | -12% | Oslomej | 10,420 | | - 10,420 | -100% |
| Vasilevo | 12,122 | 10,552 | - 1,570 | -13% | Ohrid | 55,749 | 51,428 | - 4,321 | -8% |
| Vevchani | 2,433 | 2,359 | - 74 | -3% | Petrovec | 8,255 | 9,150 | 895 | 11% |
| Veles | 55,108 | 48,463 | - 6,645 | -12% | Pehchevo | 5,517 | 3,983 | - 1,534 | -28% |
| Vinica | 19,938 | 14,475 | - 5,463 | -27% | Plasnica | 4,545 | 4,222 | - 323 | -7% |
| Vraneshtica | 1,322 | | - 1,322 | -100% | Prilep | 76,768 | 69,025 | - 7,743 | -10% |
| Vrapchishte | 25,399 | 19,842 | - 5,557 | -22% | Probishtip | 16,193 | 13,417 | - 2,776 | -17% |
| Gevgelija | 22,988 | 21,582 | - 1,406 | -6% | Radovish | 28,244 | 24,122 | - 4,122 | -15% |
| Gostivar | 81,042 | 59,770 | - 21,272 | -26% | Rankovce | 4,144 | 3,465 | - 679 | -16% |
| Gradsko | 3,760 | 3,233 | - 527 | -14% | Resen | 16,825 | 14,373 | - 2,452 | -15% |
| Debar | 19,542 | 15,412 | - 4,130 | -21% | Rosoman | 4,141 | 3,796 | - 345 | -8% |
| Debarca | 5,507 | 3,719 | - 1,788 | -32% | Sveti Nikole | 18,497 | 15,320 | - 3,177 | -17% |
| Delchevo | 17,505 | 13,585 | - 3,920 | -22% | Sopishte | 5,656 | 6,713 | 1,057 | 19% |
| Demir Kapija | 4,545 | 3,777 | - 768 | -17% | Staro Nagorichane | 4,840 | 3,501 | - 1,339 | -28% |
| Demir Hisar | 9,497 | 7,260 | - 2,237 | -24% | Struga | 63,376 | 50,980 | - 12,396 | -20% |
| Dojran | 3,426 | 3,084 | - 342 | -10% | Strumica | 54,676 | 49,995 | - 4,681 | -9% |
| Dolneni | 13,568 | 13,126 | - 442 | -3% | Studenichani | 17,246 | 21,970 | 4,724 | 27% |
| Drugovo | 3,249 | | - 3,249 | -100% | Tearce | 22,454 | 17,694 | - 4,760 | -21% |
| Zhelino | 24,390 | 18,988 | - 5,402 | -22% | Tetovo | 86,580 | 84,770 | - 1,810 | -2% |
| Zajas | 11,605 | | - 11,605 | -100% | Centar Zhupa | 6,519 | 3,720 | - 2,799 | -43% |
| Zelenikovo | 4,077 | 3,361 | - 716 | -18% | Chashka | 7,673 | 7,942 | 269 | 4% |
| Zrnovci | 3,264 | 2,086 | - 1,178 | -36% | Cheshinovo - Obleshevo | 7,490 | 5,471 | - 2,019 | -27% |
| Ilinden | 15,894 | 17,435 | 1,541 | 10% | Chucher – Sandevo | 8,493 | 9,200 | 707 | 8% |
| Jegunovce | 10,790 | 8,895 | - 1,895 | -18% | Shtip | 47,796 | 44,866 | - 2,930 | -6% |
| Kavadarci | 38,741 | 35,733 | - 3,008 | -8% | | | | | |

Source: State Statistical Office, 2022a.

Figure A1.1. Value added to GDP by section, million MKD, 2020



Source: State Statistical Office, 2022a.

Table A1.2. Government expenditure by function, 2012–2021

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|
| General public services | 11.2% | 11.4% | 13.5% | 12.3% | 8.6% | 9.9% | 6.5% | 7.8% | 36.2% | 8.7% |
| Defence | 4.9% | 4.3% | 4.2% | 3.7% | 2.8% | 2.5% | 2.7% | 2.9% | 2.5% | 3.1% |
| Public peace and order | 10.8% | 9.2% | 9.4% | 8.3% | 6.9% | 6.6% | 6.2% | 6.7% | 5.3% | 5.5% |
| Economic affairs | 21.2% | 25.1% | 22.5% | 31.2% | 20.3% | 18.4% | 24.1% | 18.3% | 24.3% | 24.8% |
| Environmental protection | 0.6% | 0.5% | 0.6% | 0.7% | 0.4% | 0.4% | 0.4% | 0.8% | 0.5% | 0.4% |
| Dwellings and community dev | 1.5% | 1.6% | 1.2% | 1.4% | 1.2% | 1.6% | 1.0% | 1.7% | 1.0% | 1.4% |
| Health | 4.7% | 4.5% | 4.2% | 3.6% | 14.2% | 14.2% | 14.0% | 14.7% | 14.4% | 15.5% |
| Recreation, culture, religion | 2.9% | 3.0% | 3.0% | 2.7% | 2.1% | 2.5% | 1.8% | 1.6% | 1.3% | 1.4% |
| Education* | 18.7% | 17.1% | 16.5% | 14.6% | 11.5% | 11.3% | 10.8% | 11.2% | 9.8% | 9.8% |
| Social protection | 23.2% | 24.9% | 21.7% | 32.0% | 32.7% | 32.6% | 34.4% | 4.6% | 29.3% | 23.2% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: Ministry of Finance, 2012-2019, 2020a, 2021a.

Note: * Education also includes funding going to education from the MoLSP.

Annex 2. The North Macedonia education system

The North Macedonia education system is divided into four main levels: pre-primary education, primary education, upper secondary education (which includes VET) and tertiary education. Pre-primary education is managed by the Ministry of Labour and Social Policy, while the other levels are managed by the Ministry of Education and Science. Education is delivered by both public and private institutions, all of which are under the supervision of the two ministries. Institutions must go through an official validation process before being allowed to enrol students.

Each of the four main levels of education are further divided into sub-levels, with different entrance ages, durations and characteristics:

1. Pre-primary, which is further subdivided into two:
 - a. Creche has a starting age of zero and a duration of three years. This level is not mandatory.
 - b. Kindergarten has a starting age of three years and a duration of three years. This level is not mandatory, and students can enter at any point in time if they are within the appropriate age range.
2. Primary education, which in turn is divided in three sub-levels, offers a National Qualification Framework (NQF) level of 1.1. Some schools offer the first two sub-levels, while others offer all three. Schools can be municipal (funded by the municipalities) or state schools (funded directly by the state).¹²⁵ The level is compulsory and is currently offered in five different languages: Macedonian, Albanian, Turkish, Serbian and Bosnian.
 - a. First period has a starting age of six years and a duration of three years. It covers Grades 1 to 3.
 - b. Second period has a starting age of nine years and a duration of three years. It covers Grades 4 to 6.
 - c. Third period has a starting age of 10 years and a duration of three years. It covers Grades 7 to 9. This period is the ISCED equivalent of lower secondary.

Primary schools can also have specialisations, according to the Law on Primary Education (Government of North Macedonia, 2019a):

 - Primary education school, where most students go.
 - Primary education school for adult education, accessible to any person over the age of 15 who meets the conditions prescribed by the programme (Government of North Macedonia, 2008a).
 - Music school, an optional programme to be taken concurrently with regular primary education school.
 - Ballet school, an optional programme to be taken concurrently with regular primary education school.
 - Primary education school with a resource centre, previously a special education school, offering materials and staff specialised in special education, who can support and guide other schools in issues related to students with disabilities.
 - International primary education school.
3. Upper secondary education, which in turn is divided into four sub-levels. It has been compulsory since 2008.
 - a. General upper secondary education (or 'gymnasium') has a starting age of 15 years and a duration of four years. It is regulated by the Law on Primary and Secondary Education (Government of North Macedonia, 2008b), and students must complete the State Matura at the end of the cycle. It has an NQF level of 4.
 - b. Vocational upper secondary education (VET) is further subdivided into three streams:

¹²⁵ For more information on school funding mechanisms, see Chapter 6.

- i. The 4-year stream allows students to either complete the State Matura and earn a Diploma for the State Matura exam if they want to progress into higher education or do a final exam to then enter the labour market. It has a NQF level of 4.
 - ii. The 3-year stream allows students to take a final exam to enter the labour market, earning a Diploma for Final Exam. It has a NQF level of 3.
 - iii. The 2-year stream allows students to take a Professional Competence exam to enter the labour market. It has a NQF level of 2.
- c. Upper secondary art education. It has a NQF level of 4.
- d. Upper secondary education for students with special education needs. It has a NQF level of 4.
4. Post-secondary non-tertiary education is work-oriented and prepares students for certain professional duties and has a duration between six months and two years. These programmes can be taught in institutions that have been verified for post-secondary education or in regular secondary schools. It has a NQF level of 5.
5. Higher education, which is equivalent to tertiary education, is guided by the Law on Higher Education (Government of North Macedonia, 2019b), and has four types of programmes:¹²⁶
 - a. Bachelor's degrees have a duration of three to five years and are equivalent to the ISCED and NQF level 6.
 - b. Master's degrees have a duration of one to two years and are equivalent to the ISCED and NQF level 7.
 - c. Specialist degrees have a duration of one to two years and are equivalent to the ISCED and NQF level 7.
 - d. Doctoral degrees have a duration of three to five years and are equivalent to the ISCED and NQF level 8.

The types of institutions in higher education are defined by the Law on Higher Education (Government of North Macedonia, 2019b). They can be 'public, public-private non-profit facilities and private non-profit facilities' (2019b: 10):

- Universities;
- Faculty, Art Academy and Higher Vocational Schools that are a part of the University;
- Autonomous Higher Vocational School.

The structure of the North Macedonia education system is shown graphically in *Table A2.1*.

¹²⁶ For more information on these programmes, see European Commission, 2022b..

