

Diagnostics of municipal labor markets in North Macedonia



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Diagnostics of municipal labor markets in North Macedonia

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Introduction

Strengthening human capital is one of the key reform priorities of the Program for Economic Reforms 2022-2024. This priority includes improvement of the labor market by adjusting the educational policies to the labor market needs. Identification of the gaps in the labor market is the baseline for the creation of measures and improvement of the conditions on the labor market. Yet, the diagnostics on a local – municipal level has not been analyzed extensively.

The intervention in this document has been prepared in cooperation among the ILO office in Skopje, Finance Think, the Economic Research and Policy Institute, and the local economic and social councils in the municipalities.

The objective of this collection of works is to provide diagnostics of the labor market on a municipal level in the Republic of North Macedonia. The intervention covered 14 municipalities from all of the eight regions in the Republic of North Macedonia. The diagnostics covers the following: Analysis of the regional characteristics; structure of the labor market by reviewing the supply and the demand side of the labor market; identification of the gap in the labor market according to education and occupation; and educational profiling and potential of the municipal educational infrastructure for overcoming the gaps on the labor market. The diagnostics provides for concrete recommendations how to address the labor market gaps by involving all stakeholders on a municipal and national level.

The work has been structured in the following manner: Overview of the macro- economic conditions; followed by labor market analysis on a national and regional level; chapter three involves the individual labor market diagnostics for the 14 municipalities, distributed according to regions; the document ends with a conclusion.



Macroeconomic and Strategic Framework

North Macedonia is a small and open economy which belongs to the group of developing countries with upper middle level of income. The GDP per capita calculated according to parity of purchase capacity is 37.8% of the average GDP per capita in the EU in 2019, which is a moderate progress compared to 2011 when the same indicator was 34.7%. In the Western Balkans, Serbia and Montenegro are closest to the European average, with 42.2% and 48.5%, respectively, of the average GDP per capita in EU for 2019, while Kosovo, Albania and Bosnia and Hercegovina are furthest away with 25.5%, 30.8% and 33.6%, respectively. As regards the tempo of convergence to the European average in the last decade (2011-2019), North Macedonia takes up the last place among the countries of the Western Balkans where the growth of the level of convergence is 0.95% on an average per annum.

During the last decade, North Macedonia recorded moderate economic growth, within the range from -0.5% to 3.9% before the pandemic crisis (Table 1). There was a significant movement of the economic growth in the second half of the last decade due to the increased activity of the export oriented companies, despite the fact of the political crisis in that same period (2017/2018). The inflow of foreign direct investments at the beginning of the decade contributed to greater openness of North Macedonia and increasing the participation of the import and export in the GDP. In parallel, economic growth was accompanied by a significant continuous drop in unemployment, from 31.4% in 2011 to 16.4% in 2019.



Table 1: Basic macroeconomic indicators for North Macedonia, 2011-2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011/ 2019
GDP per current prices (in mill.MKD)	464186	466703	501891	527631	558954	594795	618106	660878	692683	655931	49.2%
GDP per capita (curr.prices)	225493	226440	243160	255206	269997	286995	297954	318309	333551	320386	47.9%
Change in nominal GDP	6.1%	0.5%	7.5%	5.1%	5.9%	6.4%	3.9%	6.9%	4.8%	-4.1%	
GDP per constant prices (in mill.MKD)	383837	382086	393263	407535	423249	435304	440013	452688	470390	445890	22.5%
GDP per capita (cons.prices)	186461	185385	190531	197118	204446	210039	212105	218035	226509	215143	21.5%
Change of real GDP	2.3%	-0.5%	2.9%	3.6%	3.9%	2.8%	1.1%	2.9%	3.9%	-6.1%	
Inflation	3.9%	3.3%	2.8%	-0.3%	-0.3%	-0.2%	1.4%	1.5%	0.8%	1.2%	9.1%
Public expenditures (% of GDP)	18.1%	18.6%	17.5%	17.1%	17.0%	15.4%	14.9%	14.3%	14.0%	16.8%	
Budget revenues (% of GDP)	29.5%	29.6%	27.9%	27.7%	28.8%	28.5%	29.1%	28.5%	29.4%	28.9%	
Budget deficit (% of GDP)	-2.5%	-3.8%	-3.8%	-4.2%	-3.5%	-2.7%	-2.7%	-1.8%	-2.0%	-8.2%	
Received personal remittances (% of GDP)	4.1%	4.0%	3.5%	3.2%	3.0%	2.7%	2.8%	2.7%	2.5%	3.4%	
Public debt (% of GDP)	32.0%	38.3%	40.3%	45.8%	46.6%	48.8%	47.7%	48.4%	49.2%	61.0%	
Deficit of payment balance (% of GDP)	-2.5%	-3.3%	-1.6%	-0.6%	-1.9%	-2.9%	-0.9%	-0.1%	-3.3%	-3.4%	
Trading exchange (% of GDP)	113.2%	112.2%	104.9%	112.5%	113.7%	116.2%	124.1%	133.2%	138.6%	129.1%	
Export (% of GDP)	47.1%	45.4%	43.4%	47.7%	48.7%	50.7%	55.1%	60.4%	62.4%	58.1%	
Import (% of GDP)	66.1%	66.8%	61.5%	64.9%	65.0%	65.5%	69.0%	72.8%	76.2%	70.9%	
Coverage of export with import	63.7%	61.6%	64.9%	68.0%	70.5%	71.0%	73.5%	76.4%	76.2%	76.2%	
FDI (% of GDP)	4.6%	1.5%	3.1%	2.4%	2.4%	3.5%	1.8%	5.7%	3.5%	1.9%	
Unemployment rate	31.4%	31.0%	29.0%	28.0%	26.1%	23.7%	22.4%	20.7%	17.3%	16.4%	

Source: State Statistical Office and Ministry of Finance

The cumulative growth for the period 2011-2019 was 22.5%, which was also supported by public expenditures, especially at the beginning of the decade, when the implementation of several infrastructural projects started (e.g. Kichevo – Ohrid highway). Increased public spending deepened the budget deficit and accelerated the growth of public debt, which limited the fiscal space for support of future growth. Although the budget deficit stabilized in the second half of the past decade, the fiscal consolidation in the medium term poses a significant challenge. In recent times, the Covid-19 crisis seriously affected the Macedonian economy, with

a drop in domestic demand and export, as well as slowing down the inflow of foreign direct investments, pushing the economy in recession in 2020. The measures to mitigate negative effects from the pandemic increased the budget deficit and public debt at alarming levels.

An additional characteristic of the Macedonian economy is the unbalanced regional development. The region of Skopje dominates the generation of economic activities, with a share of 43.4% in the national GDP, while the lowest economic activity is generated in the Northeast region (4.8% of the GDP). The individual share of the rest of the six regions in the national GDP is within the range of 8% to 11%. In context of economic development, the Polog region, the Southwest and Northeast region are significantly behind, with GDP per capita of 33.2%, 39.5% and 53.7%, respectively, of the GDP per capita of the Skopje region. In each of the regions there are particular dominant economic sectors. For example, in the East, Southeast, Vardar and Pelagonija region, the dominant sectors are agriculture, mining and manufacturing industry, while the dominant sectors in the Polog region, Southwest and Northeast region are services, especially related to trade and real-estate. The Skopje region has a higher level of diversification of activities, although services hold a more significant share.

The strategic goal of North Macedonia is sustainable and inclusive economic growth. Reducing the gap in the regions and providing for a long-term balanced regional development will contribute to reaching the strategic goal. The policy of balanced regional development imposes implementation of structural reforms for strengthening the innovative capacity, use of natural resources, human capital and economic specifics, preserving the identity of the regions and parallel development of urban and rural areas in each of the regions. In conditions of narrowing of the labor market in North Macedonia, balanced regional development of the human capital appears as the imperative for support of the economic development of the regions. The concentration of work force in particular regions and the gaps in the qualifications of the work force are the main problems for securing sustainable economic development. Before we give an overview of the labor market in a regional context, we shall briefly present the strategic framework for decreasing the disparities among the regions, especially as regards the labor market.

Regional Development Strategy

*The Regional Development Strategy of the Republic of North Macedonia 2021-2031*¹ presents a system of objectives, tools and measures directed to decreasing the disparities in the level of development in and among the planning regions and accomplishing a balanced and sustainable development. The Strategy is based on the Law on regional balanced development and incorporates the following three strategic objectives: (1) A more balanced economically developed, ecologically sustainable and competitive planning regions, through a diligently implemented smart specialization and intensified stimulus for private investments in synergy with the public investments; (2) Attractive planning regions, with enhanced local services, effective access to the labor market, ensured higher level of gender equality and effective social protection of the most vulnerable categories of population; and (3) Significantly strengthened regional development policy, improved financial instruments for implementation thereof and completed administrative capacities on a central, regional and local level. The realization of these objectives will contribute in four directions: (1) Accelerating the integration of the country in EU; (2) use of available funds from the Instrument for pre-accession assistance (IPA); (3) realization of the sustainable development goals of the United Nations and (4) higher level of gender equality.

¹For more details visit chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fdejure.mk%2Fdownloads%2Fst_76_2021.pdf&clen=123738193&chunk=true

The Strategy is structured in seven chapters. The first two chapters establish the objectives and principles for accomplishing balanced regional development in and among the eight planning regions, the role of the strategy in achieving higher goals, such as EU integration, providing for sustainable and inclusive development and the methodology for drafting the strategy. The third chapter provides for a socio-economic analysis of the planning regions, in relation to the level of development, public investments, demographic movements, physical planning and other economic and social specifics. The fourth chapter defines the vision, strategic goals and priority areas for balanced regional development. The fifth chapter covers the implementers of the strategy, and the sixth, sources of funding. Finally, the last chapter presents the principles and indicators for monitoring, evaluation and updating of the strategy.

Employment Strategy

*The National Employment Strategy 2021-2027 with the Action plan for employment 2021-2023*², involves a detailed analysis of the labor market in the Republic of North Macedonia. Although the Strategy identifies disparities on the labor market in regional context, it does not incorporate concrete direct objective for decreasing the unbalanced labor market development in and among the eight regions. The analysis presents significant regional disparities in relation to the share of the work force, the employment and unemployment rates. Additionally, the exposure to poverty is higher with workers under temporary employment agreements living in the Southeast and Northeast region.

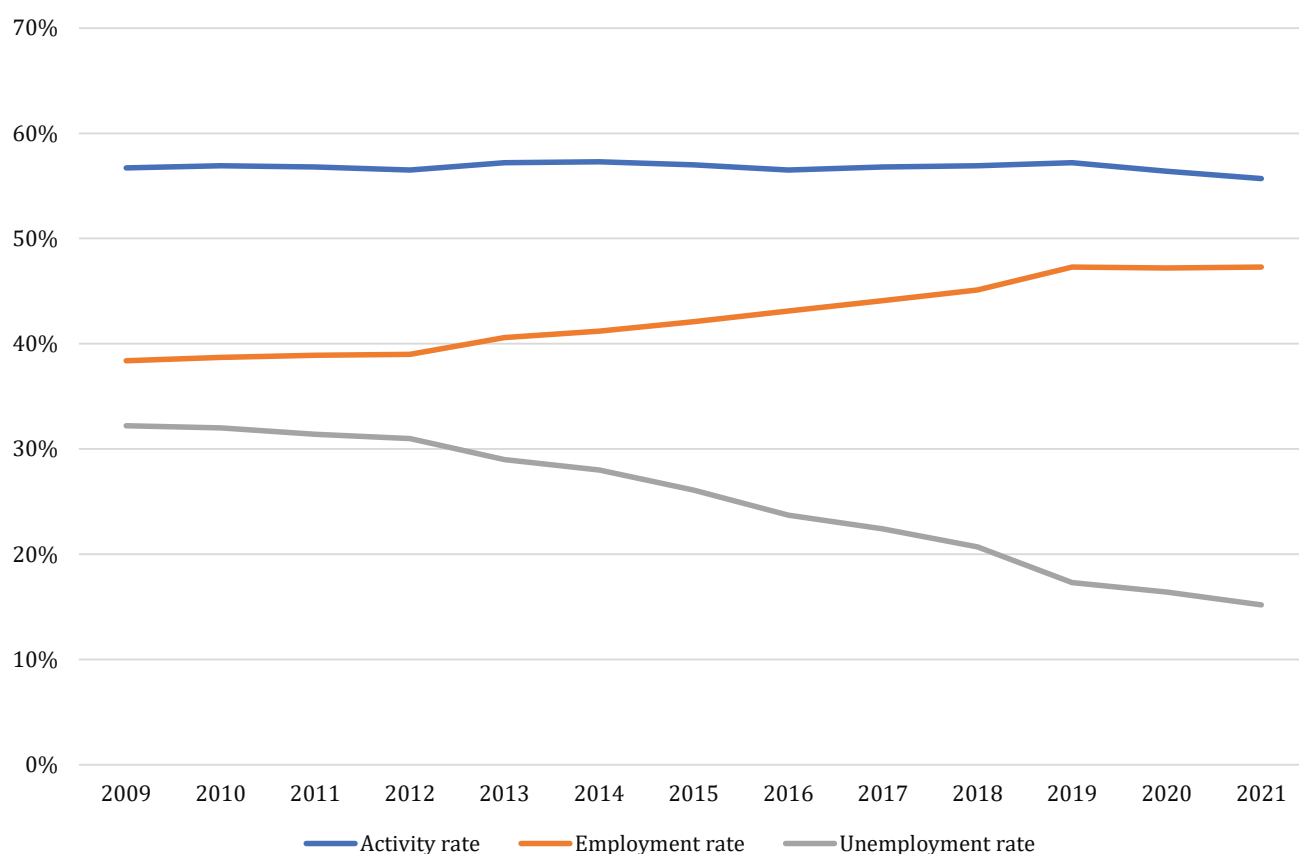
The National Employment Strategy 2021-2027 with the Action plan for employment 2021-2023 defines three key objectives which are mutually interconnected: (1) Improving the quality of the learning outcomes at all levels; (2) strengthening the role of the policies for the development of the economy and enterprises in the creation of decent jobs; and (3) strengthening the inclusiveness of the labor market policies. The Action plan for employment 2021-2023 defines concrete actions to achieve the projected outcomes. As regards the first objective, it defines measures for accelerating the reforms in education and improvement of the educational infrastructure. As regards the second objective, the measures are directed to the business entities to increase their efficiency and competitiveness, as well as to reduce the informal economy. Finally, in order to strengthen the inclusiveness of the labor market, there are defined actions to reduce labor market restrictions for the vulnerable persons and strengthen the institutional capacities on a central level in the creation and implementation of the labor market policies.

² For more details visit <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.mtsp.gov.mk%2Fcontent%2Fpdf%2F2021%2Ftrud%2FNS-V%25202021-2027%2520i%2520NPV2021-2023.pdf&clen=2190615&chunk=true>

National and regional analysis of the Labor Market in the Republic of North Macedonia

The labor market in the Republic of North Macedonia marks a trend of improvement. Graph 1 gives an overview of the activity rates on a national level from 2009 to 2021. In 2021, the share of the workforce in the working age population was 55.7%. The trend is stagnating, yet, the rate of female activity (47.7%) is significantly lower compared to men (67.1%) (Table 2). Although the National Employment Strategy 2021-2027 identified that there is an increase of the share of women in the labor market in the last decade. There are more significant improvements in the unemployment and employment rates. Thus, in 2021, the unemployment rate reached the historically lowest level of 15.2% and records more than double decrease compared to 2009 (32.2%). In the context of gender, the unemployment rate is similar for men and women (Table 2). In parallel with the trend of decreasing unemployment, there is also a noticeable increase in the employment rate. In the period from 2009 to 2021, the employment rate increased from 38.4% in 2009 to 47.3% in 2021. This is mainly due to the favorable economic climate, creation of new jobs by the private sector, furthering the active role of the companies in the free economic zones, and active employment measures.