Table A2.1. Structure of the North Macedonia education system

| Age | Education programme | | | | Grade | ISCED level |
|-----|---|-------------------------------------|---------------------|--|-----------------------|-------------|
| | Doctoral degree (at least 3 years) | | | | | 8 |
| | Master's degree (1 to 2 years) | Specialist degree (1 to 2 years) | | | | 6/7 |
| 23 | Bachelor's degree (3 to 5 years) | | | Post-secondary non-tertiary (2 years) | | 5 |
| 22 | | | | | | |
| 21 | | | | | | |
| 20 | | | | | | 4/5 |
| 19 | | | | | | |
| | State Matura Examination | | | | | |
| 18 | Upper secondary education (Compulsory) | Art education | Vocational upper | Adult upper secondary educ. | 4 th year | 3 |
| 17 | | | secondary education | Adult basic educ. | 3 rd year | |
| 16 | | | (2 to 4 years) | | 2 nd year | |
| 15 | | | (Compulsory) | | 1 st year | |
| 14 | Primary (Third period) | | | | 9 th grade | 2 |
| 13 | (Compulsory) | | | | 8 th grade | |
| 12 | | | | | 7 th grade | |
| 11 | Primary (Second period) | | | | 6 th grade | 1 |
| 10 | (Compulsory) | | | | 5 th grade | |
| 9 | | | | | 4 th grade | |
| 8 | Primary (First period) | | | | 3 rd grade | 0 |
| 7 | (Compulsory) | | | | 2 nd grade | |
| 6 | | | | | 1 st grade | |
| 5 | Pre-primary – Kindergarten | | | | Group 3 | 0 |
| 4 | | | | | Group 2 | |
| 3 | | | | | Group 1 | |
| 2 | Pre-primary – Crèche | | | | | |
| 1 | | | | | | |
| 0 | | | | | | |

Source: Authors', based on North Macedonia, 2008b, 2019a, 2019b.

Annex 3. Additional tables

Table A3.1. Summary description of skills development/learning outcome evaluations available in North Macedonia over the last decade

| Type | Periodicity | Coverage | Responsible institution | Commonly used measure | Pros | Cons | Subject/skills covered |
|------------------------------------|--------------------------------------|--|-------------------------|------------------------------|---|---|--|
| End of cycle national assessments? | Yearly | Comprehensive/ National | MoE | Score, Proficiency levels | Reflect curricula content Enable historical comparisons | International comparisons are not possible | Mathematics, language |
| MELQO | 2022 | Sample-based | MLSP | MELE | Assess skills and readiness for school | Pilot phase | cognitive, social and emotional growth |
| MICS-ECD Index | 2018-2019 | 3-4years old | UNICEF & NSO | Score and Index | | Performed once, does not cover 6-year-olds | ECD skills |
| TIMSS | 1999 2003 2011 2019 2023 | 8 th Grade 1999-2011 4 th Grade 2019 & 2023 | IEA | Score Proficiency levels | Enable international comparisons through standardised tests | Performed irregularly Only partially reflect curricula content | Maths Science |
| PIRLS | 2001 2006 2021 | 4 th Grade | IEA | Score Proficiency levels | Enable international comparisons through standardised tests | Performed irregularly Only partially reflect curricula content | Reading |
| PISA | 2000 2015 2018 2022 | Representative sample-based – 15 years old | OECD & MoE | Score Proficiency levels | Enable international comparisons through standardised tests | - Performed irregularly - Only partially reflect curricula content | Maths Science Reading |

Source: Authors, based on various survey reports.

Table A3.2. Gap analysis in achievement of students, by equity dimensions

| Source | Indicator | Gender | | | Location | | | Linguistic | | |
|--|---------------|--------|-------|-------|----------|-------|-------|------------|----------|------|
| | | Boys | Girls | Gap | Urban | Rural | Gap | Macedonian | Albanian | Gap |
| MELQO 2022 | Achieved, % | 49.23 | 50.77 | -1.54 | 67.71 | 56.37 | 11.34 | | | |
| MICS 2021 | ECD Index, % | 75.9 | 89.3 | -13.4 | 80.9 | 83.5 | -2.6 | 84.7 | 89.7 | -5 |
| MICS 2019 | Literacy, % | 58.3 | 70.2 | -11.9 | 66.3 | 61.5 | 4.8 | 75.3 | 56.4 | 18.9 |
| | Numeracy, % | 46.6 | 35.3 | 11.3 | 42.9 | 38 | 4.9 | 51.2 | 32.6 | 18.6 |
| EGRA 2015 | Macedonian, % | 77.39 | 81.25 | -3.86 | 80.83 | 69.61 | 11.22 | | | |
| | Albanian, % | 76.7 | 77.78 | -1.08 | 80.16 | 74.85 | 5.31 | | | |
| EGMA 2015 | Maths, % | 85.81 | 84.69 | 1.12 | 85.33 | 83.9 | 1.43 | 85.78 | 84.26 | 1.52 |
| TIMMS 2019 | Score Maths | 472 | 472 | 0 | 485 | 449 | 36 | 479 | 455 | 24 |
| | Score Science | 419 | 433 | -14 | 449 | 399 | 50 | 438 | 399 | 39 |
| PIRLS 2021 | Score Reading | 429 | 454 | -25 | | | | | | |
| PISA 2018 | Score Reading | 368 | 420 | -52 | | | | 409 | 344 | 65 |
| | Score Maths | 391 | 398 | -7 | | | | 409 | 355 | 54 |
| | Score Science | 404 | 423 | -19 | | | | 431 | 365 | 66 |
| Matura 2021/22 (first compulsory subject) | Score | 3.94 | 4.31 | -0.37 | 4.1 | 3.82 | 0.28 | 4.14 | 3.64 | 0.5 |

Source: Authors' calculations based on various survey reports.

Annex 4. Additional table

Table A4.1. Planned number of participants and expenditure for ALMPs, 2020–2023

| I. Employment programmes and measures | 2020 | | 2021 | | 2022 | | 2023 | |
|--|-------------|--------------------------|-------------|--------------------------|-------------|--------------------------|-------------|--------------------------|
| | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) |
| 1. Support for self-employment (entrepreneurship) | 1,990 | 10,633,345 | 1,877 | 10,309,496 | 2,000 | 10,932,230 | 2078 | 11,529,888 |
| 2. Support for the creation of new jobs | 3,334 | 13,612,890 | 2,858 | 12,294,891 | 2,139 | 11,638,528 | 2561 | 10,731,443 |
| 2.1 Wage subsidies | 1,974 | 7,348,817 | 1,978 | 8,412,587 | 1,527 | 5,888,078 | 1725 | 3,388,488 |
| 2.2 Employment and growth of enterprises | 1,152 | 3,719,358 | 370 | 801,003 | 262 | 791,100 | 536 | 1,830,760 |
| 2.3 Support to employment of disabled persons | 208 | 2,544,715 | 210 | 3,081,301 | 350 | 4,959,350 | 300 | 5,512,195 |
| 3. Training | 1,562 | 1,170,814 | 882 | 883,940 | 1,330 | 1,108,478 | 1992 | 2,048,084 |
| 3.1 On-the-job training for known employer | 338 | 221,041 | 152 | 123,642 | 70 | 47,805 | 172 | 162,211 |
| 3.1 (a) On-the-job training + subsidised employment (pilot 2023) | | | | | | | 200 | 559,350 |
| 3.2(a) Training in qualifications in demand by employers | 100 | 97,456 | 100 | 112,683 | 150 | 179,544 | 165 | 229,200 |
| 3.2 (b) Vocational training in demand by employers | 380 | 174,886 | 80 | 92,722 | 200 | 247,692 | 215 | 233,561 |
| 3.2(c) Online training for skills in demand by employers | | | 100 | 52,683 | 100 | 84,048 | | |
| 3.3 (d) Skills development through training to increase the employability of returnees from abroad | | | | | 210 | 65,141 | 210 | 16,129 |
| 3.4 Training in deficient occupations | 694 | 647,772 | 400 | 470,732 | 500 | 414,634 | 930 | 771,220 |
| 3.5 Training for C and D driver's licence | 50 | 29,659 | 50 | 31,478 | 100 | 69,320 | 100 | 76,413 |
| 4. Training for digital skills | 360 | 668,102 | 400 | 764,228 | 424 | 813,447 | 805 | 1,534,707 |
| 4.1 Training in advanced IT skills | 120 | 234,146 | 300 | 585,366 | | | 735 | 1,419,207 |
| 4.2 Training for advanced IT skills (with co-financing) for non-licensed training providers | 180 | 319,753 | 100 | 178,862 | 424 | 813,447 | | |
| 4.3 Pilot training for advanced IT skills | 60 | 114,203 | | | | | | |

Education Sector Analysis: North Macedonia

| I. Employment programmes and measures | 2020 | | 2021 | | 2022 | | 2023 | |
|---|---------------|--------------------------|---------------|--------------------------|---------------|--------------------------|-------------|--------------------------|
| | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) | Individuals | Expenditures (in EUR) |
| 4.4 Training for HR specialists-recruitment (pilot) | | | | | | | 70 | 115,500 |
| 5. Internships | 1,575 | 743,858 | 1,413 | 638,553 | 1,620 | 795,244 | 1600 | 939,146 |
| 6. Public works | 550 | 79,272 | 1,050 | 150,816 | 1,000 | 214,634 | 1,000 | 214,634 |
| 7. CARE economy | 450 | 582,037 | 970 | 2,589,505 | 750 | 1,818,778 | 650 | 2,098,857 |
| 7.1 Community-based work | | | 750 | 1,225,793 | 600 | 938,197 | 650 | 1,928,326 |
| 7.2 Training and employment of individuals for care provision for people with disability and chronic illness | | | 150 | 942,135 | 150 | 880,582 | | 170,531* |
| 7.3 Support for entrepreneurship and establishment of legal entities for provision of community-based care services | | | 70 | 421,577 | | | | |
| 8. Support for creating new employment opportunities through green investment (Pilot) | | | | | 312 | 433,139 | 150 | 592,988 |
| 9. Youth allowance | 2,875 | 1,869,919 | 2,500 | 1,641,163 | 3,500 | 2,150,378 | 3,500 | 2,193,119 |
| 10. Second chance (pilot) | | | | | | | 200 | 100,000 |
| Total | 12,696 | 29,360,236 | 11,950 | 29,272,591 | 13,075 | 29,905,441 | | |

Source: Authors' presentation based on data from the annual reports of the Employment Service Agency available at: <https://av.gov.mk/godishni-izveshtai.nspix> (only in Macedonian language).

Annex 5. Survey questionnaire results

Q1. How many years of professional experience do you have, in total?

| | |
|--------------------|--------|
| Less than 5 years | 1.53% |
| 5-15 years | 24.81% |
| 16-25 years | 36.92% |
| more than 25 years | 36.92% |

Q2. How many years of professional experience do you have in the following positions? (the results show the highest percentage of all options)

a) As a teacher (56.92%)

| | |
|--------------------|--------|
| Less than 2 years | 16.21% |
| Between 2-5 years | 13.51% |
| Between 5-10 years | 24.32% |
| More than 10 years | 40.54% |
| More than 20 years | 5.40% |

b) As a school principal (16.92%)

| | |
|--------------------|--------|
| Less than 2 years | 75% |
| Between 2-5 years | 16.66% |
| Between 5-10 years | 8.33% |
| More than 10 years | 0% |
| More than 20 years | 0% |

c) In the education administration (86.15%)

| | |
|--------------------|--------|
| Less than 2 years | 5.36% |
| Between 2-5 years | 8.93% |
| Between 5-10 years | 16.07% |
| More than 10 years | 42.86% |
| More than 20 years | 26.79% |

e) In the public administration, outside of education (41.53%)

| | |
|--------------------|--------|
| Less than 2 years | 18.51% |
| Between 2-5 years | 40.74% |
| Between 5-10 years | 11.11% |
| More than 10 years | 18.51% |
| More than 20 years | 11.11% |

f) In the private sector (36.92%)

| | |
|--------------------|--------|
| Less than 2 years | 37.5% |
| Between 2-5 years | 45.83% |
| Between 5-10 years | 8.33% |
| More than 10 years | 4.16% |
| More than 20 years | 4.16% |

g) In the civil society sector (30.75%)

| | |
|--------------------|-----|
| Less than 2 years | 55% |
| Between 2-5 years | 20% |
| Between 5-10 years | 15% |
| More than 10 years | 5% |
| More than 20 years | 5% |

Q3. For how many years have you occupied the post you currently hold?

| | |
|--------------------|--------|
| Less than 2 years | 10.75% |
| 2-5 years | 23.07% |
| 5-10 years | 16.92% |
| More than 10 years | 49.23% |

Q4. What is your highest level of education?

| | |
|---------------------|--------|
| High school diploma | 3.07% |
| Bachelor's | 61.53% |
| Master's | 27.69% |
| PhD | 7.69% |

Q5. In which field(s) of study did you obtain your highest degree? (open ended question)

Most common responses:

1. Educational sciences (including pedagogy, management in education etc.)
2. Philology
3. Law

Q6. In the past 24 months, have you participated in any Professional Development activities related to your work and provided by your employer?

| | |
|---|--------|
| No I have not participated in any PD training | 33.84% |
| Yes, less than 3 days in total | 27.69% |
| Yes, between 3 and 8 days in total | 26.15% |
| Yes, between 9 and 20 days in total | 10.76% |
| Yes, more than 20 days in total | 1.53% |

Q7. On a scale of 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the professional development opportunities provided by your employer?

| | |
|---|--------|
| 1 | 26.15% |
| 2 | 18.46% |

| | |
|---|--------|
| 3 | 41.53% |
| 4 | 9.23% |
| 5 | 4.61% |

Q8 How often do you receive training or support for new tasks or responsibilities that are added to your duties?

| | |
|-----------------|--------|
| Often | 6.15% |
| Occasionally | 35.38% |
| Rarely or never | 43.07% |

Q9. In which of the following areas did you receive professional development in the last 24 months?

| | |
|-------------------------------------|--------|
| Data analysis | 7.69% |
| Strategic planning | 6.15% |
| Human resources management | 4.61% |
| Financial management | 1.53% |
| Monitoring and evaluation | 10.76% |
| Leadership | 1.53% |
| Communications and public relations | 7.69% |
| Digital skills | 13.84% |
| Teamwork and collaboration | 9.23% |
| Other | 36.92% |

Q10. Is there a post description or any other official document that lists the terms of reference and/or duties of your post?

| | |
|--------------|--------|
| Yes | 75.38% |
| No | 4.51% |
| I don't know | 20% |

Q11. If yes, please give the name of the document. (open ended question)

Almost all respondents named the "Rulebook for systematisation of jobs"

Q12. If yes, what are the three most important duties mentioned in this document? (open ended question)

Most common response: Planning, managing and/or organising the internal work of in the department

Q13. If no such document exists, how were you informed of the duties of your post (multiple answers possible)? (most common responses are ranked)

1. Personal search
2. Induction training
3. Formal briefing sessions
4. Informal briefing

5. I was not informed (no respondents selected this response)

Q14. On a scale of 1 (not clear at all) to 5 (very clear), how clear is the definition of your duties?

| | |
|---|--------|
| 1 | 6.15% |
| 2 | 3.07% |
| 3 | 27.69% |
| 4 | 30.76% |
| 5 | 32.30% |

Q15. Are there official documents, that specify the functions of your department/unit/ service?

| | |
|--------------|--------|
| Yes | 72.30% |
| No | 4.61% |
| I don't know | 20% |

Q16. If yes, please give the name of the document. (open ended question)

Most common responses:

1. Rulebook on the internal organisation of the MES/unit/department/bureau
2. Annual programme of the MES/unit/department/bureau
3. Rulebook on the systematisation of the jobs

Q17. What is the main function of your department/unit/service, according to this document? (open ended question)

N/a

Q18. If no such document exists, how were you informed of the functions of your department/unit/service (multiple answers possible)?

| | |
|--------------------------|--------|
| Induction training | 9.09% |
| Formal briefing sessions | 18.18% |
| Informal briefing | 9.09% |
| Personal search | 45.45% |
| I was not informed | 27.27% |

Q19. On a scale of 1 (not clear at all) to 5 (very clear), how clear is the definition of the functions of your department/unit/service?

| | |
|---|---------|
| 1 | 3.07% |
| 2 | 4.51% |
| 3 | 20% |
| 4 | 36.922% |
| 5 | 35.38% |

Q20. Please identify the three tasks to which you dedicate most time, starting with the one that

takes most time. (open ended question)

N/a

Q21. How would you describe your current workload?

| | |
|-------------------------------|--------|
| Light and easy | 10.76% |
| Manageable/at the right level | 35.38% |
| Heavy but doable | 38.46% |
| Overwhelming | 15.38% |

Q22. How often do you find yourself working on tasks that are not part of your job description?

| | |
|-----------------|--------|
| Rarely or never | 12.30% |
| Occasionally | 27.69% |
| Frequently | 60% |

Q23. If you are at times unable to respect a deadline, what were some of the constraints that prevented you from delivering within a timely manner? (you can indicate more than one)

| | |
|--|--------|
| Not enough staff | 46.15% |
| Too many conflicting duties | 47.69% |
| The task is not clear | 7.69%% |
| I don't have the authority for this task | 9.23%% |
| Lack of financial resources | 23.07% |
| lack of support by the superior | 21.53% |

Q24. Do you have access to the following resources in your office? Percentage of the answers "Yes"

| | |
|--|--------|
| Computer or laptop | 83.08% |
| Desk | 92.31% |
| Printer or photocopier | 66.15% |
| Mobile phone, paid by the office | 38.46% |
| Mobile Phone, at my own expense | 73.85% |
| Professional e-mail | 92.31% |
| Access to national databases having information on education | 47.69% |

Q25. When you encounter a technical or professional problem, to what extent are the following resources useful to you?

a) My supervisor

| | |
|-------------------|--------|
| Not at all useful | 13.85% |
| Somewhat useful | 29.23% |
| Useful | 32.31% |
| Very useful | 24.62% |

b) Colleagues in my unit/department

| | |
|-------------------|--------|
| Not at all useful | 3.08% |
| Somewhat useful | 30.77% |

| | |
|-------------|--------|
| Useful | 27.69% |
| Very useful | 38.46% |

c) Colleagues in other units/departments/agencies

| | |
|-------------------|--------|
| Not at all useful | 6.15% |
| Somewhat useful | 43.08% |
| Useful | 36.92% |
| Very useful | 13.85% |

d) Learning and development resources (books; journals; training modules)

| | |
|-------------------|--------|
| Not at all useful | 21.54% |
| Somewhat useful | 30.77% |
| Useful | 36.92% |
| Very useful | 10.77% |

e) Official documents

| | |
|-------------------|--------|
| Not at all useful | 7.69% |
| Somewhat useful | 33.85% |
| Useful | 40% |
| Very useful | 18.46% |

f) Internet

| | |
|-------------------|--------|
| Not at all useful | 3.08% |
| Somewhat useful | 23.08% |
| Useful | 46.15% |
| Very useful | 27.69% |

g) Communication with the civil society organizations

| | |
|-------------------|--------|
| Not at all useful | 18.46% |
| Somewhat useful | 33.85% |
| Useful | 33.85% |
| Very useful | 13.85% |

h) Communication with the donors

| | |
|-------------------|--------|
| Not at all useful | 36.92% |
| Somewhat useful | 24.62% |
| Useful | 21.54% |
| Very useful | 16.92% |

Q26. Please indicate the extent to which you agree with the following statements:

a) I am satisfied with the support that my superior gives me

| | |
|-------------------|--------|
| Strongly disagree | 18.46% |
| Disagree | 0.77% |
| Agree | 43.08% |
| Strongly agree | 27.69% |

b) I know what colleagues in my unit/department are doing

| | |
|-------------------|--------|
| Strongly disagree | 12.32% |
| Disagree | 2.31% |
| Agree | 38.46% |
| Strongly agree | 36.92% |

c) I know what colleagues in other units/departments in my agency are doing

| | |
|-------------------|--------|
| Strongly disagree | 18.46% |
| Disagree | 24.62% |
| Agree | 36.92% |
| Strongly agree | 20% |

d) I know what colleagues in other agencies are doing

| | |
|-------------------|--------|
| Strongly disagree | 26.15% |
| Disagree | 27.69% |
| Agree | 33.85% |
| Strongly agree | 12.31% |

e) I have access to the necessary information to perform my job

| | |
|-------------------|--------|
| Strongly disagree | 10.71% |
| Disagree | 6.92% |
| Agree | 50.77% |
| Strongly agree | 21.54% |

f) The information/data available to me is of good quality

| | |
|-------------------|--------|
| Strongly disagree | 12.31% |
| Disagree | 23.08% |
| Agree | 49.23% |
| Strongly agree | 15.38% |

g) I am informed of the decisions taken within my unit/office

| | |
|-------------------|--------|
| Strongly disagree | 21.54% |
| Disagree | 12.31% |
| Agree | 41.54% |
| Strongly agree | 24.62% |

h) I participate in decision-making within my unit/office

| | |
|-------------------|--------|
| Strongly disagree | 32.31% |
| Disagree | 12.31% |
| Agree | 30.77% |
| Strongly agree | 24.62% |

Q27. How regularly are there staff meetings within your unit, either virtually or face to face?

| | |
|----------------------|--------|
| Once a week | 24.62% |
| Once a month | 7.69% |
| once in three months | 9.23% |
| No regular meetings | 58.46% |

Q28. If you have participated in one or several meetings of your unit/office, how useful did you find these meetings?

| | |
|---|--------|
| Very useful | 26.15% |
| Useful | 32.31% |
| Not very useful | 15.38% |
| Not useful at all | 3.08% |
| So far I haven't participated to such meeting | 23.08% |

Q29. Since you got your current position, have you applied for a more senior post?

| | |
|-----|--------|
| Yes | 21.54% |
| No | 78.46% |

Q30. In your opinion, what are the obstacles to career advancement for education officials?