Graph 1: Rates of activity on a national level, 2009-2021



Source: State Statistical Office of the Republic of North Macedonia

The improved labor market condition was accompanied by increase of the average gross salary. In 2020, the average gross salary reached MKD 40566 (Table 2). In addition to the favorable market conditions, the average salary was driven also by the wage increase policies (increase of the minimum wage and subsidies for wage increase), which has contributed to accelerated increase of wages since 2017.

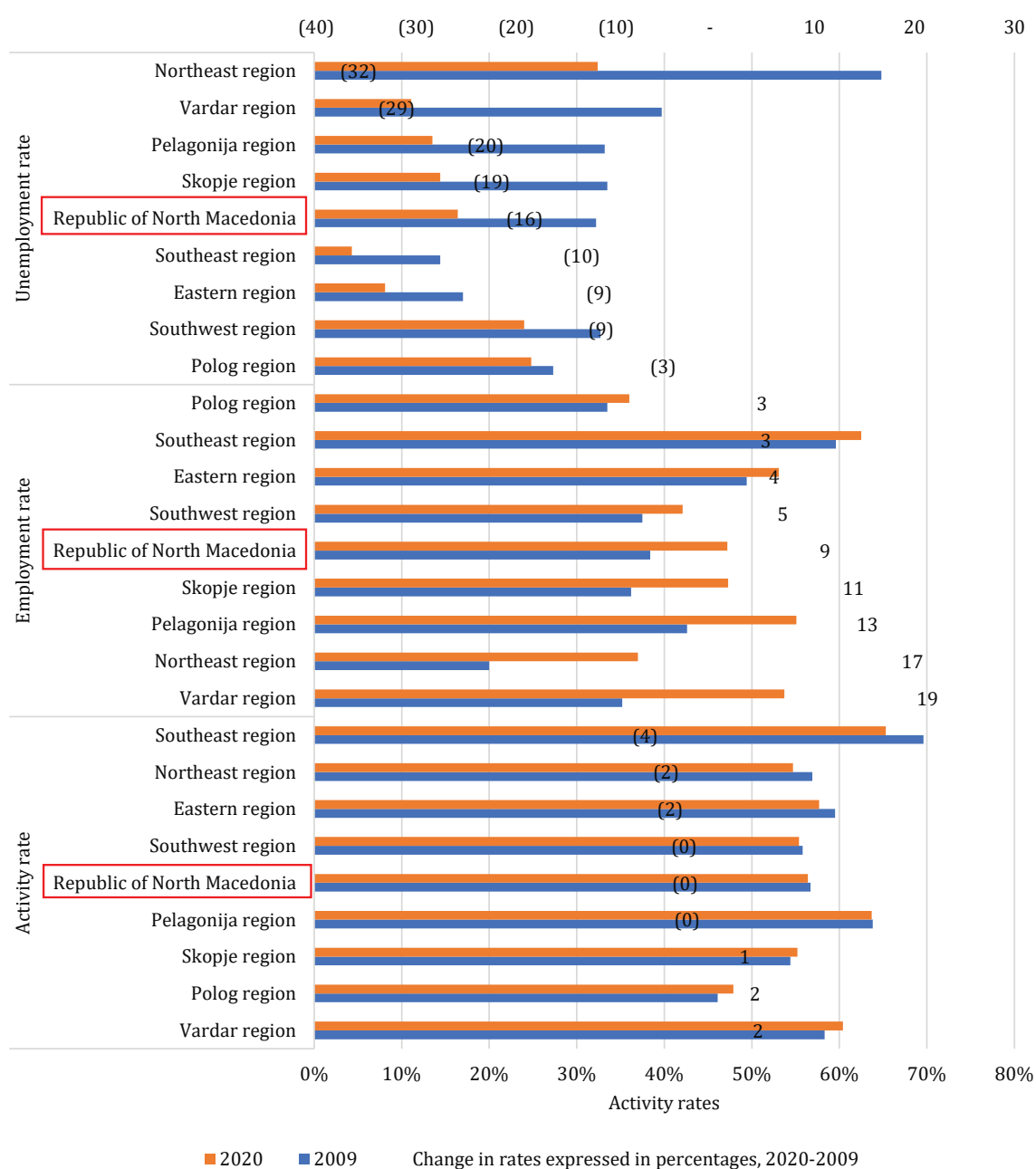
Table 2: Overview of the basic indicators on the Labor Market in 2020-2021

Indicator	2020	2021
Total working age population	1,685,589	1,681,863
Active population - total	950,858	937,482
Active population - employed	794,909	795,276
Part-time employed	36380	
Active population - unemployed	155,949	142,206
unemployed persons from the records of active job-seekers with the Employment Service Agency*	156,432	
Other persons seeking employment, ESA*	89,211	
Rate of activity, total	56.4%	55.7%
-men	67.1%	
-women	45.7%	
Employment rate	47.2%	47.3%
-men	55.9%	
-women	38.4%	
Unemployment rate	16.4%	15.2%
-men	16.7%	
-women	15.9%	
Average paid gross salary, in MKD	40,566	42,887

Source: State Statistical Office; *Annual report of the ESA for 2020

The Labor market analysis on a regional level identifies differences among the regions. Graph 2 provides an overview of the activity rates according to regions, in 2009 and 2020, and change of the rates for this period.

Graph 2: Rates of activity on a regional level in 2009 and 2020 and change in percentage points

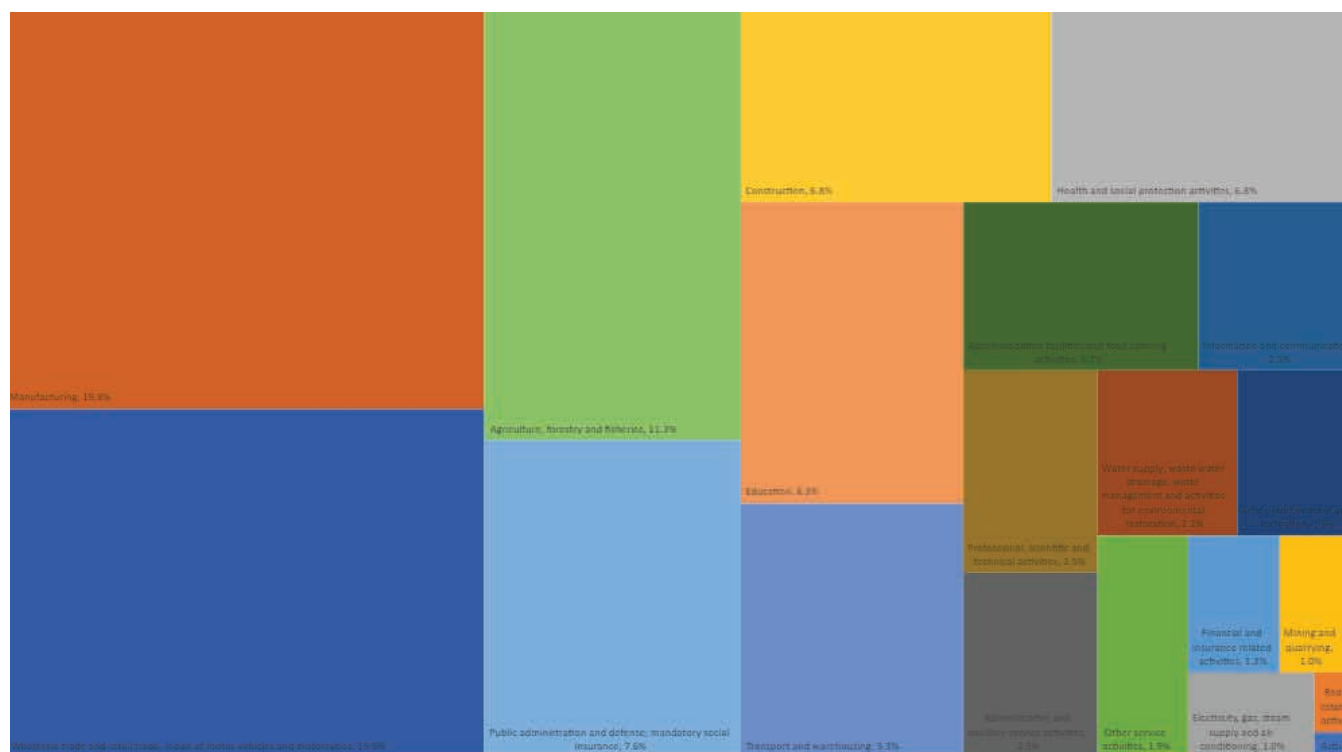


Source: State Statistical Office of the Republic of North Macedonia

Although on a national level the unemployment rate marks the lowest rate, nevertheless, on a regional level, there are regions which record high unemployment rates (Northeast, 32%; Polog, 25% and Southwest, 24%). At the same time, in the period from 2009 to 2020, the Northeast region made the greatest progress in decreasing the unemployment rate (decrease of 32 percentage points), while the Polog and Southwest region mark a modest decrease of three and nine percentage points, respectively. The Southeast and Eastern region have the lowest unemployment rates, of four and eight percentage points, respectively, and a moderate progress in decreasing the unemployment rate. Similarly, the Skopje, Pelagonija and Vardar regions are near the national average of unemployment, with a more significant progress in decreasing the unemployment rate. This condition coincides with the progress made with the rate of employment. The regions with the greatest changes in the rate of unemployment, at the same time, are the regions which accomplished the biggest change in employment. The reasons for the differences may be due to different factors, among which: Geographic positioning (Vardar region), the location of the technological and industrial zones (Southwest, East, Southeast and Pelagonija region), the business environment (Skopje region), etc.

Graph 3 shows the structure of employment according to economic activity. The results show that in 2021, almost half of the employed (46.7%) are employed in three sectors: Manufacturing industry (19.8%); Wholesale and retail trade; repair of motor vehicles and motorcycles (15.4.7%) and agriculture, forestry and fisheries (11.3%). Nevertheless, the structure of employment in the last decade has changed, and there is an increasing trend in the share of workers in the services sector, on the account of decreasing the share of workers in agriculture.

Graph 3: Structure of employment according to economic activity, 2021



Source: State Statistical Office of the Republic of North Macedonia

Employment according to sectors has a regional characteristic. The greatest share of employed in agriculture is in the Southeast (35.7%) and Pelagonija region (23.7), and the lowest in the Skopje region (2.1%). The manufacturing industry as a sector has the largest share in the total employment and is significant for all regions. Still, the share of workers in this sector is significantly greater in the Eastern region (34.7%) and Vardar region (30.6%) as compared to the Southwest, Polog and Skopje regions, where there is a greater employment in the wholesale and retail trade sector.

Table 2: Structure of employment according to regions, 2021

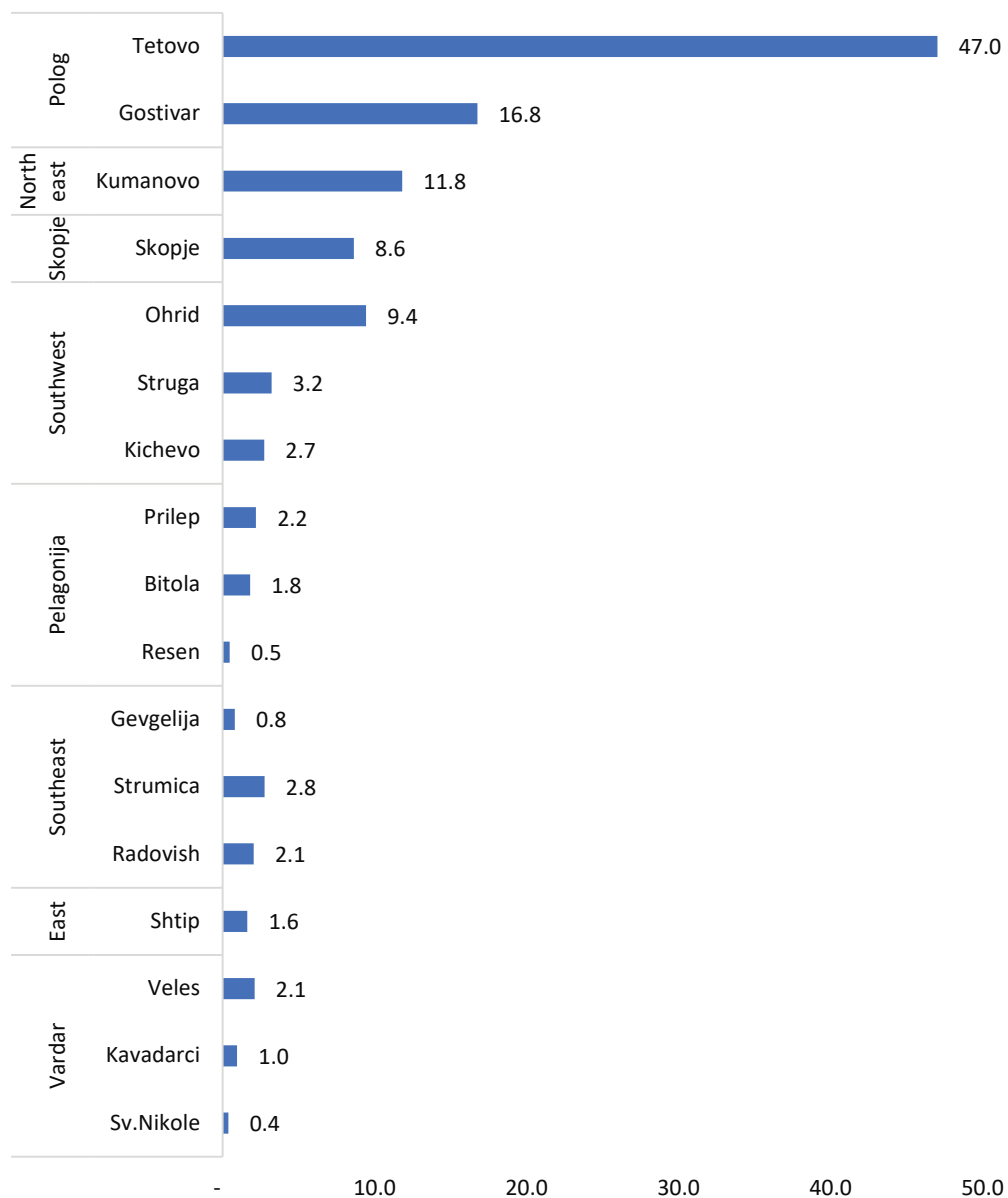
Sector	Vardar	Eastern	South-West	South-East	Pelago-nija	Polog	North-East	Skopje
Agriculture, forestry and fisheries	14.6%	9.8%	6.0%	35.7%	23.7%	6.3%	4.0%	2.1%
Mining and quarrying	0.8%	0.8%	4.0%	1.1%	2.0%	0.4%	0.7%	0.2%
Manufacturing	30.6%	34.7%	13.3%	19.6%	25.1%	13.7%	20.9%	13.9%
Electricity, gas, steam supply and air-conditioning	1.6%	0.4%	0.6%	0.1%	2.2%	1.1%	0.6%	1.1%
Water supply; waste water drainage, waste management and activities for environmental restoration	2.2%	1.8%	4.5%	1.5%	2.8%	0.5%	1.7%	2.2%
Construction	5.6%	3.9%	10.1%	3.2%	3.3%	10.5%	12.5%	7.2%
Wholesale trade and retail trade, repair of motor vehicles and motorcycles	12.2%	12.7%	18.4%	11.3%	10.2%	17.8%	13.3%	20.1%
Transport and warehousing	5.8%	7.2%	3.4%	7.0%	2.2%	4.0%	8.4%	5.6%
Accommodation facilities and food catering activities	3.3%	3.6%	6.6%	2.3%	2.0%	5.9%	3.3%	3.4%
Information and communication	0.9%	0.7%	0.6%	0.9%	3.5%	0.8%	1.6%	5.3%
Financial and insurance related activities	0.5%	0.7%	0.8%	0.9%	1.0%	0.9%	1.1%	1.9%
Real estate activities			0.1%	0.1%	0.1%	0.1%	0.2%	0.7%
Professional, scientific and technical activities	1.2%	1.4%	1.7%	1.8%	2.1%	1.7%	2.5%	4.3%
Administrative and ancillary service activities	2.7%	1.5%	2.0%	1.0%	1.0%	0.9%	1.9%	4.2%
Public administration and defense; mandatory social insurance	4.5%	7.8%	8.8%	2.9%	5.4%	11.6%	9.3%	8.6%
Education	3.2%	5.1%	8.4%	4.0%	5.0%	11.8%	6.4%	5.9%
Health and social protection activities	5.9%	5.7%	6.5%	3.3%	6.0%	7.3%	7.3%	8.8%
Arts, entertainment and recreation	1.7%	1.1%	1.5%	3.0%	1.2%	2.4%	3.1%	1.8%
Other service activities	2.7%	1.2%	2.9%	0.4%	1.2%	2.2%	1.3%	2.4%
Activities of Extra-territorial organizations and bodies							0.0%	0.4%