Most common chosen responses:

1. Unattractive salaries
2. Lack of transparent job offer processes
3. Lack of support by the superiors

Q31. How often do you receive feedback from your supervisor on your job performance?

| | |
|--------------|--------|
| Frequently | 20.00% |
| Occasionally | 32.31% |
| Rarely | 30.77% |
| Never | 16.92% |

Q32. How useful is this feedback?

| | |
|-------------------|--------|
| Very useful | 26.15% |
| Useful | 44.62% |
| Not very useful | 13.85% |
| Not at all useful | 15.38% |

Q33. How fair do you feel the yearly appraisal is in evaluating your job performance?

| | |
|-----------------------------|--------|
| Very fair | 10.77% |
| Somewhat fair | 58.46% |
| Not fair at all | 20% |
| It is not applicable for me | 10.77% |

Q34. The education sector is guided by a national education strategy. Have you participated in meetings regarding:

a) Its development

Yes 33.85%
No 66.15%

b) Its approval/validation

Yes 18%
No 82%

c) Its dissemination

Yes 26%
No 74%

d) Its implementation

Yes 43.08%
No 56.92%

Q35. In your opinion, to what extent does the Education Strategy reflect the priorities needed in the education sector?

To a small extent 15.38%
To some extent 50.77%
To a large extent 20%
I don't know 13.85%

Q36. In your opinion, how effective is the National strategy in improving the quality of education in the country?

Very effective 15.38%
Somewhat effective 50.77%
Not effective 21.54%
I don't know 12.31%

Q37. To what extent does the education strategy guide your everyday work?

Frequently 23.08%
Sometimes 41.54%
Rarely 26.15%
Never 9.23%

Q38. In your everyday work, how easy is it to follow the policies, guidelines or recommendations set out in the education strategy?

Easy 15.38%
Somewhat difficult 70.77%
Difficult 13.85%

Q39. So far, how successful do you think the education strategy has been in achieving its intended goals?

Very successful 9.23%

Moderately successful 49.23%
Unsuccessful 24.62%
I don't know 16.92%

Q40. Indicate how far you agree with the following statements.

a) There are sufficient rules, regulations, and procedures to guide my work

Strongly disagree 9.23%
Disagree 29.23%
Agree 58.46%
Strongly agree 4.62%

b) The rules, regulations, and procedures are easy to understand

Strongly disagree 7.69%
Disagree 27.69%
Agree 56.92%
Strongly agree 7.69%

c) The rules, regulations, and procedures are well applied in my workplace

Strongly disagree 12.31%
Disagree 21.54%
Agree 49.23%
Strongly agree 16.92%

d) I have enough autonomy to execute my duties

Strongly disagree 13.85%
Disagree 15.38%
Agree 41.54%
Strongly agree 29.23%

e) Good performance is recognized and valued in my unit/office

Strongly disagree 16.92%
Disagree 15.38%
Agree 40%
Strongly agree 27.69%

f) I feel that my opinion and work are valued in my unit

Strongly disagree 44.55%
Disagree 9.90%
Agree 24.75%
Strongly agree 20.7%

g) My work is important for the education system in North Macedonia

Strongly disagree 7.69%
Disagree 9.23%

Education Sector Analysis: North Macedonia

| | |
|----------------|--------|
| Agree | 30.77% |
| Strongly agree | 52.31% |

j) The Ministry offers its staff room to grow professionally

h) If I could choose, I would choose the same career path

| | |
|-------------------|--------|
| Strongly disagree | 46.15% |
| Disagree | 30.77% |
| Agree | 20% |
| Strongly agree | 4.62% |

| | |
|-------------------|--------|
| Strongly disagree | 18.46% |
| Disagree | 26.15% |
| Agree | 32.31% |
| Strongly agree | 23.08% |

k) I sometimes consider applying for a job position outside of the education administration

i) I am satisfied with the financial conditions of my position

| | |
|-------------------|--------|
| Strongly disagree | 18.46% |
| Disagree | 9.23% |
| Agree | 36.92% |
| Strongly agree | 35.38% |

| | |
|-------------------|--------|
| Strongly disagree | 68.18% |
| Disagree | 13.63% |
| Agree | 16.66% |
| Strongly agree | 1.51% |

Annex 6

6.1 Additional tables

Table A6.1. Structural distribution of the MoES realised budget among its four components, 2012–2022

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MoES | 99.0% | 98.9% | 98.5% | 97.8% | 97.6% | 97.4% | 97.0% | 97.2% | 97.7% | 97.0% | 97.4% |
| BDE | 0.6% | 0.6% | 1.0% | 1.0% | 1.1% | 0.9% | 0.7% | 0.6% | 0.6% | 0.7% | 0.6% |
| NAEPM | 0.4% | 0.5% | 0.5% | 1.1% | 1.1% | 1.5% | 2.1% | 1.9% | 1.5% | 2.1% | 1.8% |
| SEI* | -- | -- | -- | 0.1% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: Authors' calculations based on Ministry of Finance, 2023.

Note: * SEI was singled out starting 2015, before it was part of MoES budget line.

Table A6.2. MoES budget by spending categories, 2012–2022

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | AAGR |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Recurrent Million MKD 2022 prices | | | | | | | | | | | | |
| Wage & allowances | 5,905 | 5,618 | 5,376 | 6,068 | 5,907 | 5,952 | 5,621 | 5,788 | 5,817 | 6,376 | 6,407 | 0.8% |
| Block grants | 16,872 | 16,266 | 16,229 | 16,265 | 15,793 | 15,481 | 15,786 | 16,394 | 18,149 | 17,495 | 17,239 | 0.2% |
| Operating | 2,307 | 2,360 | 2,011 | 2,414 | 2,399 | 2,961 | 2,763 | 2,623 | 2,240 | 2,345 | 2,399 | 0.4% |
| Debt | 115 | 253 | 133 | 317 | 252 | 142 | 180 | 245 | 138 | 91 | 8 | -23.3% |
| Social | 1,216 | 1,169 | 1,264 | 1,367 | 1,388 | 1,316 | 1,121 | 1,079 | 1,060 | 1,390 | 1,947 | 4.8% |
| Total recurrent | 26,416 | 25,667 | 25,012 | 26,431 | 25,739 | 25,853 | 25,472 | 26,128 | 27,405 | 27,697 | 28,001 | 0.6% |
| Capital | 1,412 | 2,028 | 1,582 | 1,546 | 1,432 | 1,087 | 825 | 1,162 | 966 | 1,253 | 1,168 | -1.9% |
| Total | 27,827 | 27,695 | 26,594 | 27,977 | 27,171 | 26,940 | 26,297 | 27,290 | 28,371 | 28,950 | 29,169 | 0.5% |
| Percentage* | | | | | | | | | | | | |
| Recurrent % | | | | | | | | | | | | |
| Wage & Allow. | 21.2% | 20.3% | 20.2% | 21.7% | 21.7% | 22.1% | 21.4% | 21.2% | 20.5% | 22.0% | 22.0% | |
| Block grants | 60.6% | 58.7% | 61.0% | 58.1% | 58.1% | 57.5% | 60.0% | 60.1% | 64.0% | 60.4% | 59.1% | |
| Operating | 8.3% | 8.5% | 7.6% | 8.6% | 8.8% | 11.0% | 10.5% | 9.6% | 7.9% | 8.1% | 8.2% | |
| Debt | 0.4% | 0.9% | 0.5% | 1.1% | 0.9% | 0.5% | 0.7% | 0.9% | 0.5% | 0.3% | 0.0% | |
| Social | 4.4% | 4.2% | 4.8% | 4.9% | 5.1% | 4.9% | 4.3% | 4.0% | 3.7% | 4.8% | 6.7% | |
| Total recurrent | 94.9% | 92.7% | 94.1% | 94.5% | 94.7% | 96.0% | 96.9% | 95.7% | 96.6% | 95.7% | 96.0% | |
| Capital % | 5.1% | 7.3% | 5.9% | 5.5% | 5.3% | 4.0% | 3.1% | 4.3% | 3.4% | 4.3% | | |
| Total (%) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: * Computed over constant realised budget for the period 2012–2022.

Table A6.3. MoLSP education budget by spending categories, 2012–2022

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | AAGR* |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Million MKD 2022 prices | | | | | | | | | | | | |
| <i>Wage</i> | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | -1.6% |
| <i>Block grant</i> | 1,515 | 1,454 | 1,446 | 1,459 | 1,536 | 1,614 | 1,737 | 2,022 | 2,324 | 2,156 | 2,347 | 4.5% |
| <i>Social</i> | 136 | 128 | 124 | 126 | 130 | 119 | 95 | 90 | 272 | 309 | 281 | 7.6% |
| <i>Total recurrent</i> | 1,657 | 1,589 | 1,576 | 1,593 | 1,673 | 1,739 | 1,837 | 2,118 | 2,602 | 2,471 | 2,634 | 4.7% |
| <i>Capital</i> | 51 | 82 | 37 | 33 | 26 | 34 | 45 | 117 | 276 | 390 | 234 | 16.4% |
| <i>Total</i> | 1,709 | 1,670 | 1,613 | 1,625 | 1,699 | 1,773 | 1,882 | 2,235 | 2,878 | 2,860 | 2,868 | 5.3% |
| Percentage* | | | | | | | | | | | | |
| <i>Wage</i> | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | |
| <i>Block grant</i> | 88.7 | 87.0 | 89.6 | 89.8 | 90.4 | 91.0 | 92.3 | 90.5 | 80.7 | 75.4 | 81.9 | |
| <i>Social</i> | 7.9 | 7.7 | 7.7 | 7.8 | 7.6 | 6.7 | 5.0 | 4.0 | 9.4 | 10.8 | 9.8 | |
| <i>Total recurrent</i> | 97.0 | 95.1 | 97.7 | 98.0 | 98.5 | 98.1 | 97.6 | 94.8 | 90.4 | 86.4 | 91.9 | |
| <i>Capital</i> | 3.0 | 4.9 | 2.3 | 2.0 | 1.5 | 1.9 | 2.4 | 5.2 | 9.6 | 13.6 | 8.1 | |
| <i>Total</i> | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | |

Source: Authors' calculations based on Ministry of Finance, 2023a.