Source: Survey of the work force, State Statistical office

In addition to the employment structure per sector and the activity rates, the gap in the labor market, identified by comparison between the supply and demand of workers, provides for a detailed diagnostics of the labor market conditions. Still, the labor market gaps have a local component, which is driven by the demand for workers according to the region's conditions (development of the region, location, business environment), and the supply, which is mainly driven by the educational infrastructure in the municipality. Graph 4 shows the gap in 14 municipalities. Results indicate that the regions with worse labor market condition (higher unemployment rate, lower workers demand, less favorable business environment) face larger gaps on the labor market. Hence, municipalities from the Polog region record the largest labor market gap. In the municipality of Tetovo, for each demanded worker by the companies for the Polog region, Municipality of Tetovo can offer 47 unemployed persons. Followed by the municipalities from the Northeast region and Skopje region. On the other hand, in the municipalities from the Vardar region, the gaps are almost nonexistent. Despite the fact that specifics of the regions are greatly reflected on the gaps on municipal level, still, even within one region, there are differences among municipalities. For example, the differences between the gap in Tetovo and Gostivar are threefold, similarly, between Ohrid and Kichevo.

Graph 4: Gap in the labor market in selected municipalities, according to regions

Supply of workers from the Municipality for every demanded worker for the Region



Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Methodology

The diagnostics of the labor market was conducted on a municipal level and involved 14 municipalities from the eight regions, as follows: Sv.Nikole, Kavadarci, Veles, Shtip, Radovish, Strumica, Gevgelija, Resen, Bitola, Prilep, Kichevo, Struga, Ohrid, Kumanovo, Gostivar, Tetovo and the City of Skopje. The City of Skopje covers the following municipalities: Aerodrom, Butel, Gazi Baba, Gjorche Petrov, Karposh, Kisela Voda, Saraj, Centar, Chair and Shuto Orizari.

The Methodology consists of a descriptive analysis of the following:

- The supply on the labor market, through analysis of the unemployed, active job seekers in the municipalities;
- The demand on the labor market, through analysis of expected employments per occupation and per level of education;
- The potential for generating professionals, through analysis of the educational institutions in the municipalities; and
- Horizontal mismatch between the supply and demand

We used administrative data on: unemployed persons, according to various characteristics, from the Employment Service Agency; A Survey on the anticipated demand from the Employment service agency; data on the educational profiles and number of pupils/students per years, from the educational institutions in the municipalities. For six municipalities: Resen, Strumica, Tetovo, Kichevo, Kumanovo, Bitola and Sv. Nikole, the diagnostics contains data from 2020; and for eight municipalities: Veles, Radovish, Gevgelija, Gostivar, Kavadarci, Prilep, Ohrid and the City of Skopje, the diagnostics contains data from 2021.

The disadvantage of this analysis is the fact that data regarding employed persons and working age population at municipal level were not available, thus, the analysis was made using absolute numbers, instead of rates, and to the extent possible. The Employment Service Agency of the Republic of North Macedonia registers employed persons by employment contract, which may not reflect the most accurate condition, due to possible double registration. The precise number of employees may be obtained from the Health Insurance Fund, however, desegregated data is maintained at the level of regional units (30 in total) and is not corresponding to the data at the municipal level. The State Statistical Office does not generate any data on the employment and unemployment rates, and on the activity rate at municipal level.

Diagnostics of municipal labor markets in North Macedonia

Skopje Region

Diagnostic overview of the labour market in the municipalities of the City of Skopje

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipalities of the City of Skopje, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Strengthening the mechanisms which will prevent system manipulation
- Intensifying the cooperation between secondary vocational schools and the business sector
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipalities of the City of Skopje and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The City of Skopje is facing shortage of workforce, mainly for occupations with low skills, high skills for the occupation information and communication technology professionals and occupations in the service sector with medium skills level. For each required worker with primary education in the Skopje region, there are 34 unemployed persons in the City of Skopje. However, this gap is disappearing when adjusted for the persons without occupation. The City of Skopje has well established educational structure, which may contribute to addressing the deficiency gaps. Yet, the current contribution is moderate. Educational institutions and programs for verification which produce profiles in the deficient occupations should be stimulated, and discourage profiling in the severely sufficient occupations.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in Skopje and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The City of Skopje, as a separate administrative unit, covers the capitol and includes ten municipalities: Aerodrom, Butel, Gazi Baba, Gjorche Petrov, Karposh, Kisela Voda, Saraj, Centar, Chair and Shuto Orizari. They are all part of the Skopje region, with 506.926¹ inhabitants, with a share of 80% of the total number of inhabitants in the Skopje region. Currently, the labour market in the Skopje region is

moderately favourable; the region is fourth according to low unemployment and employment rate², and third lowest activity rate³ as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 14.4% (15% for women and 14% for men), the employment rate was 47,3%, while the activity rate was 55,2%. Although according to the activity rates of the population, the Skopje region is not the best, still, the average gross salary is highest and is MKD 45.961 (Regions in the Republic of North Macedonia, SSO, 2021). This may be due to the higher competitiveness and productivity of the workforce. Furthermore, the region is characterized with developed industry and concentration of the biggest production and service capacities in the country, whereby, the Skopje region is generating 43.4% of the total GDP of the Republic of North Macedonia.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²Following the Vardar region (10.8%), Eastern region (7.8%) and the Southeastern region (6.3%)

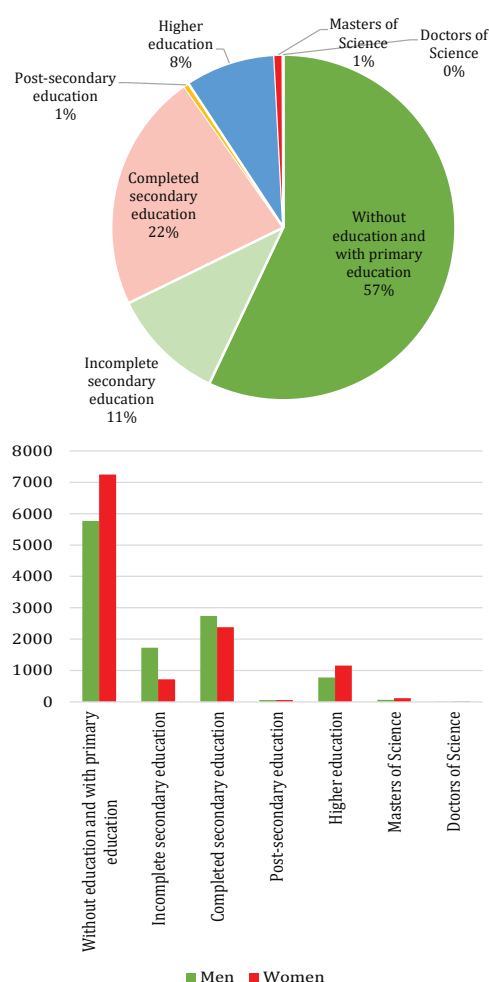
³Following the Southeastern region (63.3%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the City of Skopje in 2021, 51% were women and 49 were men. In terms of education, persons with lower educational attainment are predominant. 68% of the unemployed were persons with primary or no education (57%) and incomplete secondary education (11%) (Figure 1).

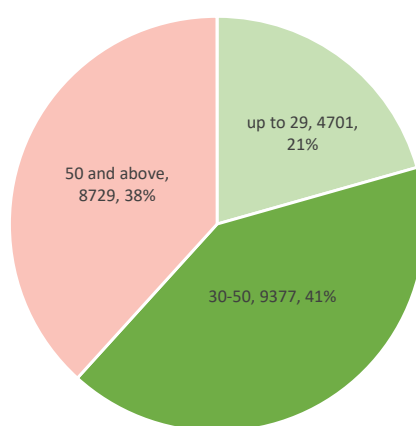
Figure 1: Unemployed persons in the City of Skopje, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed persons are aged 30 to 50 (41%). The figures for the registered unemployed among persons aged 50 and more and young people up to 29 years of age are lower and similar (Figure 2).

Figure 2: Structure of unemployed by age



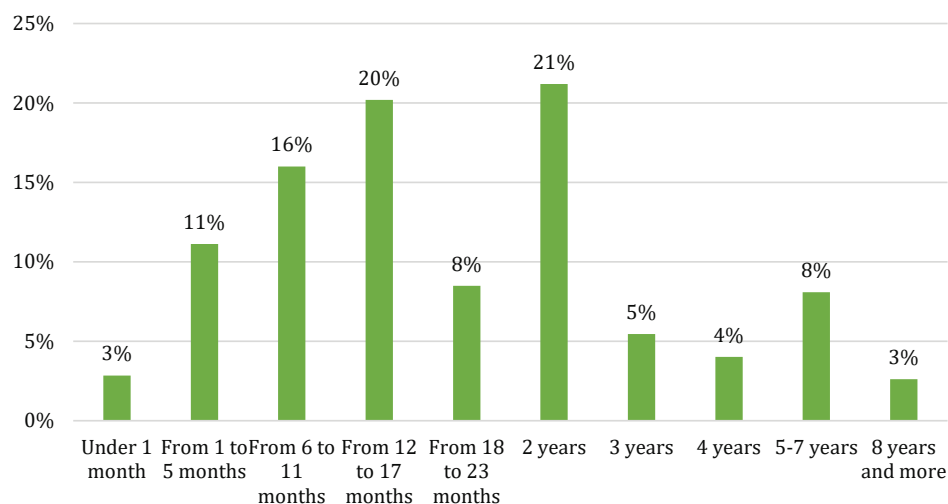
Source: Employment Service Agency of the Republic of North Macedonia

31% of the unemployed wait for a job up to a year, most of them up to five months (Figure 3). Probably the individual characteristics of this category unemployed (educational attainment, educational profile, age) are better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Yet, most of the

unemployed, 42% of the unemployed persons are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the City of Skopje. According to the Employment Service Agency, this category includes 16.826 persons, which represents a share of 74% in the total number of active job seekers. One half of them are with primary (38%) and incomplete secondary education (17%). This indicates that these persons are mostly with low educational attainment. Furthermore, 13% of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Figure 3: Unemployed in City of Skopje, by length of unemployment spell



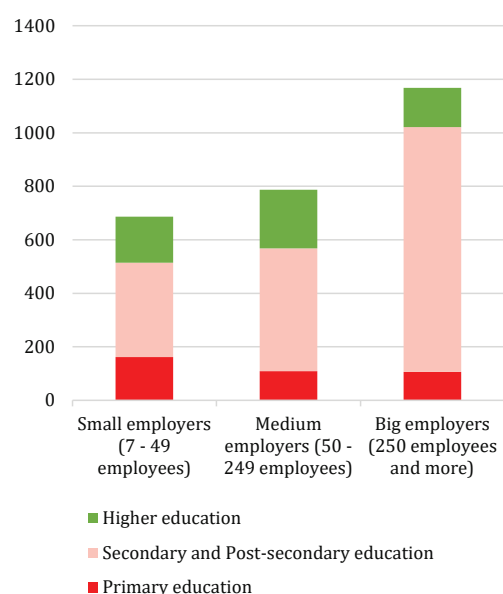
Source: Employment Service Agency of the Republic of North Macedonia

Demand

According to the regional labour demand survey in 2021, the total demand for the Skopje region is 2.642 jobs, which accounts for 11% of the unemployed labour force in the City of Skopje and it is very low. This indicates a probability for underestimating the real situation, first, as a result of pessimistic expectations, due to the Covid-19 pandemic, and also, due to the methodological approach which lacks weighting the results.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly half of the vacancies will be generated by big employers, additional 30% by medium companies, and 26% by small employers. This may also explain the structure of employers in the City of Skopje, which is dominated by small employers. In terms of the demand by education, the demand for workers who completed secondary (65%) and higher education (20%) is predominant.

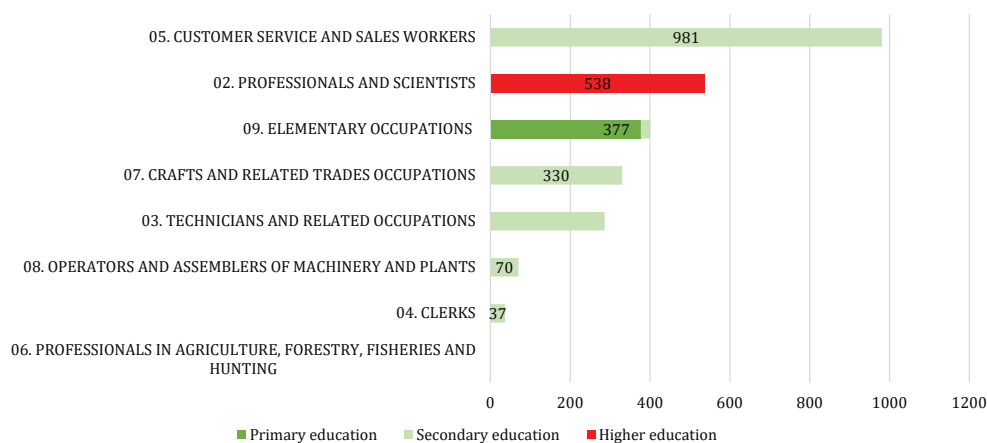
Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, agricultural workers, manufacturing line labourers, kitchen helpers). The demand for workers with secondary education is more heterogeneous in terms of occupations. Even for elementary occupations there is a demand for workers with secondary education. 37 per cent of the total demand for workers and 57% of the demand for workers with secondary education is for customer services and sales: Sales worker, security guard (protection of persons and property), cashiers, call centre sales worker, housekeeper, presenter, cook, bar tender, etc. Followed by occupations for professionals and scientists, including: Programmer, mechanical engineer, construction engineer, computing professional, pharmacist, pharmaceutical technologist and other related occupations with small demand. 12 per cent of the total demand for workers is for trades workers and technicians and related occupations, mainly for: building construction workers and related construction workers, welders, locksmiths and related occupations.

Figure 5: Labour demand by occupation and education for the City of Skopje

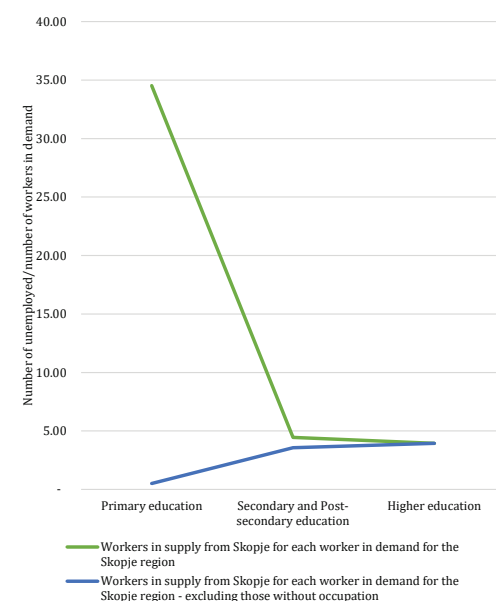


Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Labour market gap by education and occupation

The labour market gap in the City of Skopje is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

The results showed that for every worker required by the companies in the Skopje region, there are 8.6 unemployed persons in the City of Skopje. The gap is biggest with primary education, 34 unemployed persons for one demanded worker with primary education. For the persons with secondary, this coefficient is 4.4, and 3.9 for those with higher education. Still, if we make the adjustment for the persons without occupation, the results are significantly adjusted, mainly for persons with primary education, thus, the gap for persons with primary education disappears.

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the City of Skopje. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green – moderate gap). Taking in consideration that there is potential underestimation of the demand, the occupations with moderate gaps should be monitored, but without undertaking immediate measures.

The results are heterogeneous. In high skills level, the results show that there is a gap in eight out of eleven occupations. For five of the occupations the gap is severely

positive, and in three occupations there is a deficiency gap, out of which a severe deficiency gap for one occupation. In the occupations with higher education, there is an intense surplus gap with the following occupations: Teaching professionals; legal, social and cultural professionals; and science and engineering associate professionals. For these occupations, greater supply than demand occurs also for the persons with lower level of education. For the occupations at high skill level and secondary education the positive gap is due to the lower demand. For the occupation information and communication technology professionals with higher education there is severe deficiency gap. There is a moderate deficiency gap for health associate professionals and information and communication technology technicians.

In the occupations with medium skills there is greater heterogeneity both according to occupation and according to education. Therefore, in five out of 15 occupations there is a severe sufficiency gap - greater supply than demand of the workforce (personal services workers; personal care and related occupations; metal workers, machinery assemblers and related occupations; electrotechnology workers; and operators of machinery and plants). Nevertheless, in the occupation personal service workers, the gap disappears with increasing of the educational attainment from primary to secondary. Vice versa, the gap is deepening and occurs for the following occupations: Metal work, machinery assemblers and related occupations; electrotechnology workers; and operators of machinery and plants. There is deficiency gap in four occupations, out of which in three (sales workers; security of persons and property; and drivers of motor vehicles, mobile plants and ship deck crew) the gap is severe, and moderate for accounting and bookkeeping clerks, statistical,

finance and material recording and transport clerks; building construction workers and related construction workers. For the occupations of construction workers and drivers, deficiency gaps occur when the level of education increases from primary to secondary.

In occupations at low skill level, except for the occupation operators of machinery and plant, there is a severe deficiency gap for all other occupations, mostly elementary workers and helpers in different activities, and there is also a severe surplus of labour for persons without occupation and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The general conclusion is that the City of Skopje is facing shortage of workforce, mainly for occupations with low skills, high skills for the occupation information and communication technology professionals and occupations in the service sector with medium skills level. At the same time, the City of Skopje has a lot of people without occupation with primary education, which distort the big picture. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas.⁵

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	53	Personal care workers and related occupations				
	52	Sales workers				
	54	Security guards				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
Low skill level	81	Machine and Plant operators				
	82	Machinery and equipment assemblers				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery elementary workers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
	99					
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

Significant surplus
Surplus

Adequately matched
Deficit
Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

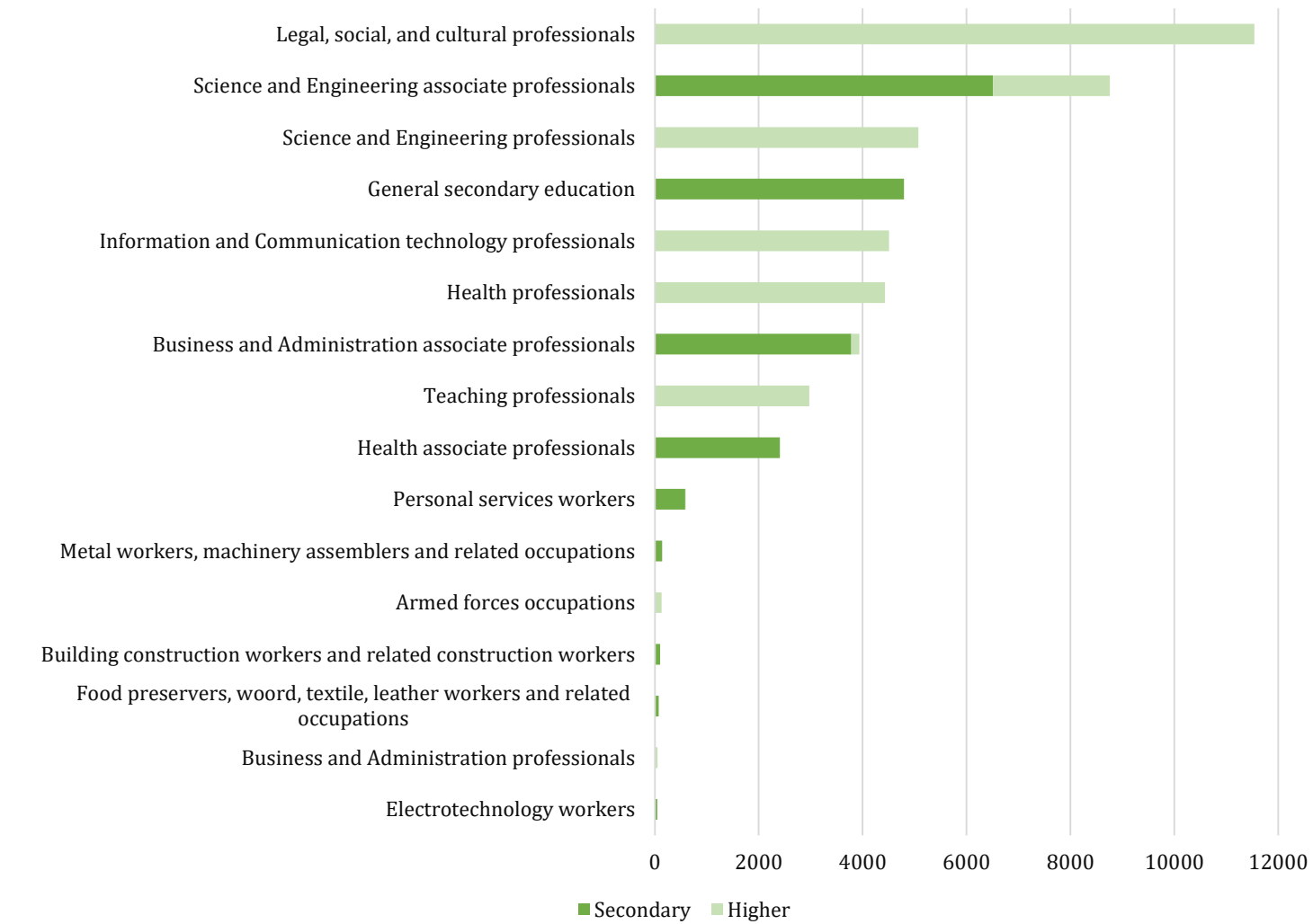
There are 23 secondary schools and 80 Faculties in the City of Skopje. In the forthcoming four years, the secondary and higher education institutions are expected to produce 49.575 profiled professionals for the labour market. Yet, taking into consideration that the City of Skopje is an educational hub generating professionals for the whole country, part of these generated professionals will contribute to the labour markets of other municipalities and regions. 51% of the total supply of educational profiles falls within three occupations: Science and engineering professionals, science and engineering associate

professionals and legal, social and cultural professionals. Half of these are in the occupation of legal and social science professionals and cultural professionals, or 23% of the total supply. An additional 10% are persons with general secondary education, classified as without occupation. In addition to this, there are 95 verified qualification programs, which will contribute to the upskilling and re-skilling processes.

These results imply that the City of Skopje has developed and well established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the

labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years. The results show that educational institutions and verification programs may be crucial active factors in overcoming part of the deficiency gap in the City of Skopje, although currently the contribution is moderate. What is problematic is that part of the educational institutions, including some verification programs, mass produce profiles in occupations with severe sufficiency gaps. Hence, drastic change is necessary and control of the generated professionals in occupations for which there is already drastically greater supply than demand.

Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Educational institutions on the territory of the City of Skopje, Ministry of Education and Science of the Republic of North Macedonia

In this context, in the occupations with high skills, the higher education institutions which offer profiles in the occupation information and communication technology professionals shall contribute to the reduction of the deficiency gap. 11 faculties for information science/technology/engineering within numerous universities generate professionals for this occupation. They should be motivated to produce more professionals for these occupations. Contrary, the higher education institutions which produce professionals in the occupations teaching professionals; and legal and social science professionals and cultural professionals should be discouraged. 40 faculties in the City of Skopje produce professionals in these occupations. In the occupations with medium skills, secondary schools moderately contribute to overcoming the gaps. Thus, for the occupation health associate professionals, including veterinary technicians, there are five secondary vocational schools in the City of Skopje which offer profiling for this occupation and have the potential

to contribute to reduction of the deficiency gap. For the occupation building construction workers and related construction occupations, there are two secondary vocational schools which offer profiles with secondary education. In these two occupations there are also verified programs, which may additionally contribute to reducing of the deficiency gap. For the severely deficient occupation sellers, there are profiles defined as economic - legal, and trade - economics technician, economic - legal, and trade - business secretary and related occupations, within six secondary vocational schools. Within these profiles there is an opportunity to pilot programs and formulate specializations in the occupation sales workers. In order to mitigate the deficiency gap in security guards (protection of property and person), re-skilling and upskilling programs should be encouraged through the verification programs (creation of a new program for this occupation). At the same time, secondary vocational schools, and especially verification programs should be

careful with producing profiles in the occupations for which the current supply is drastically greater than the demand. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. In the end, it is interesting that for the occupations with low skills and primary education there are severe deficiency gaps, and at the same time no supply of qualification programs for profiles in these occupations. Hence, it is necessary to stimulate verification programs which will qualify persons with primary education and without occupation in some of the occupations with severe deficiency gaps, such as: elementary workers in agriculture, forestry and fisheries; elementary workers in mining, construction, manufacturing, and transport; helpers in food preparation and elementary workers, refuse collectors and related occupations.



Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

skill level	Code	Occupation/Profile	Primary	Second-ary	Post-sec-ondary	higher	Second-ary	higher	upskill- ing and re-skill- ing
High skill level	01							131	
	21	Science and engineering professionals						5.072	
	22	Health professionals						4.431	
	23	Teaching professionals						2.973	
	24	Business and administration professionals						53	
	25	Information and communications technology professionals						4.510	
	26	Legal, social and cultural professionals						11.541	
	31	Science and engineering associate professionals					6.505	2.252	
	32	Health associate professionals					2.408		
	34	Legal, social and cultural associate professionals							
	35	Information and communications technicians							
	33	Business and Administration associate profession-als					3.782	154	
Medium skill level	41	General office clerks and secretaries							
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks							
	44	Other office clerks							
	51	Personal services workers					585	11	
	53	Personal care workers and related occupations							
	52	Sales workers							
	54	Security guards							
	71	building construction workers and related con-struction workers					104		
	72	Metal workers, machine assemblers and related occupations					142		
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers					48		
	75	food preservers, wood, textile and leather workers and related occupations					75		
Low skill level	81	Machine and Plant operators							
	82	Machinery and equipment assemblers							
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew							
	91	Cleaners and helpers							
	92	Agricultural, forestry and fishery elementary workers							
	93	Labourers in mining, construction, manufacturing and transport							
	94	Food preparation assistants							
	96	Refuse workers and other elementary workers							
	99								
		No occupation							
		General secondary education					4.798		

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the City of Skopje has shown that the greatest education-to-occupation gap is the one for the persons with primary education, mainly generated by persons without occupation. For each required worker with primary education in the Skopje region, there are 34 unemployed persons in the City of Skopje. However, this gap is disappearing when adjusted for the persons without occupation. Furthermore, the labour market is facing shortage of workforce, mainly for occupations with low skills, high skills for the occupation information and communication technology professionals and occupations in the service sector with medium skills level. The City of Skopje has well established educational structure, which may contribute to addressing the deficiency gaps. Yet, the current contribution is moderate. Educational institutions and programs for verification which produce profiles in the deficient occupations should be stimulated, and discourage profiling in the severely sufficient occupations.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour force for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the City of Skopje, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. Companies offering verification of programs and potential upskilling centres, in cooperation with ESARNM, should design and deliver training courses and modules and verified programs for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Mitigate the deficiency gap for the occupation drivers, by subsidizing obtaining driver's license
- Continuing the programs for verification with upskilling and reskilling of professionals in the profiles of the occupations information and communication technology technicians (technicians- operators and system operators) and building construction workers (construction worker, bricklayer, construction workers with traditional materials and reinforced concrete placers). At the same time, they should be careful with generating profiles which belong to occupations with sufficiency gap
- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance, sales workers, occupations for protection of persons and property, and information and communications technology technicians)
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations in the short-term through:
 - o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to

produce more graduates. For instance, the deficiency gap with sales workers may be mitigated by generating professionals from the six secondary vocational schools which have profiles defined as economic-legal and trade- economic technician, economic-legal and trade-business secretary, etc. Within these profiles there is an opportunity to pilot programs and formulate specializations in the occupation sales workers.

- o The upskilling and re-skilling centres and verification programs, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work

- o Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-projects for deficient occupations

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the City of Skopje

- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the Business sector

- To intensify the cooperation with secondary vocational schools
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the City of Skopje, regional chambers of commerce, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical office and the Employment Service Agency of the Republic of North Macedonia

- To collect and publish labour market statistics at

municipal level (employment, unemployment, and activity rates)

- The survey of the demand for workforce should be weighted and with randomly selected sample according to size of company and sector



Vardar Region

Labour market diagnostics in the municipality of Sveti Nikole

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Sveti Nikole, such as:

- Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)
- Activation of passive job seekers of working age through a campaign for activation of passive job seekers
- Production of profiles by the upskilling and re-skilling centres in the Vardar region for the most demanded occupations: sewers, salespersons, locksmiths, welders
- Strengthening the cooperation between the secondary vocational school “Kocho Racin” and the relevant companies in the municipality
- Redesigning the curricula/ profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Sveti Nikole and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Sveti Nikole is facing a shortage of qualified labour force and a deficiency gap for medium and low skill occupations. For each required worker with primary education in the Vardar region, there are 0.38 unemployed persons in the municipality of Sveti Nikole. To a certain extent this is owing to the fact that the municipality's share in the total population of the region is relatively small, i.e., it is only 12%. There is a predominant deficiency gap in the municipality of Sveti Nikole, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Sveti Nikole have a moderate potential to address the gap with deficient occupations. Furthermore, they should be careful with any further production of profiles that broaden the surplus gap. Greater efforts need to be taken to overcome the problem with the shortage of labour.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Sveti Nikole and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Sveti Nikole is the fourth biggest municipality in the Vardar region, with population of 17,853¹, thus accounting for 12% of the total population in the Vardar region. Currently, the labour market in the Vardar region is favourable; it is ranked third² in terms of the unemployment, employment and activity rates as compared to the other seven regions.