Note: * Computed over constant realised budget for the period 2012–2022.

Table A6.4. Spending by category and by main education level, million MKD, 2022

| | Adult ed. | Pre-primary | Primary | Upper secondary | Higher | Science |
|--------------------|-----------|-------------|---------|-----------------|--------|---------|
| Wages & Allowances | 9 | 1,896 | 11,348 | 4,495 | 4,702 | 176 |
| Operating | 12 | 508 | 2,078 | 1,104 | 1,024 | 31 |
| Social | - | 35 | 358 | 853 | 1,412 | 155 |
| Capital | 0 | 285 | 841 | 354 | 349 | 15 |
| Total Budget | 21 | 2,723 | 14,625 | 6,805 | 7,486 | 377 |

Source: Authors' calculations based on Ministry of Finance, 2023a. Based on realised MoES and MoLSP 2022 budget.

Table A6.5. Monthly gross and net school staff salaries by staff characteristics, for primary and secondary education, 2022

| | Primary | Secondary |
|----------------------------|---------|-----------|
| Head | | |
| Monthly gross salary (MKD) | 61,523 | 64,537 |
| Monthly net salary (MKD) | 40,745 | 42,699 |
| Working experience (year) | 21.3 | 19.5 |
| % Temporary | 8 | 10 |
| % Men | 47 | 51 |
| DEPUTY | | |
| Monthly gross salary (MKD) | 55,157 | 54,860 |
| Monthly net salary (MKD) | 36,621 | 36,428 |
| Working experience (year) | 24.1 | 20.5 |
| % Temporary | 12 | 0 |
| % Men | 54 | 52 |
| Teachers | | |
| Monthly gross salary (MKD) | 45,711 | 46,980 |
| Monthly net salary (MKD) | 30,457 | 31,278 |
| Working experience (year) | 16.6 | 16.6 |
| % Temporary | 27 | 24 |
| % Men | 28 | 36 |
| Other staff | | |
| Monthly gross salary (MKD) | 44,467 | 46,008 |
| Monthly net salary (MKD) | 29,685 | 30,670 |
| Working experience (year) | 11.0 | 15.6 |
| % Temporary | 54 | 22 |
| % Men | 14 | 19 |
| Administrative | | |
| Monthly gross salary (MKD) | 31,295 | 33,054 |
| Monthly net salary (MKD) | 21,147 | 22,293 |
| Working experience (year) | 18.2 | 17.9 |
| % Temporary | 14 | 14 |
| % Men | 49 | 44 |
| Total | | |
| Monthly gross salary (MKD) | 43,344 | 44,910 |
| Monthly net salary (MKD) | 28,932 | 29,945 |
| Working experience (year) | 16.5 | 16.8 |
| % Temporary | 27 | 22 |
| % Men | 31 | 37 |

Source: Authors' calculations based on MoES October 2022 Payroll data for primary and secondary education.

Table A6.6. Annual gross statutory salaries for full-time, fully qualified teachers, expressed in purchasing power standard*, 2021/2022

| | Pre-primary | Primary | Lower secondary | Upper secondary |
|------------------------|-------------|---------|-----------------|-----------------|
| Western Balkans | | | | |
| Albania | 11,301 | 11,916 | 12,531 | 13,242 |
| Montenegro | 18,998 | 18,998 | 18,998 | 18,998 |
| Bosnia-Herzegovina | 11,783 | 12,568 | 13,354 | 15,710 |
| North Macedonia | 15,983 | 16,436 | 16,436 | 17,159 |
| Serbia | 13,713 | 16,041 | 16,041 | 16,041 |
| STEE7 | | | | |
| Bulgaria | 16,770 | 16,770 | 16,770 | 16,770 |
| Croatia | : | 23,455 | 23,455 | 23,455 |
| Estonia | : | 19,804 | 19,804 | 19,804 |
| Latvia | 13,719 | 13,058 | 13,058 | 13,058 |
| Lithuania | 25,584 | 25,584 | 25,584 | 25,584 |
| Slovakia | 10,877 | 13,475 | 13,475 | 13,475 |
| Slovenia | 22,819 | 22,819 | 22,819 | 22,819 |
| Other Europe | | | | |
| Hungary | 12,852 | 12,852 | 12,852 | 12,852 |
| Poland | 14,893 | 14,893 | 14,893 | 14,893 |
| Romania | 19,060 | 19,060 | 19,060 | 19,060 |
| Türkiye | 38,876 | 38,876 | 39,286 | 39,286 |

Source: European Commission, 2023a.

Note: * Purchasing power standard (PPS) is an artificial common reference currency unit used to express the volume of economic aggregates for the purpose of spatial comparisons in such a way that price level differences between countries are eliminated. The PPS values are obtained by dividing the national currency units by the respective purchasing power parity.

Table A6.7. Percentage difference between the statutory starting salaries of lower secondary teachers and their salaries after 10- and 15-years' service, and at the top of the pay range, 2021/2022

| | After 10 years (%) | After 15 years (%) | At the end of the career (%) | Average NBR of years to reach the salary at the top of the range |
|------------------------|-----------------------|-----------------------|------------------------------------|---|
| Western Balkans | | | | |
| Albania | 27.6 | 41.5 | 77.8 | 32 |
| Montenegro | 4.8 | 8.2 | 29.2 | 40 |
| Bosnia-Herzegovina | 5 | 7.5 | 20 | |
| North Macedonia | 5.1 | 7.8 | 20 | 40 |
| Serbia | 4 | 6 | 16 | 40 |
| STEE7 | | | | |
| Bulgaria | 3.2 | 7.1 | ... | |
| Croatia | 4.5 | 7 | 19.4 | 40 |
| Lithuania | 3.3 | 14.9 | 30.8 | 25 |
| Slovakia | 12.4 | 15.1 | 28.8 | 40 |
| Slovenia | 22.5 | 54.1 | 84.7 | 25 |

Other Europe

| | | | | |
|---------|------|------|------|----|
| Hungary | 25.1 | 34.4 | 76.1 | 42 |
| Poland | 34 | 63.5 | 70.4 | 20 |
| Romania | 19.3 | 28.6 | 70.5 | 40 |
| Türkiye | 2.9 | ... | ... | 25 |

Source: European Commission, 2023a.

Table A6.8. Earnings functions of gross salary in public primary education, 2022

| | Coefficient | t | Coefficient | t |
|---------------------------------|-------------|-------|-------------|-------|
| Education | | | | |
| Bachelor | Ref | | Ref | |
| Unknown level of education | -3,308 | -8.2 | -616 | -1.6 |
| Secondary or lower | -15,522 | -10.8 | -5,900 | -24.4 |
| Post-secondary (Diploma) | -246 | -1.3 | 508 | 2.9 |
| Master's and + | 1,315 | 2.7 | 731 | 1.6 |
| Working experience (years) | 356 | 18.5 | 335 | 18.6 |
| Working experience ² | -2.7 | -5.8 | -2.5 | -5.8 |
| Gender | | | | |
| Female | Ref | | Ref | |
| Male | -299 | 2.6 | -246 | -2.3 |
| Status | | | | |
| Open-ended | -4,086 | -27.5 | -4,850 | -34.9 |
| Temporary | | | | |
| Position | - | - | Ref | |
| Administrative | - | - | 17,365 | 22 |
| Deputy | - | - | 24,123 | 53.8 |
| Head | - | - | 12,106 | 41.6 |
| Other staff | - | - | 10,532 | 45.2 |
| Teacher | | | | |
| Constant | 42,282 | | 32,048 | |
| N | 21,419 | | 21,419 | |
| R ² | 45.8 | | 53.4 | |

Source: Authors' calculations based on MoES Payroll October 2022.

Table A6.9. Earning function of gross salary in public secondary education, 2022

| | Coefficient | t | Coefficient | t |
|----------------------------|-------------|------|-------------|------|
| Education | | | | |
| Post-secondary (Diploma)/ | Ref | | Ref | |
| Unknown level | -13,100 | 24.1 | -7,413 | 12.9 |
| Secondary or lower | 1,931 | 3.8 | -130 | 0.3 |
| Bachelor | 2,451 | 3.7 | 369 | 0.5 |
| Master's and + | | | | |
| Working experience (years) | 596 | 16.2 | 543 | 15.7 |

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| | Coefficient | | t | | Coefficient | | t |
|---------------------------------|-------------|--|------|--|-------------|--|------|
| Working experience ² | -7.9 | | -8.6 | | -6.7 | | -7.8 |
| Gender | | | | | | | |
| Female | Ref | | | | Ref | | |
| Male | 761 | | 4 | | 639 | | 3.6 |
| Status | | | | | | | |
| Open-ended | Ref | | | | Ref | | |
| Temporary | -3,925 | | 14.2 | | -4,331 | | 16.5 |
| Position | | | | | | | |
| Administrative | | | | | Ref | | |
| Deputy | - | | - | | 14,016 | | 12.4 |
| Head | - | | - | | 24,451 | | 28.1 |
| Other staff | - | | - | | 8,727 | | 15.8 |
| Teacher | - | | - | | 8,779 | | 21.2 |
| Constant | 38,865 | | | | 32,698 | | |
| N | 7,966 | | | | 7,966 | | |
| R ² | 43.9 | | | | 50.2 | | |

Source: Authors' calculations based on MoES Payroll October 2022.