In 2019, the unemployment rate of the population aged 15 and above was 10.8% (12% for women and 9.9% for men), the employment rate was 55.2%, while the activity rate was 61.8%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 31,078. This places the Vardar region on the fourth place (in the middle) of the rankings by the average salary (Regions in the Republic of North Macedonia, SSO, 2020). The region is characterized by favourable climate, in particular for winegrowing, hence the region is recognized by the concentration of wine cellars. There are also significant deposits of ferronickel in the region, which is excavated and processed.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

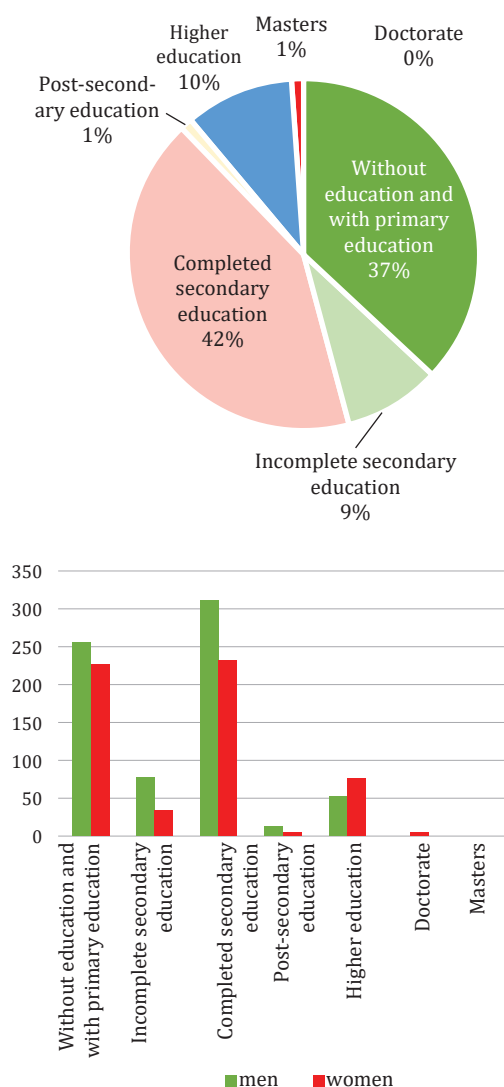
²After the Southeast region (6.3%) and the Eastern region (7.8%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Sveti Nikole in 2020, 44% were women and 55% were men. In terms of education, persons with primary or no education (37%) and those with completed secondary education (42%) are almost equally represented. Persons who have completed higher education have a share of 12% (Figure 1).

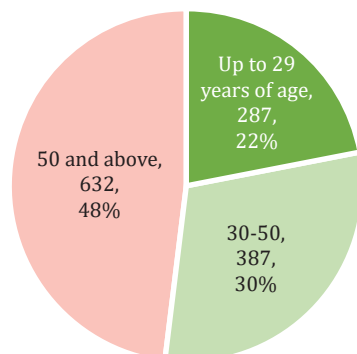
Figure 1: Unemployed persons in the municipality of Sveti Nikole, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed persons are aged 50 and more (48%). They are followed by unemployed persons aged 30 to 50 (30%), while young people up to 29 years of age have the smallest share (22%) (Figure 2).

Figure 2: Structure of unemployed by age



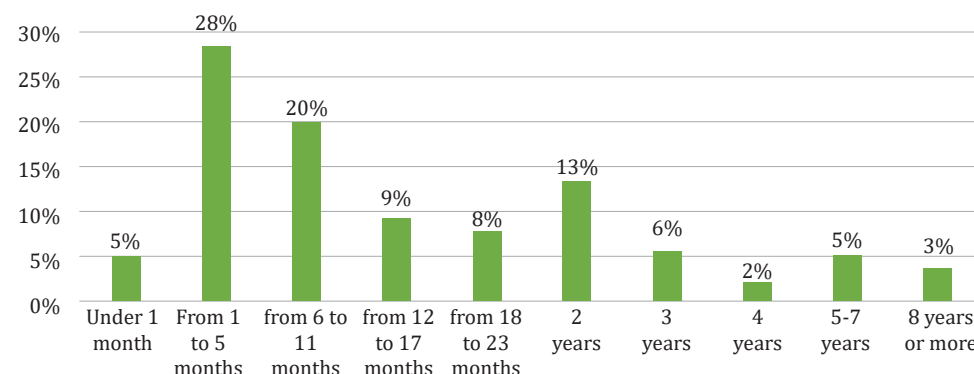
Source: Employment Service Agency of the Republic of North Macedonia

53% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage,

the time required to apply for a job and the process of recruitment to employment, etc. Although such structure may appear encouraging, 29% of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Sveti Nikole. According to the Employment Service Agency, this category includes 1,052 persons, which represents a share of 80% in the total number of active job seekers. One half (51%) have completed secondary education, 41% are with primary education (32%) or incomplete secondary education (9%). Furthermore, only seven per cent of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Figure 3: Unemployed in the municipality of Sveti Nikole, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

Demand

According to the regional labour demand survey in 2020, the total demand for the Vardar region is 3,447 jobs, which is 160% more than the unemployed labour force in the municipality of Sveti Nikole. This points out to a shortage of workers, but, it may also be a result of the relatively small share of the municipality in the overall region.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that 74% of the vacancies will be generated by big employers, additional 18% by medium companies and only eight per cent by small employers. This may explain the structure of employers in the Vardar region, where the big companies are the biggest employers, and in terms of location the region is also attractive for foreign investors. In terms of the demand by education, the demand for workers who completed primary (73%) and secondary education (24%) is predominant.

Cross-referencing the demand by education and occupation (NCO-

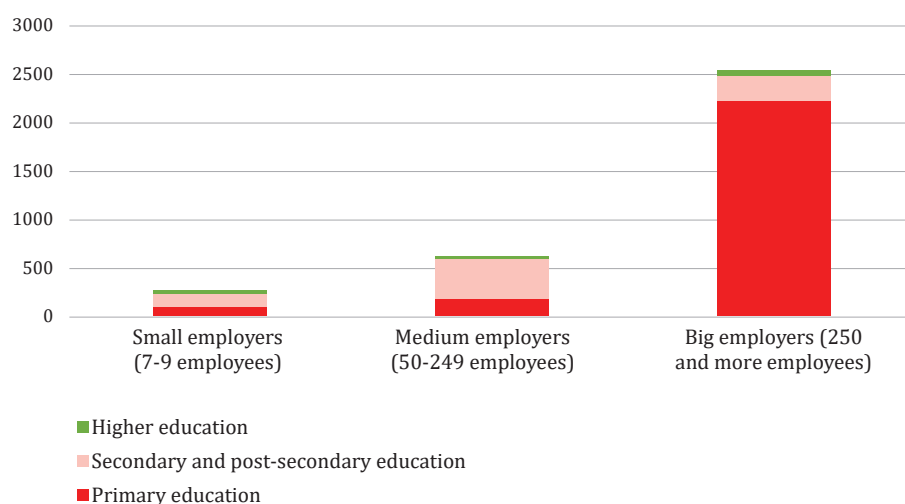
ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, elementary workers not elsewhere classified; crop farm labourers; manufacturing line labourers).

The demand for workers with secondary education is more heterogeneous in terms of occupations. 11 per cent of the total demand for workers and 64% of the demand for workers with secondary education is for craft and related trades workers, including: sewers, locksmiths, welders, other craft and related trades workers, building repairs electricians, butchers, motor vehicle mechanics, etc. They are followed by the occupations of services workers, including: waiters, salespersons, cooks and related occupations. All workers with higher education in demand on the market are in the occupation of professionals and science professionals. Of those, 20% related to mechanical engineers and 18% to industrial production engineers.

Labour market gap by education and occupation

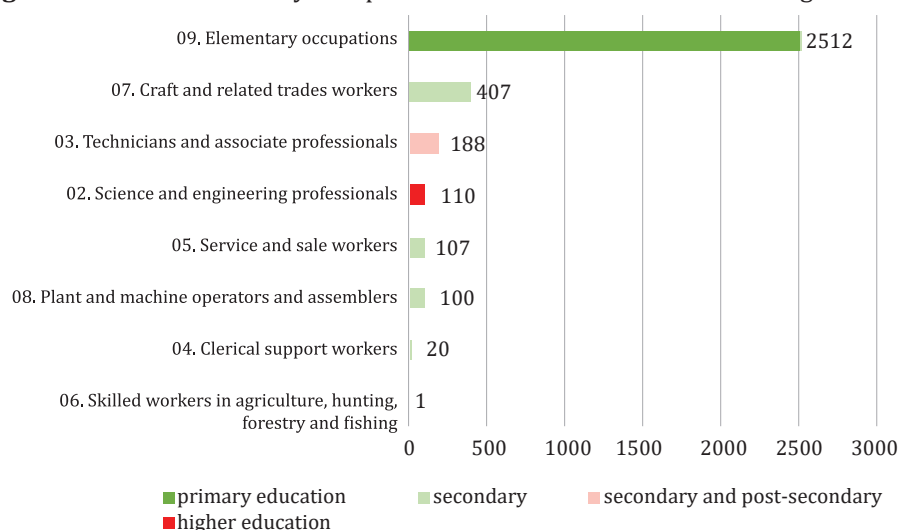
The labour market gap in the municipality of Sveti Nikole is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results indicate that the municipality of Sveti Nikole can cover for 38% of the total labour demand in the Vardar region. As opposed to other municipalities where there are usually more unemployed persons for each newly created job, the situation in the municipality of Sveti Nikole is reverse and the supply is less than the demand. To a certain extent this is owing to the fact that the municipality's share in the total population of the region is relatively small, i.e., it is only seven 12%. For every worker with primary education required in the Vardar region, there are 0.2 unemployed persons in the municipality of Sveti Nikole, for those with secondary and post-secondary education the ratio is 0.83, while for those with higher education the ratio is 1.3.

Figure 4: Labour demand by education and company size



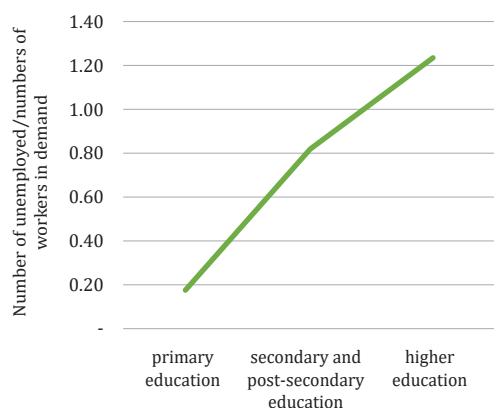
Source: Employment Service Agency of the Republic of North Macedonia

Figure 5: Labour demand by occupation and education for the Vardar region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020³

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the municipality of Sveti Nikole. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations.

The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green - moderate gap).

The results show that for higher level skills there is a gap for five out of nine occupations. For four of the occupations the gap is positive, and there is a deficiency gap only for one occupation. For the higher education occupations there is a potential higher overqualification for the occupation of legal, social and cultural professionals, and there is great supply and lack of demand for teaching professionals. For the occupations at high skill level and secondary education the positive gap is owing to the lower demand. For three occupations, science and engineering associate professionals; health associate professionals; and business and administration associate professionals, the severe positive gap disappears and transforms into a deficiency gap with the transition from secondary to post-secondary education. This indicates potential underqualification.

For medium skill level occupations, there is a severe surplus gap, where the labour supply is significantly greater than the demand only for one of 11 occupations: market-oriented skilled agricultural workers. It is probably owing to the fact that this is a relatively new occupation and the market is yet to generate adequate demand. In view of the fact that the agricultural sector in the municipality of Sveti Nikole is highly developed, this gap is of temporary nature. For seven occupations with secondary education there is a severe deficiency gap, in particular for: services workers; building construction workers and related construction workers; machine and plant operators; and operators of motor vehicle and mobile plants. This indicates a shortage of labour for these occupations. On the other hand, for food preservers, wood, textile and leather workers and related occupations and precision mechanics, handicraft workers and printers, the positive gap disappears with the increase of the educational attainment from primary to secondary education. This implies underqualification and a need to upskill persons with primary education.

In occupations at low skill level there is a severe deficiency gap for all occupations with primary education, mostly elementary workers and helpers in different activities, as well as severe surplus of labour for persons without occupation and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation.

It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the labour market in the municipality

³ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

of Sveti Nikole is facing a shortage of labour, mostly for occupations at medium level skills, shortage of elementary workers, and underqualification of persons with primary education and without occupation. To an extent, this may be owing to the emigration trend in the country.

There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills

acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁴.

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	33	Business and administration associate professionals				
Medium skill level	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

⁴World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Educational profiling as a factor in bridging or broadening the gaps

There are one secondary school and one higher education institution in Sveti Nikole.

In the forthcoming two years these institutions are expected to produce 686 profiled professionals for the labour market. 75% of the total supply of educational profiles fall within three occupations: legal and social professionals; health associate professionals; and persons with completed general secondary education, classified as persons without occupation.

These results imply that the municipality of Sveti Nikole has a moderately well-established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years.

The results show that the occupations and profiles supplied by educational

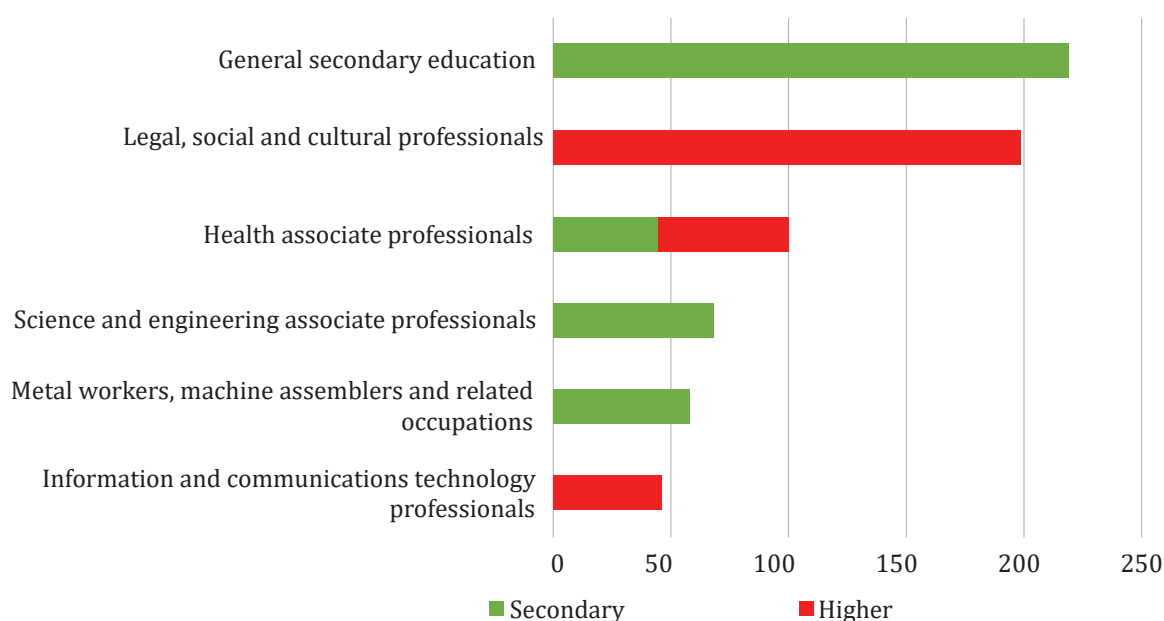
institutions largely fail to bridge the existing gap in the labour market. Furthermore, some of the profiles produced only broaden the surplus gap. Thus, the profiles with high level skills produced by the International Slavic University “Gavrilo Romanovich Derzhavin” – Sveti Nikole, are in occupations already severely in surplus. For occupations at medium skill level and with secondary education, the profiles produced are more adequate. The produced profiles: motor vehicle technicians and motor vehicle mechatronics technicians match fully the labour market demand and will contribute to the mitigation of the deficiency gap. On the other hand, the agriculture and veterinary profiles produced may aggravate further the surplus gap considering the already significant supply of such occupations among the unemployed.

For the purpose of mitigating the deficiency gap, the secondary school “Kocho Racin” – Sveti Nikole should consider introducing new profiles in the deficient occupation: food preservers, wood, textile and leather

workers and related occupations, in cooperation with the Joint Stock Company for Manufacture of Garments “Moda” from Sveti Nikole, which is already engaged in validation of adult learning in the occupation of light garments sewer. For other deficient occupations the gap may be addressed by re-skilling the persons who completed general secondary education, in cooperation with the upskilling and re-skilling centres in the adjacent municipalities.

In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centres in the neighbouring municipalities in the Vardar region could improve their roles and engage actively in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions within the territory of the municipality of Sveti Nikole, data collected by the Municipality of Sveti Nikole and the Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

			Labour market gap				Profiles profuced by educational institutions	
Skill level	Code	Occupation/Educational profile	Primary	Secondary	Post-secondary	Higher	Secondary	Higher
High skill level	21	Science and engineering professionals						
	22	Health Professionals						
	23	Teaching professionals						
	24	Business and administration professionals						
	25	Information and communications technology professionals						45
	26	Legal, social and cultural professionals						199
	31	Science and engineering associate professionals					67	
	32	- Veterinary technicians and assistants - Occupational safety and health engineers						
	33	Business and administration associate professionals - Police inspectors and detectives					43	56
	35	Information and communications technology technicians - motor vehicles mechanics, mechatronic technicians						
Medium skill level	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks						
	51	Personal services workers						
	52	Sales workers						
	54	Security guards						
	61	Market-oriented skilled agricultural workers						
	71	Building construction workers and related construction workers						
	72	Metal workers, machine assemblers and related occupations - motor vehicles mechanics, mechatronic technicians				57		
	73	Precision mechanics, handicraft workers and printers						
	74	Electrotechnology workers						
	75	Food preservers, wood, textile and leather workers and related occupations						
Low skill level	83	Drivers of motor vehicles, mobile plant operators and deck crew						
	92	Agricultural, forestry and fishery labourers						
	93	Labourers in mining, construction, manufacturing and transport						
	96	Refuse workers and other elementary workers						
		No occupation						
		General secondary education				219		

Source: Employment Service Agency of the Republic of North Macedonia, Ministry of Education and Science of the Republic of North Macedonia, data delivered by the Municipality of Sveti Nikole and the Ministry of Education and Science of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Sveti Nikole has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For every worker with primary education required in the Vardar region, there are 0.2 unemployed persons in the municipality of Sveti Nikole, for those with secondary and post-secondary education the ratio is 0.83, while for those with higher education the ratio is 1.3. To a certain extent this is owing to the fact that the municipality's share in the total population of the region is relatively small, i.e., it is only 12%. There is a predominant deficiency gap in the municipality of Sveti Nikole, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations.

For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Sveti Nikole have a moderate potential to address the gap with deficient occupations. Furthermore, they should be careful with any further production of profiles that broaden the surplus gap. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by re-skilling the unemployed persons with general secondary education, upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design upskilling and re-skilling training within the active labour market measures for the unemployed

active job seekers in the municipality of Sveti Nikole, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres from the neighbouring municipalities in the Vardar region, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1
- Production of profiles by the upskilling and re-skilling centres in the Vardar region for the most demanded occupations: salespersons, locksmiths, welders
- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance, operators of motor vehicles, mobile plants and deck crew; customer services clerks, personal services workers, security guards, etc.)

To design a process for certification of informally acquired skills, in cooperation with ESARNM and the upskilling and re-skilling centres in the region.

To increase the labour supply by activation of the passive job seekers at working age. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- **To bridge the gap in deficient occupations short-term through:**
 - o Educational institutions which have established programmes

in the deficient occupations should increase the attractiveness by means of scholarships and campaigns, and increase the enrollment quotas so as to produce more graduates. For instance, the deficiency gap for metal workers, machine assemblers and related occupations may be mitigated with the profiles produced by the secondary school "Kocho Racin" - Sveti Nikole. Furthermore, the introduction of new profiles should be considered in the deficient occupation: food preservers, wood, textile and leather workers and related occupations, in cooperation with the Joint Stock Company for Manufacture of Garments "Moda" from Sveti Nikole, which is already engaged in validation of adult learning in the occupation of light garments sewer.

o The upskilling and re-skilling centres in the Vardar region, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work.

o Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-projects for deficient occupations

• In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Sveti Nikole

o The curricula should reflect the demanded skills of the XXI

century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with the secondary vocational school “Kocho Racin”

- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

- To provide incentives and working conditions for parents by organizing transport to the remote and rural areas, flexible working arrangements and remote work

For the municipality of Sveti Nikole, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

- To intensify the investments in kindergartens and homes for the elderly, thus enabling the activation of the passive unemployed on the labour market who are not active because they are providing care for the children and the elderly

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Kavadarci

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Kavadarci, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Strengthening the mechanisms which will prevent system manipulation
- Reformulating the profiles offered by the educational institutions, in accordance with the structure of the business sector and the labour market. Stimulating and pilot-programs in severely deficient profiles
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Kavadarci and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

There is a predominant deficiency gap in the municipality of Kavadarci, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. The results showed that for every worker required by the companies in the Vardar region, there are 0.96 unemployed persons in the municipality of Kavadarci. Greater demand than supply is especially emphasized for persons with secondary education, so, the gap in secondary education is 0.7, and there is almost complete matching of the supply with demand for persons with primary education. The educational institutions in the municipality of Kavadarci have limited potential to address the gaps with deficient occupations, and it is necessary to consider new pilot profiles. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Kavadarci and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Kavadarci is the second biggest municipality in the Vardar region, with population of 38.937¹, thus accounting for 26% of the total population in the Vardar region. Currently, the labour market in the Vardar region is favourable; it is ranked third² in terms of the unemployment,

employment and activity rates as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 11.8% (13% for women and 9,6% for men), the employment rate was 53,7%, while the activity rate was 60,4%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 34.324. This places the Vardar region on the fifth place by the average salary (Regions in the Republic of North Macedonia, SSO, 2020). The region is characterized by favourable climate, in particular for winegrowing, hence the region is recognized by the concentration of wine cellars. There are also significant deposits of ferronickel in the region, which is excavated and processed.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

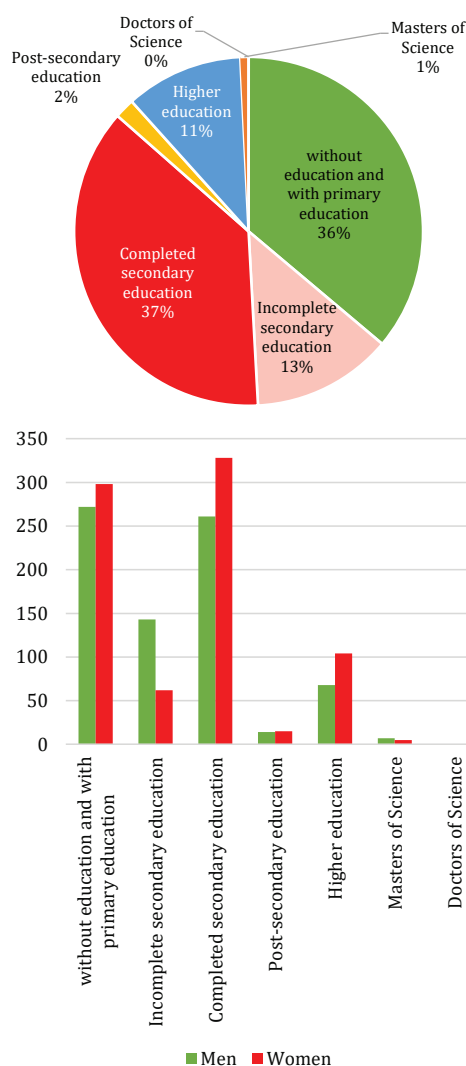
²After the Northeast region (33%) and the Polog region (28.5%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Kavadarci in 2021, 51% were women and 49% were men. Compared to other municipalities, the number of registered active job seekers is relatively small. In context of education, the structure is heterogenous. 49% of the unemployed were persons with primary or no education (36%) and incomplete secondary education (13%), 37% with secondary education (13%), 37% with secondary education, and 14% with higher education (Figure 1).

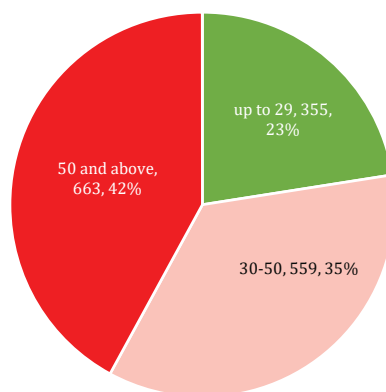
Figure 1: Unemployed persons in the municipality of Kavadarci, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 50 or more (42%), followed by the unemployed aged 30 to 50 (35%). Lower number of registered unemployed are young people up to the age of 29 (Figure 2).

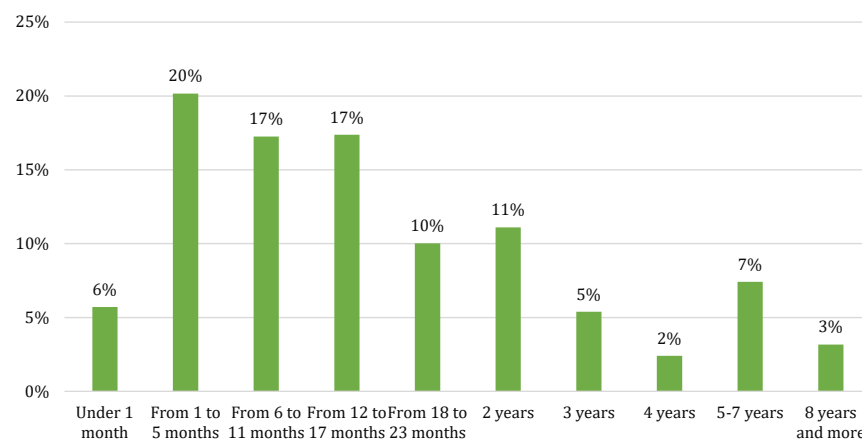
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

Almost half of the unemployed (43%) wait for a job up to a year, most of them up to five months (Figure 3). Probably the individual characteristics of this category unemployed (educational attainment, educational profile, age) are better suited to the labour market demand when compared with those with unemployment spells exceeding one year. Additional 38% wait for employment up to two years. This group is likely a subject of frictional unemployment, which

Figure 3: Unemployed in the municipality of Kavadarci, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Only 18% of the unemployed active job seekers wait for employment for more than two years. This indicates probable gaps due to the mismatch between the offer and the demand on the labour market and structural unemployment for persons waiting for employment more than three years.

In the Municipality of Kavadarci the favourable labour market conditions is reflected on the group registered as passive job seekers. This category is moderate. According to the Employment Service Agency, this category includes 839 persons, which represents a share of 53% in the total number of active job seekers. The structure of education is almost identical as with the active job seekers. Half of them are persons with completed secondary education and almost half with low education (28% with primary education and 15% with incomplete secondary education). This indicates that these persons are not necessarily with low educational attainment. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out

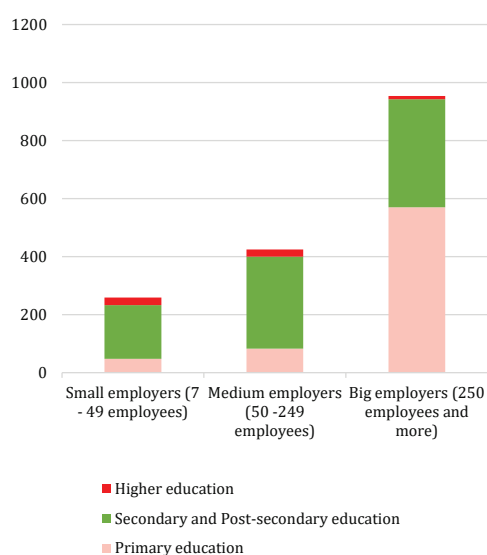
of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Vardar region is 1.638 jobs, which accounts for more than the unemployed labour force in the municipality of Kavadarci.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that 58% of the vacancies will be generated by big companies, additional 26% by medium companies and 16% by small employers. This may also explain the structure of employers in the Vardar region, which is dominated by medium and big employers. In terms of the demand by education, the demand for workers who completed secondary (53%) and primary education (43%) is predominant.

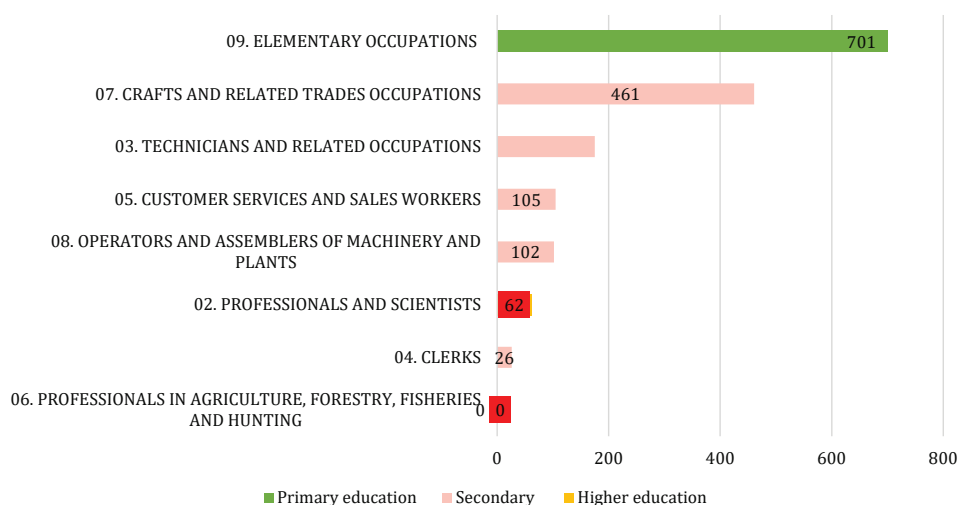
Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-IS-CO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, manufacturing laborers, cleaners, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. 28 per cent of the total demand for workers and 53% of the demand for workers with secondary education is for craft and related trades workers, including: Tobacco preparers, sewers, sewer of textile, welder, locksmith, butcher and related occupations. Followed by the demand for technicians and related occupations, service workers and machinery and plant assemblers. The total demand for occupations with higher education is from professionals and scientists, including: Computing professionals, mechanical engineers, doctors.

Figure 5: Labour demand by occupation and education

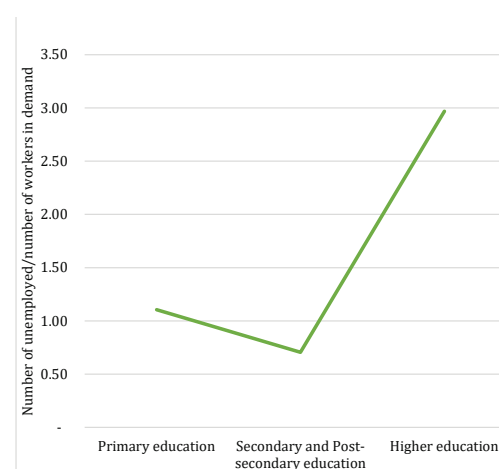


Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Labour market gap by education and occupation

The labour market gap in the municipality of Kavadarci is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2021

The results showed that for every worker required by the companies in the Vardar region, there are 0.96 unemployed persons in the municipality of Kavadarci. Greater demand than supply is especially emphasized for persons with secondary education, so, the gap in secondary education is 0.7, and there is almost complete matching of the supply with demand for persons with primary education.