Table A6.10. Earning function of gross salary in public primary and secondary education, 2022

| | Coefficient | | t | | Coefficient | | t |
|---------------------------------|-------------|--|-------|--|-------------|--|-------|
| Education | | | | | | | |
| Ref | | | | | Ref | | |
| Secondary or lower | -14,424 | | 79.9 | | -64,797 | | -28.9 |
| Bachelor | 1,121 | | 7.1 | | -140 | | -0.9 |
| Master's and + | 2,217 | | 6.4 | | 472 | | 1.4 |
| Working experience (years) | 451.5 | | 26.3 | | 407.3 | | 25.6 |
| Working experience ² | -4.5 | | -10.9 | | -3.9 | | -10.1 |
| Gender | | | | | | | |
| Ref | | | | | Ref | | |
| Male | 210 | | 2.2 | | 112 | | 1.3 |
| Status | | | | | | | |
| Ref | | | | | Ref | | |
| temporary | -3,908 | | 30.4 | | -4,494 | | -37.1 |
| Position | | | | | | | |
| Ref | | | | | Ref | | |
| Admin Primary | - | | - | | -10,334 | | -49.6 |
| Admin Secondary | - | | - | | -8,580 | | -32.9 |
| Deputy Primary | - | | - | | 6,697 | | 8.9 |
| Deputy Secondary | - | | - | | 6,466 | | 6.7 |
| Head Primary | - | | - | | 13,108 | | 33.9 |
| Head Secondary | - | | - | | 16,903 | | 23.5 |
| Other staff Primary | - | | - | | 361 | | 1.6 |
| Other staff Secondary | - | | - | | 670 | | 1.8 |
| Teacher Secondary | - | | - | | 951 | | 8.8 |
| Constant | 40,328 | | | | 41,943 | | |
| N | 27,515 | | | | 27,515 | | |
| R ² | 47 | | | | 55 | | |

Source: Authors' calculations based on MoES Payroll October 2022.

Table A6.11. Some features of municipal primary schools and their costs by municipality, 2022

| Municipality | N° central & indep schools | N° indep. Schools | N° central schools | N° satellite schools | N° students | N° teachers | STR | Budget (MKD '000) | UC (MKD) |
|-------------------|-------------------------------------|-------------------------|--------------------------|----------------------------|----------------|----------------|------|-------------------------|-------------|
| Shuto Orizari | 2 | 1 | 1 | 1 | 4,139 | 255 | 16.2 | 173,267 | 41,862 |
| Studenichani | 3 | - | 3 | 8 | 3,510 | 241 | 14.6 | 150,474 | 42,870 |
| Aerodrom | 7 | 6 | 1 | 1 | 6,532 | 480 | 13.6 | 308,030 | 47,157 |
| Arachinovo | 2 | 1 | 1 | 2 | 2,103 | 130 | 16.2 | 99,457 | 47,293 |
| Chair | 9 | 9 | 0 | 0 | 7,981 | 545 | 14.6 | 385,642 | 48,320 |
| Kisela Voda | 8 | 5 | 3 | 4 | 5,562 | 401 | 13.9 | 284,240 | 51,104 |
| Butel | 7 | 6 | 1 | 1 | 5,183 | 361 | 14.4 | 270,449 | 52,180 |
| Saraj | 9 | 2 | 7 | 12 | 5,359 | 407 | 13.2 | 280,769 | 52,392 |
| Tetovo | 12 | 3 | 9 | 13 | 9,885 | 861 | 11.5 | 536,014 | 54,225 |
| Gorce Petrov | 6 | 4 | 2 | 2 | 3,559 | 284 | 12.5 | 193,282 | 54,308 |
| Veles | 6 | 2 | 4 | 12 | 4,504 | 366 | 12.3 | 248,089 | 55,082 |
| Centar | 8 | 8 | 0 | 0 | 4,770 | 383 | 12.5 | 266,347 | 55,838 |
| Karposh | 10 | 9 | 1 | 1 | 5,923 | 457 | 13.0 | 333,110 | 56,240 |
| Gazi Baba | 11 | 7 | 4 | 5 | 6,812 | 493 | 13.8 | 389,517 | 57,181 |
| Shtip | 5 | 2 | 3 | 9 | 3,895 | 360 | 10.8 | 223,024 | 57,259 |
| ----- | | | | | | | | | |
| Rosoman | 1 | - | 1 | 5 | 344 | 53 | 6.5 | 39,213 | 113,990 |
| Pehchevo | 1 | - | 1 | 4 | 313 | 46 | 6.8 | 35,925 | 114,775 |
| Zelenikovo | 1 | - | 1 | 6 | 300 | 59 | 5.1 | 35,009 | 116,695 |
| Demir Hisar | 3 | - | 3 | 10 | 467 | 91 | 5.1 | 56,954 | 121,957 |
| Karbintsi | 1 | - | 1 | 9 | 385 | 96 | 4.0 | 47,656 | 123,781 |
| Konche | 1 | - | 1 | 5 | 255 | 61 | 4.2 | 32,605 | 127,862 |
| Kratovo | 1 | - | 1 | 8 | 485 | 123 | 3.9 | 62,226 | 128,301 |
| Zrnovtsi | 1 | - | 1 | 1 | 160 | 35 | 4.6 | 20,950 | 130,940 |
| Novatsi | 1 | - | 1 | 8 | 236 | 70 | 3.4 | 31,567 | 133,758 |
| Lozovo | 1 | - | 1 | 4 | 209 | 27 | 7.7 | 28,193 | 134,893 |
| Cheshinovo – Obl. | 2 | - | 2 | 7 | 352 | 89 | 4.0 | 51,041 | 145,004 |
| Staro Nagorichane | 3 | - | 3 | 8 | 269 | 91 | 3 | 49,725 | 184,852 |
| Novo Selo | 2 | - | 2 | 9 | 403 | 124 | 3.3 | 79,456 | 197,161 |
| Mavrovo and Rost. | 3 | - | 3 | 9 | 292 | 80 | 3.7 | 60,299 | 206,502 |
| Debartsa | 1 | - | 1 | 10 | 185 | 102 | 1.8 | 41,413 | 223,853 |
| Total/average | 337 | 110 | 227 | 646 | 184,768 | 18,933 | 9.8 | 12,222,580 | 66,151 |

Source: Authors' calculations based on Ministry of Finance, 2023a, realised 2022 municipal budget and State Statistical Office, 2023a.

Note: Skopje municipalities are highlighted in orange. This table displays the information related to the 15 municipalities with the lowest unit costs and the 15 municipalities with the highest unit costs.

Table A6.12. Multivariate analysis of expenditure determinants of municipal primary schools at municipality level

| Variable | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|-------------------------------|-------------|------|-------------|------|-------------|------|-------------|------|
| | Coefficient | t | Coefficient | t | Coefficient | t | Coefficient | t |
| Students number | 36,431 | 32.3 | 37,004 | 36.3 | 37,338 | 36.4 | 37,153 | 36.4 |
| Central schools | Ref | | | | | | | |
| Independent schools | -5,834,055 | 5.7 | | | | | | |
| Density (inhabitant/km2) | -258,263 | 0.5 | 83.4 | 0.2 | -20.6 | 0.1 | -67.6 | 0.1 |
| Regional GDP 2015 | -13,042 | -2.4 | -14.4 | 3.1 | -16.3 | 3.1 | | |
| Independent schools | | | Ref | | Ref | | Ref | |
| Number of satellites = 1 | | | 1,886,840 | 1.6 | 1,703,833 | 1.4 | 2,100,867 | 1.9 |
| Number of satellites = 2 | | | 4,054,512 | 3.4 | 3,791,443 | 3.2 | 4,012,696 | 3.4 |
| Number of satellites = 3 | | | 5,995,424 | 4.3 | 5,980,579 | 4.4 | 6,114,721 | 4.5 |
| Number of satellites = 4 + | | | 12,629,296 | 10.4 | 11,803,166 | 9.6 | 12,080,395 | 9.9 |
| % Albanian, Turkish, Romanian | | | | | Ref | | Ref | |
| % Macedonian | | | | | 39,015 | 2.7 | 47,834 | 2.6 |
| % Serbian | | | | | -495,257 | 1.7 | -626,984 | -1.8 |
| % Bosnian | | | | | -201,815 | 1.5 | -76,616 | -0.5 |
| Southeast | | | | | | | Ref | |
| Vardar | | | | | | | 3,066,428 | 1.6 |
| East | | | | | | | 4,273,347 | 2.3 |
| southwest | | | | | | | 6,271,459 | 3.6 |
| Pelago | | | | | | | -556,870 | -0.3 |
| Polog | | | | | | | 4,332,120 | 2.3 |
| Notheast | | | | | | | 5,043,259 | 2.6 |
| Skopje | | | | | | | 853,039 | 0.5 |
| Constant | 21,808,435 | | 15,638,209 | | 14,466,366 | | 7,004,064 | |
| R ² | 76.5% | | 80.7% | | 81.4% | | 83.0% | |

Source: Authors' calculations based on Ministry of Finance, 2023, realised 2022 municipal budget and State Statistical Office, 2023a.

Table A6.13. Some features of municipal secondary schools and their costs, by municipality, 2022