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the municipality of Kavadarci. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green - moderate gap).

The results show that for higher level skills there is a gap for six out of ten occupations. Out of which, the gap is drastically positive, and additionally, there is a moderately

surplus gap in two occupations for persons with secondary/post-secondary education. In the occupations with higher education, there is an intense surplus gap with the following occupations: Business and administration professionals, and legal, social and cultural professionals. For the latter, there is a surplus gap regardless of education attainment and it is deepening as the education attainment increases. There is a moderate deficiency gap only for information and communications technology professionals. For the persons with high skill level and secondary education, there are mainly surplus gaps. This may be due to the structure of the sectors which dominate in the Municipality of Kavadarci, however, part of them are occupations with high mobility and should be considered in context of the overall demand on a national level. Thus, for the occupations associate professionals for science and engineering and health professionals, despite the positive gaps, these are not problematic.

Deficiency gaps are prevailing for occupations at medium skill level. Therefore, out of 12 occupations, there is a moderate sufficiency gap only in two occupations (clerks for general office works and secretaries and electrotechnology workers). In five occupations, there is a deficiency gap, predominantly moderate, except for the occupation food preservers, wood, textile, and leather workers and related occupations, where the gap is severely deficient.

In occupations with low skills, there are deficiency gaps in all occupa-

tions identified in the Municipality of Kavadarci, whereas for two occupations: Drivers of motor vehicles, mobile plants and ships' deck crew; elementary workers; refuse collectors and related occupations, there is a severe deficiency gap. On the other hand, there is a drastic surplus of unemployed workforce with persons without occupations and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The general conclusion is that the labour market in municipality of Kavadarci is lacking workforce, mainly for the occupations with low and medium skills. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and business and administrative associates, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas³.

³World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	42	Customer services clerks				
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
Low skill level	81	Machine and Plant operators				
	82	Machinery and equipment assemblers				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery elementary workers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are three secondary schools in the Municipality of Kavadarci and five programs for verification of adult learning. In the forthcoming four years these institutions are expected to produce 1.412 profiled professionals for the labour market. Half of the total offer of education profiles are in one occupation: Science and engineering professionals, and additional 35% are persons with general secondary education, classified as without occupation, and 13% profiles in the occupation business and administrative associate professionals. In addition, there are five programs for verification of adult learning in the Municipality of Kavadarci.

These results imply that the municipality of Kavadarci has established

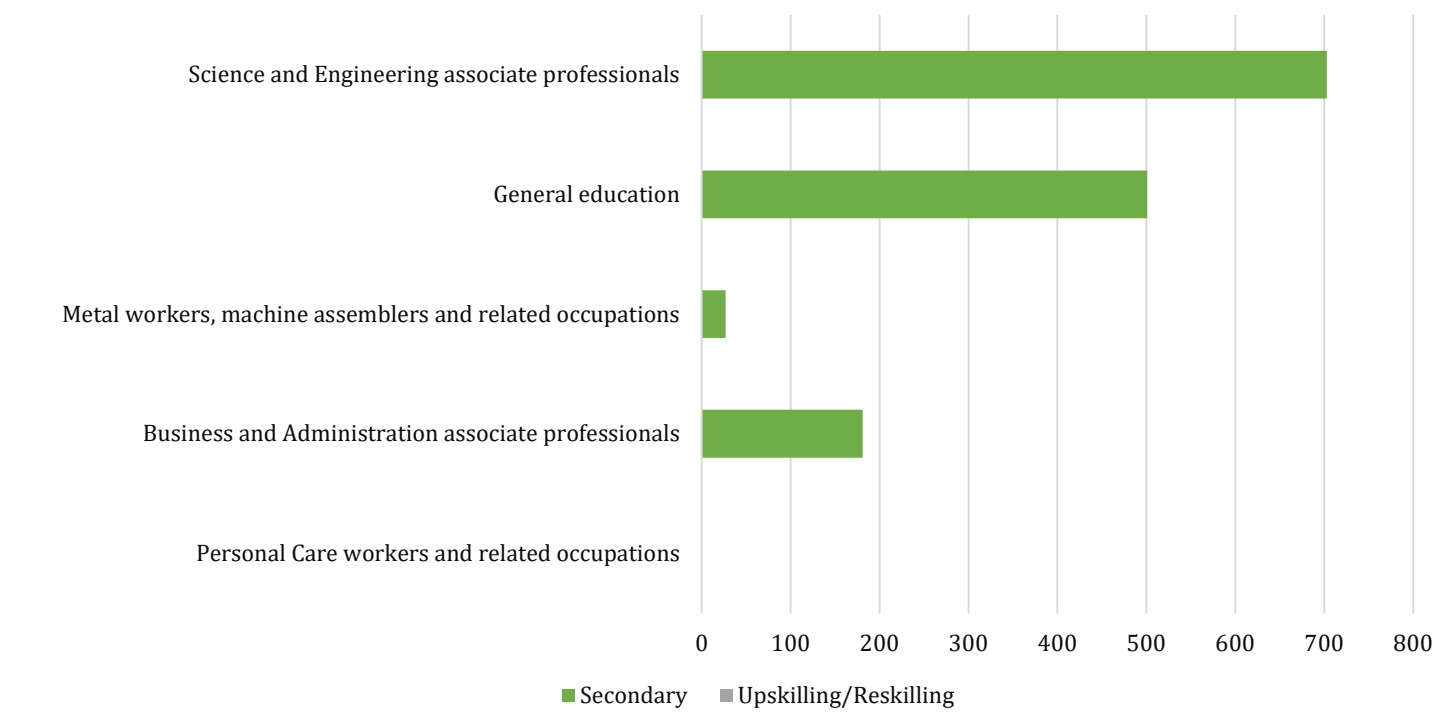
an educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years. The results show that educational institutions and verification programs in the municipality of Kavadarci have limited capacity and modest contribution in decreasing the labour market gaps in the municipality of Kavadarci. Hence, change is necessary, promote opening new programs in the deficiency occupations and controlling production of profiles in the sufficient occupations.

Educational institutions in the Municipality of Kavadarci mainly generate profiles in the sufficient occupations, such as: Associate professionals in science and engineering; and business and administra-

tive associate professionals, as well as profiles with general secondary education, which are classified in the category without occupation.

There are severe gaps for secondary education occupations for: food preservers, wood, textile and leather workers and related occupations; drivers of motor vehicles, mobile plants and deck crew, new pilot profiles should be considered which will generate professionals. Deficient occupations for medium skill level, and especially low skill level, should be mitigated by stimulating the role of verification programs for adult learning, by creation of verification programs for deficient occupations, such as: Tobacco preparers, sewers, textile sewers, welders, locksmith, butcher, drivers of motor vehicles, mobile plants and ships' deck crew; elementary workers in agriculture, forestry and fisheries; and elementary workers, refuse collectors and related occupations.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions in the Municipality of Kavadarci, Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher	Secondary	Upskilling/re-skilling
High skill level	21	Science and engineering professionals						
	22	Health professionals						
	23	Teaching professionals						
	24	Business and administration professionals						
	25	Information and communications technology professionals						
	26	Legal, social and cultural professionals						
	31	Science and engineering associate professionals					703	
	32	Health associate professionals						
	35	Information and communications technicians						
	33	Business and Administration associate professionals					181	
Medium skill level	41	General office clerks and secretaries						
	42	Customer services clerks						
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks						
	51	Personal services workers						
	52	Sales workers						
	53	Personal care workers and related occupations						
	54	Security guards						
	61	Market-oriented skilled agricultural workers						
	71	building construction workers and related construction workers						
	72	Metal workers, machine assemblers and related occupations					27	
	73	Precision mechanics, handicraft workers and printers						
	74	Electrotechnology workers						
	75	food preservers, wood, textile and leather workers and related occupations						
	81	Machine and Plant operators						
	82	Machinery and equipment assemblers						
Low skill level	83	Drivers of motor vehicles, mobile plant operators and ship deck crew						
	91	Cleaners and helpers						
	92	Agricultural, forestry and fishery elementary workers						
	93	Labourers in mining, construction, manufacturing and transport						
	96	Refuse workers and other elementary workers						
		No occupation						
		General secondary education					501	

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The overview of the labour market in the Municipality of Kavadarci has shown that the greatest gap between education and occupation on the labour market is with persons with higher education. For each required worker with higher education in the Vardar region, there are 3 unemployed persons in the municipality of Kavadarci. There is a predominant deficiency gap in the municipality of Kavadarci, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals and for business and administrative associates. The educational institutions in the municipality of Kavadarci have limited potential to address the gaps with deficient occupations. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour force for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Kavadarci, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling institutions, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to

provide them with qualifications suitable for occupations at skill level 1

- Deficient occupations for medium skill level, and especially low skill level, should be mitigated by creation of verification programs for adult learning, particularly for occupations such as: Tobacco preparers, sewers, textile sewers, welders, locksmith, butcher, drivers of motor vehicles, mobile plants and ships' deck crew; elementary workers in agriculture, forestry and fisheries; and elementary workers, refuse collectors and related occupations.
- Upskilling/re-skilling of the persons with completed general secondary education in some of the deficient occupations with secondary education
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Educational institutions should consider introduction of pilot profiles in the occupations with severe deficiency gaps
 - The Training and retraining programs organized through verification of adult learning and the Employment Centre, should be motivated to

intensify their work

- Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:
 - Regular internship for students of secondary vocational schools in relevant companies
 - Pilot-programs for deficient occupations
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Kavadarci
 - The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Intensify the cooperation with the secondary vocational schools and the upskilling/reskilling institutions and programs.
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Kavadarci, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in

demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Veles

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Veles, such as:

- **Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)**
 - **Strengthening the mechanisms which will prevent system manipulation**
 - **Intensifying the cooperation between secondary vocational schools and the business sector**
 - **Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Veles and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)**
- **Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand**

There is a predominant deficiency gap in the municipality of Veles, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. The biggest gap is with person with higher education. For each required worker with higher education in the Vardar region, there are 4 unemployed persons in the municipality of Veles. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals and for business and administrative associates. The educational institutions in the municipality of Veles have limited potential to address the gaps with deficient occupations. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Veles and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Veles is the biggest municipality in the Vardar region, with population of 54.546¹, thus accounting for 36% of the total population in the Vardar region. Currently, the labour market in the Vardar region is favourable; it is ranked third² in terms

of the unemployment, employment and activity rates as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 11.8% (13% for women and 9.6% for men), the employment rate was 53.7%, while the activity rate was 60.4%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 34.324. This places the Vardar region on the fifth place by the average salary (Regions in the Republic of North Macedonia, SSO, 2020). The region is characterized by favourable climate, in particular for winegrowing, hence the region is recognized by the concentration of wine cellars. There are also significant deposits of ferronickel in the region, which is excavated and processed.

¹ Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

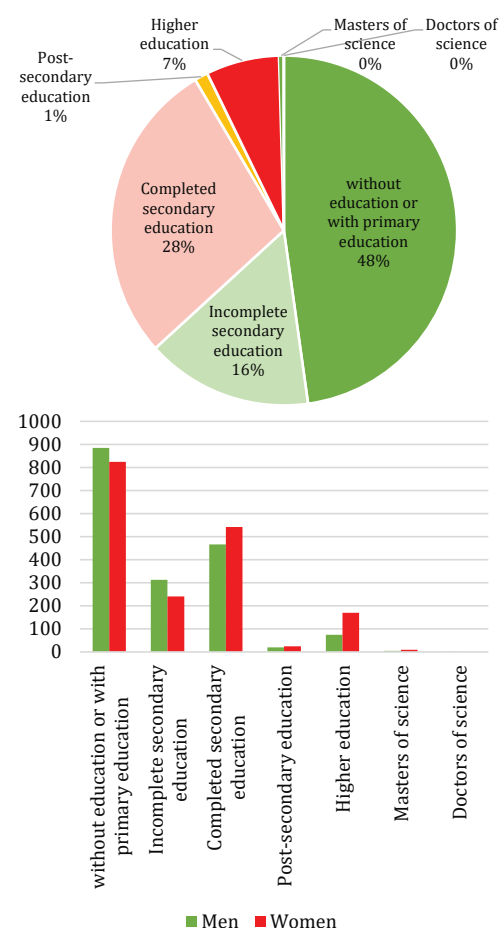
² After the Southeast region (unemployment 4.3%) and Eastern region (unemployment 8.1%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Veles in 2021, 51% were women and 49 were men. In terms of education, persons with lower educational attainment are predominant. 64% of the unemployed were persons with primary or no education (48%) and incomplete secondary education (16%) and incomplete secondary education (16%) (Figure 1).

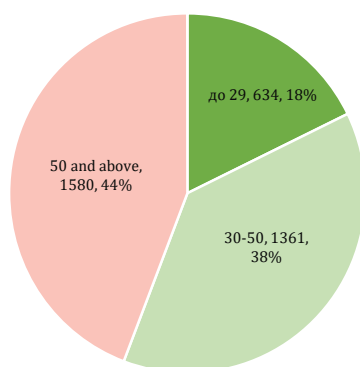
Figure 1: Unemployed persons in the municipality of Veles, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 50 or more (44%), followed by the unemployed aged 30 to 50 (38%). Lower number of registered unemployed are young people up to the age of 29 (Figure 2).

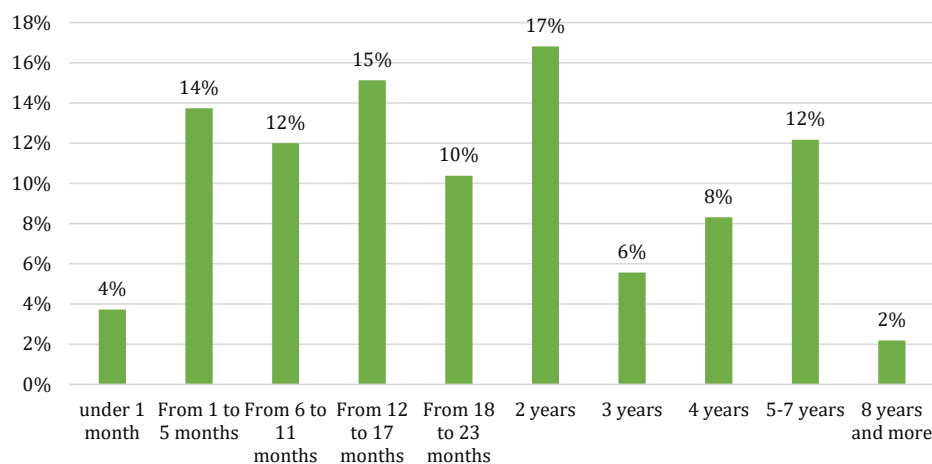
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

30% of the unemployed wait for a job up to a year, most of them up to five months (Figure 3). Probably the individual characteristics of this category unemployed (educational attainment, educational profile, age) are better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Yet, most of the unemployed, 42%, wait for employment from one to three years, and the percentage is decreasing to 28% with persons waiting for employment more than three years.

Figure 3: Unemployed in the municipality of Veles, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

This indicates probable gaps due to the mismatch between the offer and the demand on the labour market and structural unemployment for persons waiting for employment more than three years.