| Municipality | N° schools | N° Gym | N° Gym & VET | N° VET | N° students | N° teachers | Str | Budget (MKD '000) | Of w/ BG | UC MKD |
|------------------|------------|--------|--------------|--------|-------------|-------------|------|-------------------|----------|---------|
| Kisela Voda | 1 | - | - | 1 | 1,473 | 101 | 14.6 | 74,974 | 96% | 50,899 |
| Centar | 3 | 2 | - | 1 | 4,958 | 280 | 17.7 | 273,106 | 98% | 55,084 |
| Saraj | 1 | - | 1 | - | 728 | 50 | 14.6 | 40,957 | 97% | 56,259 |
| Butel | 2 | - | 1 | 1 | 3,003 | 240 | 12.5 | 179,105 | 100% | 59,642 |
| Chair | 1 | - | 1 | - | 1,186 | 91 | 13 | 81,339 | 94% | 68,583 |
| Karposh | 6 | 2 | 4 | - | 5,259 | 405 | 13 | 362,350 | 91% | 68,901 |
| Gostivar | 4 | - | 1 | 3 | 3,123 | 381 | 8.2 | 233,669 | 95% | 74,822 |
| Tetovo | 5 | 2 | - | 3 | 5,842 | 553 | 10.6 | 455,320 | 96% | 77,939 |
| Bitola | 6 | 1 | 1 | 4 | 3,685 | 360 | 10.2 | 288,185 | 95% | 78,205 |
| Shuto Orizari | 1 | - | - | 1 | 400 | 41 | 9.8 | 31,840 | 100% | 79,601 |
| Kichevo | 2 | - | 2 | - | 1,482 | 177 | 8.4 | 120,753 | 97% | 81,480 |
| Aerodrom | 5 | - | 3 | 2 | 3,589 | 331 | 10.8 | 299,825 | 75% | 83,540 |
| Shtip | 4 | 1 | 1 | 2 | 2,153 | 185 | 11.6 | 183,967 | 95% | 85,447 |
| Ohrid | 3 | - | 3 | - | 1,913 | 152 | 12.6 | 164,539 | 94% | 86,011 |
| Struga | 2 | 1 | - | 1 | 2,059 | 219 | 9.4 | 179,102 | 100% | 86,985 |
| --- | | | | | | | | | | |
| Resen | 1 | - | 1 | - | 317 | 46 | 6.9 | 34,024 | 91% | 107,332 |
| Probishtip | 1 | - | - | 1 | 300 | 45 | 6.7 | 32,361 | 94% | 107,869 |
| Gazi Baba | 3 | 1 | - | 2 | 1,920 | 146 | 13.2 | 207,815 | 100% | 108,237 |
| Dolneni | 1 | 1 | - | - | 300 | 38 | 7.9 | 32,517 | 94% | 108,389 |
| Ilinden | 1 | - | - | 1 | 285 | 20 | 14.3 | 31,271 | 93% | 109,724 |
| Berovo | 1 | - | 1 | - | 302 | 51 | 5.9 | 40,020 | 97% | 132,517 |
| Kratovo | 1 | - | 1 | - | 203 | 26 | 7.8 | 27,090 | 100% | 133,447 |
| Mavrovo And Rost | 1 | 1 | - | - | 112 | 19 | 5.9 | 15,390 | 98% | 137,415 |
| Sveti Nikole | 1 | - | 1 | - | 355 | 51 | 7 | 50,441 | 88% | 142,087 |
| Makedonska Kam | 1 | - | 1 | - | 136 | 32 | 4.3 | 20,399 | 78% | 149,994 |
| Valandovo | 1 | - | 1 | - | 196 | 35 | 5.6 | 29,684 | 95% | 151,447 |
| Demir Hisar | 1 | - | 1 | - | 120 | 27 | 4.4 | 19,772 | 90% | 164,766 |
| Vrapchishte | 1 | - | 1 | - | 129 | 24 | 5.4 | 21,417 | 89% | 166,025 |
| Krushevo | 1 | - | 1 | - | 113 | 28 | 4 | 21,183 | 100% | 187,460 |
| Makedonski Brod | 1 | - | 1 | - | 85 | 22 | 3.9 | 26,516 | 100% | 311,957 |
| Total/average | 93 | 16 | 45 | 32 | 65,140 | 6,007 | 10.8 | 5,397,370 | 93% | 82,858 |

Source: Authors' calculations based on Ministry of Finance, 2023, realised 2022 municipal budget and State Statistical Office, 2023a.

Note: Skopje municipalities are highlighted in orange. This table displays the information related to the 15 municipalities with the lowest unit costs and the 15 municipalities with the highest unit costs.

Table A6.14. Multivariate analysis of expenditure determinants in municipal secondary education, 2022

| | Model 1 | | Model 2 | | Model 3 | |
|------------------------------|-------------|------|-------------|------|-------------|------|
| | Coefficient | t | Coefficient | t | Coefficient | t |
| Number of students | 51,028 | 14.5 | 50,619 | 14.2 | 49,092 | 14.9 |
| School is | | | | | | |
| Gymnasium | Ref | | Ref | | Ref | |
| VET and Gymnasium | 3,934,953 | 1.6 | 4,876,089 | 1.1 | 3,579,107 | 0.8 |
| VET | 7,258,291 | 0.9 | 8,045,589 | 1.8 | 7,706,755 | 1.7 |
| Density (inhabitant/km2) | -2,009 | 1.6 | -1,059 | 0.6 | - | |
| Regional GDP 2015 | | | 21.2 | 0.9 | - | |
| All regions except Southeast | | | | | Ref | |
| Southeast | | | | | 10,164,525 | 1.8 |
| Constant | 19,362,767 | | 23,278,228 | | 18,501,727 | |
| R ² | 73.80% | | 74.10% | | 74.20% | |

Source: Authors' calculations based on Ministry of Finance, 2023, realised 2022 municipal budget and State Statistical Office, 2023a.

6.2. Number and effective status of workers in public education according to the payroll in Primary and Secondary education

The file on the individual salaries of staff in the education system provides a relatively accurate picture of the number of staff in each of the various functions listed and removes any doubt about the numbers in the various categories of staff, which vary from one statistical source to another.

For the year 2022, the number of primary school teachers recorded by SSO, the national statistics body, was 19,138. In the individual payroll/salary file, the number of teachers is 19,174, including teachers and other staff. Similarly, this salary file shows a relatively large number of administrative and service staff (around 4,000 for primary schools and 1,200 for secondary schools), whereas their numbers are much lower, according to SSO (343).

Table A6.15. Number of teaching staff in primary, by source of information, October 2022

| | Payroll | | | SSO |
|-------------|-----------|--------------|-----------------------------------|--------|
| | No filter | On leave = 0 | On leave = 0 and gross salary > 0 | |
| Teacher | 17,375 | 15,680 | 15,606 | 19,138 |
| Other staff | 1,799 | 1,676 | 1,663 | |
| Total | 19,174 | 17,356 | 17,269 | |

Source: Authors' calculations based on MoES October 2022 Education Payroll and State Statistical Office, 2023a.

While there do not appear to be any statistics that would give a precise figure for the number of teachers facing pupils among all those with teaching status, the salary file reveals another ambiguity: a relatively large number of people are declared to be 'on leave', while receiving a salary for their work in the Education Department.

In the primary sector, 2,129 people have been declared 'on leave', 82% of whom receive a salary (MKD 3,189 per month on average). Teachers and other similar staff are particularly affected by this situation, accounting for 85% of 'on leave' staff. Of these 2,129 people, 1,228 are on secondment to another public service, and virtually all of them receive a salary (an average of MKD 3,344). Of the 901 on-leave staff who are not on secondment to another public sector job, 58% are receiving a salary at the time of the survey.

Table A6.16. Staff 'on leave' characteristics and average monthly gross salary in primary education payroll, October 2022

| Reasons to be on leave | % with Gross salary > 0 | Number with Gross salary > 0 | Average monthly gross salary in MKD (if gross salary > 0) |
|--------------------------------------|-------------------------|------------------------------|---|
| Employment by public call | 99.20% | 900 | 33,236 |
| Employment by agreement | 98.20% | 214 | 34,989 |
| Employment from election | 100% | 107 | 35,107 |
| Employment from official appointment | 87.50% | 7 | 61,019 |
| Total reasons 6 to 10 | 99% | 1,228 | 33,844 |
| Other reasons | 58% | 901 | 31,630 |
| Total 'on leave' | 82% | 2,129 | 33,189 |

Source: Authors' calculations based on MoES October 2022 Education Payroll data.

A similar situation can be observed in the secondary sector, where 409 people are 'on leave' at the reference date of the salary file (October 2022). A smaller proportion of them are on secondment to a public sector activity (22.0%) but, as in the primary sector, they all receive a salary. Among the 319 employees on leave to a job outside the previous framework, nearly two out of three are still receiving a salary.

Table A6.17. Staff 'on leave' characteristics and average monthly gross salary in secondary education payroll, October 2022

| Reasons to be on leave | % with Gross salary > 0 | Number with Gross salary > 0 | Average monthly gross salary in MKD (if gross salary > 0) |
|---|----------------------------|---------------------------------|---|
| Employment by public call | 99.2% | 81 | 28,578 |
| Employment by agreement | 98.2% | 8 | 24,063 |
| Employment from election | 100% | 1 | 22,401 |
| Employment from official appointment | 87.5% | 2 | 63,357 |
| Total reasons 6 to 10 | 99.0% | 90 | 28,734 |
| Other reasons to leave | 60.2% | 319 | 32,630 |
| Total 'on leave' | 68.70% | 409 | 31,499 |

Source: Authors' calculations based on MoES October 2022 Education Payroll data.

This situation can probably be explained by the fact that the observation of salaries is a one-off event, whereas the actual secondment situation may occur over time (on 1 January of the following year rather than in October, for example), or by other administrative reasons unknown to us. However, this situation needs to be clarified, since as the number of staff and the amounts involved are far from insignificant in terms of expenditure and operations (actual management).

6.3. Block grants and formulas

Different formulas, similar challenges

In North Macedonia, each education subsector operates under a distinct funding formula, a pattern commonly observed in various European systems. Although these formulas vary in their specifics, they share numerous common challenges. The aim here is not to delve into the intricacies of each formula and its individual characteristics but instead to offer a comprehensive overview of the shared challenges they collectively face.

Most of the funding formulas are outdated and do not adequately reflect the changes in the structure, size and needs of the education system that have occurred over the past two decades. For example, the funding formulas for pre-primary, primary and secondary education are linked to the fiscal decentralisation process, which began in 2007, with limited consideration of the evolving needs of educational institutions or the shifting demographics within municipalities over time. The higher education formula dates back from the late 1980s and has not been adequately adjusted over time to take into account the expansion of the higher education system and the wide range of providers.¹²⁷

Over the years, the government has stopped adhering strictly to the rules of the funding formulas it had defined. The result is that funding formulas are not consistently followed, and the funding is not allocated on the basis of objective and transparent criteria. Since the budget is no longer based on the objective criteria that had been originally designed to allocate resources every year, the amount of public money that each municipality receives today reflects, to a large extent, historical trends (in most cases last year's budget volume). The consequence of this is that there are no incentives in place that would push for a more optimal and efficient use of resources.

The way municipalities transfer funding to schools is also non-transparent. The MoES transfers its budgetary funding by means of block grants to municipalities. These funds transit through the municipalities, which then allocate them to schools. The block grant calculation is not specified in the legislation, so the actual calculation is not clearly defined. Furthermore, as a recent World Bank report notes, 'Despite the fact that the central government provides most of the funds, the funding comes with too few strings attached and municipalities have no obligations to disclose the criteria and standards used to decide on the distribution of funding per school' (World Bank, 2023, p.5). In this respect, the municipalities remain the final arbiters of actual expenditure.

The process of decentralisation has not resulted in a significant shift in how municipalities take ownership of education funding. While municipalities are allowed by law to supplement education funding with their own resources, except for school employee salaries, they seldom do so in practice. This reluctance stems from two main reasons related to the fiscal capacity of municipalities and their perceived role in financing education: i) many municipalities are financially weak and cannot afford to 'top-up' with additional funding; and ii) municipalities hold a (mis)conception that block grants from the central government are supposed to cover the full costs for the education services provided. This perception is evident in the fact that municipal contributions from their own resources constitute only 1.3% of the total education budget.

The allocation of funding is more or less disconnected from any performance indicators that would motivate municipalities and/or schools towards a more efficient and accountable management of funds and the achievement of national level strategic goals. Outcome-based allocation which rewards performance is difficult because the formulas do not incorporate such elements, and the reliability and quality of financing data are not entirely appropriate to allow for the measurement of performance. In addition, there is no clear link between the funding formulas used and the key

¹²⁷ Salmi, J. (2016). Sustainable Funding Model for the Macedonian Tertiary Education System.

objectives that the Government is aiming to reach, such as those stated in the National Education Strategy.

The current structure of funding formulas prioritises the allocation of resources towards staff costs, often overlooking the consideration of student enrolment numbers. Typically, fund distribution depends heavily on the nature of school expenses and the staffing levels. The number of students is rarely taken into account when allocating funds. Commonly, the distribution of funds relies more on the types of expenses borne by schools and staffing numbers. In part, this leads to the recruitment of ‘unnecessary’ teachers, a situation exacerbated by the absence of central-level accountability mechanisms and performance measurements imposed on municipalities.

The possibility to shift 20% of budget items from one category to another creates sufficient budget flexibility for schools; however, long-term planning becomes difficult for schools since there is no possibility to build financial reserves. International experience shows that having the ability to shift 20% is more than sufficient room for manoeuvre, as larger shifts are not realistic in a situation of scarce resources. While having some flexibility to shift money may be welcomed in principle, the relevance of the budget as an accountability instrument is decreased. Instead, if inputs are flexible, a better way of legitimising why a school deserves a certain sum of money are performance indicators or information about attainment of certain goals.

Proposals for new funding models in the pipeline and considerations for the future

The challenges identified highlight the necessity of reevaluating the approach to financing education by introducing new or revised formulas. Over recent years, the Government with the help of international development partners has commissioned several reports and initiatives aiming towards the creation of new formulas. Specifically:

- In pre-primary education, the MoLSP, with the support of the World Bank, is in the process of developing a new funding formula for this subsector. A situational analysis of the existing formula has been completed, with draft options for a new formula expected by the end of 2023.
- In primary education, the 2016-2025 National Education Strategy makes an explicit priority of introducing a new primary education funding formula. In cooperation with the World Bank and UNICEF, the MoES has developed a new draft funding formula for primary education.¹²⁸ The process of preparation of the formula involved broad consultations with key stakeholders at all levels (schoolteachers, directors, parents, municipalities, heads of departments at MoES and the MoF, development partners, etc.). This formula aims to address issues of efficiency by gradually reducing the portion of salaries in total block grants, reallocating funds to enhance quality, equity and teacher training. Moreover, it seeks to increase primary education expenditure to 2.1% of the GDP by 2027 and support the gradual optimisation of the school network. As a next step, the Government should adopt a new Decree stipulating the new formula.
- In secondary education, in cooperation with the Embassy of Switzerland in North Macedonia, through SDC’s Education for Employment Project, the MoES has developed a new draft funding

¹²⁸ The new formula consists of four components: 1) Basic component (applies to all students without exception): defines a basic per student sum (including salaries, learning materials, teacher PD, utilities) which is multiplied with a coefficient depending of on the level of school development (which distinguishes between nine different types of schools); 2) Variable component (applies only to certain students and covers the costs for vulnerable categories): such as school transport, special needs students, minority language of instruction, school trips for students at risk’ 3) Adjusting component (provides a smoothing effect on the results obtained from the previous two components), with schools receiving +/- 5% from what they received the previous year; and 4) Development component (provides performance-based incentives to schools), and amounts up to 1% of the total that a school would receive.

formula¹²⁹ for secondary education in 2021¹³⁰. The process of preparation of the formula involved consultations with key stakeholders including representatives from the ministries of Economy, Labour and Social Policy, Local Self-Government; Association of the units of Local self-government, representatives from 3 chambers and business sector associations, development partners etc. The introduction of the new formula was postponed beyond the planned 2022/2023 school year¹³¹.

- In higher education, two reports conducted by international consultants in 2011 and 2019 have outlined potential funding formula options. A new draft funding formula was prepared by the Ministry in 2017 (international expert was engaged through a World Bank financed project SKILLS). However, according to the new Law on Higher Education adopted in 2018 the National Council for Higher Education is responsible to propose the Decree for Measures and Criteria for the Funding of Higher Education, that is to be adopted by the Government. According to the work plan of the National Council the Decree for Measures and Criteria for the Funding of Higher Education should be prepared in 2024 (taking in consideration the draft formula prepared in 2017).

Each reform endeavour, including funding reforms, carries inherent risks and potential pitfalls that may result in the failure of the reform. These challenges can result in suboptimal implementation of funding reforms and funding models. Bearing this in mind, a successful reform planning process should exhibit awareness of several critical considerations to ensure a favourable reform outcome:

Incentivising performance and using the formula as a policy steering mechanism in order to ensure close alignment with national priorities: The new funding formulas should have a number of steering elements within them that reflect the performance of education institutions. The main dimensions of performance should be defined by indicators reflecting their contribution to access, equity, quality and the efficiency of the use of public resources. The selected indicators should be concise and measurable. If the indicators are too generic, this could cause unwanted effects. The indicators should also be in alignment with the strategic policy priorities of the country in the field of education. This implies that there should be a clear national strategic direction in the first place, without which funding will remain ineffective. On the other hand, a vision and plan for education development will not be successful without sufficient financial resources and incentives.

Ensuring transparency, objectivity and fairness in the allocation process and criteria: The funding formulas should be transparent. All providers of education must know what their budget is and what rules and objective criteria have been used to calculate it. Direct and discretionary negotiations between the MoES and providers (such as the current arrangements in higher education), should be

¹²⁹ The new formula consists of three components: A - Basic amount, B - Standard component and C - development component. 1) A - The basic amount is calculated as a necessary amount for normal functioning of the standard educational unit/school, i.e. "virtual" school with 8 classes (two classes per year each), with 24 students in each class (a total of 192 pupils). The basic amount enables financing of municipalities which have lower number of students than the effective number of students in the country's secondary school (Effective number of students is a sum of the number of students who attend gymnasium, the number of students who attend the VET schools multiplied by the coefficient 1.3 and the number of students with special educational needs multiplied by coefficient 2.0.) 2) B - The standard component comprises the standard cost per student in secondary education in the amount of 79,168 denars (in year 2021) annually per student, and it includes the costs for salaries and contributions, utilities, heating, materials, repairs and maintenance, contracted services, and other expenditures. The standard component is calculated every other year such that the costs for salaries of the educational and non-educational staff will be increased by 0.5% on the basis of past efforts, by appropriate percentage when there is an increase of salaries and an increase for career promotion, while the other costs are adjusted according to the projected inflation rate. 3) C - The development component will provide support in the process of collecting additional funds and tools for mobilization of resources for development of secondary education. Every municipality will have the opportunity to get an appropriate amount of funds depending on the performance of schools (evaluated by developed clear and measurable criteria) which are located on its territory but not more than 1% of the grant. The development component was planned to be introduced in 2023.

¹³⁰ See North Macedonia ERP 2022-2024 (Ministry of finance, 2022b).

¹³¹ See World Bank, 2023b.

abolished to limit pressures from interested parties and avoid biases. Additionally, the outcomes of each funding round should be publicly accessible. This transparency enhances accountability, as it allows stakeholders, including the government, educational institutions and the public, to assess whether the funds are being distributed in a fair and efficient manner.

Ensuring sufficient communication and stakeholder participation in designing the funding models:

The government should consult various stakeholders, including educators, parents, students, and community members, in the development of the funding formulas. Participation in the model design process could lead to the ideal effect that people become and feel being part of the reform process and start to develop 'ownership' for reforms. This will also ensure that diverse perspectives are considered and increases the likelihood of successful implementation. Without an inclusive process that explains the objectives and the benefits of the reform, the effects of the reform could be reduced or undermined because of resistance.

Strengthening human capacities: The weak internal capacities in the MoES and MoF, as well as municipalities and schools, may be an issue that requires attention in order to strengthen their institutional capacities and push them towards a more performance-oriented management of funds. In the implementation of new funding models, often times a lot of technical knowledge is required. For this reason, training that supports staff in collecting, analysing and monitoring funding data will be essential. Such training should also ensure that the changes introduced are easily understandable by all stakeholders.

Increasing data collection, accuracy and monitoring: The implementation of any new funding model necessitates the establishment of a robust data infrastructure that ensures compatibility between various educational and financial data sources. This compatibility is crucial for effective data triangulation. Since late 2022, the MoF with the support of the World Bank, is working on the development of an Integrated Financial Management System (IFMIS). The goal of the IFMIS is to provide a modernised public finance system which will be attained by connecting the existing defragmented and disconnected systems to a single centralised digital platform. The IFMIS will encompass several key functionalities, including budget planning, budget execution (comprising all expenditure and revenue activities, as well as operations related to a single treasury account), debt management and integration with other government systems for the automated exchange of data. Additionally, it will provide a secure web portal for authorised budget users and public entities to access relevant information. This effort lays a strong foundation for improving spending efficiency, enhancing transparency and accountability, and enabling more predictable medium-term planning in all sectors, including education.

Avoiding too much complexity in funding models: Employing an excessively complex funding formula can pose several challenges. Firstly, such complexity can obscure transparency and accountability, making it difficult for stakeholders to understand how funding is allocated and utilised. Secondly, a highly intricate formula can place an undue burden on educational institutions and administrative bodies, demanding extensive resources and time to decipher and implement. Thirdly, the more complex the formula is, the higher and more costly the calculation efforts will be (see ETF, 2020a).

Maintaining complementarity and consistency among the various funding formulas: As the government is working on several new formulas at the same time, it is essential that these funding instruments are complementary, consistent and mutually reinforcing. It is worth noting, however, that if too many reforms are carried at once, there is a risk that the education administration will be overwhelmed and unable to meet the requirements of the reform.

Ensuring a smooth transition and stability over time: The new funding formulas may also need to incorporate a transition period to protect the big winners and losers over a short period of time (as the new primary education formula envisages). Piloting the formulas in several municipalities before the

national roll-out could also be one of the ways forward. Additionally, the government should develop funding formulas that are sustainable in the long run. Frequent changes to the rules and criteria once implementation starts can lead to uncertainty for education institutions and loss of confidence in the reliability of the system and the administration.

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