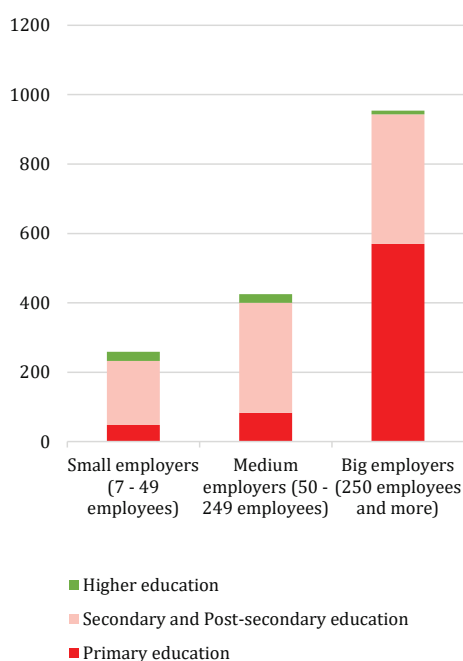
In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Veles. According to the Employment Service Agency, this category includes 1.490 persons, which represents a share of 42% in the total number of active job seekers. One half of them are with primary (37%) and incomplete secondary education (16%). This indicates that these persons are mostly with low educational attainment. Furthermore, only six per cent of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Vardar region is 1.638 jobs, which accounts for 45% of the unemployed labour force in the municipality of Veles.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that 58% of the vacancies will be generated by big companies, additional 26% by medium companies and 16% by small employers. This may also explain the structure of employers in the Vardar region, which is dominated by medium and big employers. In terms of the demand by education, the demand for workers who completed secondary (53%) and primary education (43%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

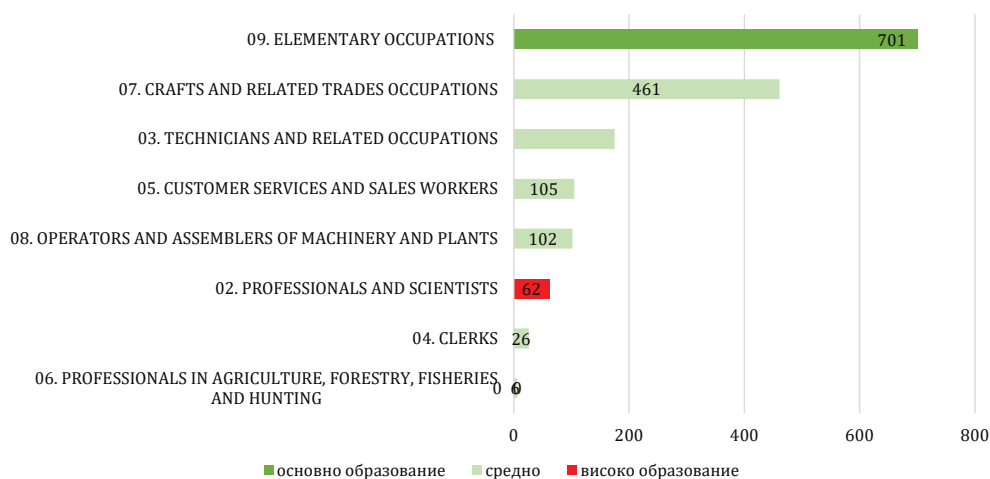
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the

group of elementary occupations (predominantly for elementary workers, manufacturing laborers, cleaners, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. 28 per cent of the total demand for workers and 53% of the demand for workers with secondary education is for trades and related trades workers, including: Tobacco preparers, sewers, sewer of textile, welder, locksmith, butcher and related occupations. Followed by the demand for technicians and related occupations, customer service workers and machine and plant assemblers. The total demand for occupations with higher education is from professionals and scientists, including: computing professionals, mechanical engineer, doctors.

Labour market gap by education and occupation

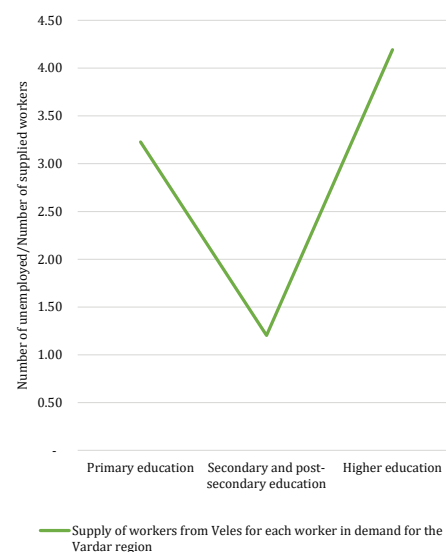
The labour market gap in the municipality of Veles is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment.

Figure 5: Labour demand by occupation and education for the Municipality of Veles



Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2021

The results showed that for every worker required by the companies in the Vardar region, there are 2.1 unemployed persons in the municipality of Veles. This is a low to medium gap, compared to other municipalities/regions. The gap is biggest with the higher education, 4.2 unemployed persons for one demanded worker with higher education. For the persons with secondary and post-secondary education, the comparison is more adequate, and the ratio is 1.2, while for those with primary it is 3.2.

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the municipality of Veles. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green – moderate gap).

The results show that for higher level skills there is a gap for six out of eleven occupations. Out of which, the gap is drastically positive only for two occupations, and additionally, there is a moderately surplus gap in two occupations for persons with secondary education. In the occupations with higher education, there is an intense surplus gap with the following occupations: legal, social and cultural professionals, and business and administrative

associates. There is a moderate gap for education professionals and business and administration professionals, in two occupations: Science and engineering associate professionals and health associate professionals, whereas, the moderate deficiency gap occurring with persons with secondary education disappears with higher level of education attainment. This indicates potential underqualification. Deficiency gaps are prevailing for occupations at medium skill level. Thus, out of 14 occupations, there is surplus gap only for three occupations, of which for two occupations (metal workers, machine assemblers and related occupations, and food preservers, wood, textile, leather workers and other trades and related trades workers) surplus gap occurs only for persons with primary education and turn to drastic deficiency gaps for the persons with secondary education. In seven occupations there is deficiency gap, predominantly moderate, except for the two above mentioned occupations.

In occupations with low skills, except for the occupations of machinery and plant operators and food preparation assistants, in all other occupations there is greater demand compared to supply, which creates the deficiency gap. In three occupations: Drivers of motor vehicles, mobile plants and ships' deck crew; elementary workers in agriculture, forestry and fisheries; and elementary workers, refuse collectors and related occupations,

there is a drastic deficiency gap. On the other hand, there is a drastic surplus of unemployed workforce with persons without occupations and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or reskilling measures for persons with general secondary education.

The general conclusion is that the labour market in municipality of Veles is lacking workforce, mainly for the occupations with low and medium skills. To an extent, this may be owing to the emigration trend in the country. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and business and administrative associates, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas³.

³ World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	42	Customer services clerks				
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	52	Sales workers				
	53	Personal care workers and related occupations				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
Low skill level	81	Machine and Plant operators				
	82	Machinery and equipment assemblers				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

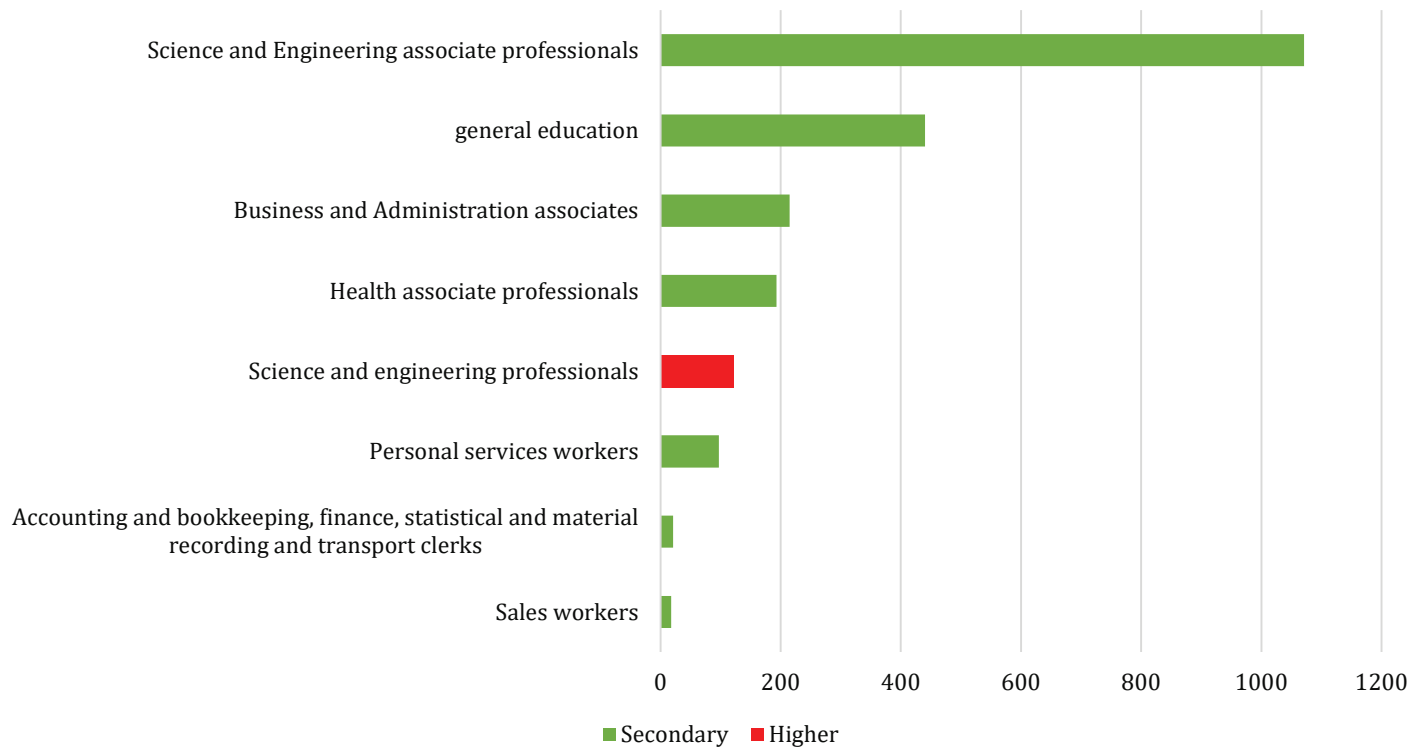
There are 4 secondary schools and one faculty in the Municipality of Veles. In the forthcoming four years, the secondary and higher education institutions are expected to produce 2.177 profiled professionals for the labour market. Half of the total offer of education profiles are in one occupation: Science and engineering professionals, and additional 10% are persons with general secondary education, classified as without occupation. In addition, the Municipality of Veles has two institutions for verification programs for adults and one Open University for life-long learning.

These results imply that the municipality of Veles has partially established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the

labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years. The results show that educational institutions and verification programs in the municipality of Veles have limited capacity and modest contribution in decreasing the labour market gaps in the municipality of Veles. Hence, change is necessary, promote opening new programs in the deficiency occupations and controlling production of profiles in the sufficient occupations. One of the explanations for this situation is the fact that the location of the municipality of Veles is close to Skopje, so, probably, part of the produced profiles comes from those educational institutions. The educational institutions in the municipality of Veles mainly contribute to the reduction of deficient profiles in two occupations with secondary education, as follows: accounting and bookkeeping statistical, finance and insurance,

material recording and transport clerks, and sales workers. In drastic gaps with medium skills in the occupations of the mechanical profession, the secondary school “Kole Nedelkovski” may contribute to the decrease of the gap, by upskilling to secondary education of the unemployed in those occupations, and with completed primary education and/or pilot- profiles, which shall generate demanded profiles (such as welders, locksmiths, master professionals). For other deficient occupations with medium skills and particularly low skills, it is necessary to stimulate the role of the Open Civil University “Blagoj Strachkovski” – Veles, verification of adult learning by opening programs for significantly deficient occupations, such as: Tobacco preparers, sewers, textile sewers, welders, locksmith, butcher, drivers of motor vehicles, mobile plants and ships’ deck crew; elementary workers in agriculture, forestry and fisheries; and elementary workers, refuse collectors and related occupations.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions in the Municipality of Veles, Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

skill level	Code	Occupation/profile	Primary	Sec- ondary	Post-sec- ondary	higher	Secondary	higher	upskill- ing and re-skilling
High skill level	21	Science and engineering professionals						122	
	22	Health professionals							
	23	Teaching professionals							
	24	Business and administration professionals							
	25	Information and communications technology profes- sionals							
	26	Legal, social and cultural professionals							
	31	Science and engineering associate professionals					1071		
	32	Health associate professionals					193		
	34	Legal, social and cultural associate professionals							
	35	Information and communications technicians							
	33	Business and Administration associate professionals					215		
Medium skill level	41	General office clerks and secretaries							
	42	Customer services clerks							
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					21		
	44	Other office clerks							
	51	Personal services workers					97		
	52	Sales workers					18		
	53	Personal care workers and related occupations							
	54	Security guards							
	61	Market-oriented skilled agricultural workers							
	71	building construction workers and related construc- tion workers							
	72	Metal workers, machine assemblers and related occupations							
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers							
	75	food preservers, wood, textile and leather workers and related occupations							
	81	Machine and Plant operators							
Low skill level	82	Machinery and equipment assemblers							
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew							
	91	Cleaners and helpers							
	92	Agricultural, forestry and fishery labourers							
	93	Labourers in mining, construction, manufacturing and transport							
	94	Food preparation assistants							
	96	Refuse workers and other elementary workers							
		No occupation							
		General secondary education					440		

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The overview of the labor market in the Municipality of Veles has shown that the greatest gap between education and occupation on the labor market is with persons with higher education. For each required worker with higher education in the Vardar region, there are 4 unemployed persons in the municipality of Veles. There is a predominant deficiency gap for occupations with medium and low skills level in the municipality of Veles, which implies a shortage of qualified labour force. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals and for business and administrative associates. The educational institutions in the municipality of Veles have limited potential to address the gaps with deficient occupations. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour force for the Employment Centers and ESARNM

Design active labour market measures for the unemployed active job seekers in the municipality of Veles, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The Open Civil University “Blagoj Strachkovski” - Veles, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation

so as to provide them with qualifications suitable for occupations at skill level 1

- Deficient occupations for medium skill level, and especially low skill level, should be mitigated by creation of verification programs for adult learning and the Open Civil University, particularly for occupations such as: Tobacco preparers, sewers, textile sewers, welders, locksmith, butcher, drivers of motor vehicles, mobile plants and ships’ deck crew; elementary workers in agriculture, forestry and fisheries; and elementary workers, refuse collectors and related occupations.
- Upskilling/re-skilling of the persons with completed general secondary education in some of the deficient occupations with secondary education
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to produce more graduates. For example, deficient gaps in occupations of the mechanical profession may be mitigated by producing profiles by the secondary school “Kole Nedelkovski”, by upskilling to secondary education of the unemployed

in those occupations, and with completed primary education and/or pilot-profiles, which shall generate demanded profiles (such as welders, locksmiths, master professionals).

- The Training and retraining programs organized through verification of adult learning and the Open Civil University, in cooperation with ESARNM and the Employment Center, should be motivated to intensify their work
- Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:
 - Regular internship for students of secondary vocational schools in relevant companies
 - Pilot-programs for deficient occupations
- In the medium term, it is necessary to redesign the programs / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Veles
 - The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with secondary vocational schools and the Open Civil University
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the jobs and the quality of the practical training for pupils and

- students in the companies
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

**For the Municipality of Veles,
regional chambers of commerce,
secondary schools**

- To raise the awareness of young people about which educational

profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Eastern Region

Labour market diagnostics in the municipality of Shtip

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Shtip, such as:

- o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates
- Stimulating and intensifying the validation of adult education programmes in cooperation with ESARNM and the Employment Centre
- Intensifying the cooperation between secondary vocational schools and the business sector
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Shtip and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Shtip is facing underqualification, a shortage of qualified labour force and a deficiency gap for medium and low skill occupations, as well as severe surplus gaps for specific occupations with higher education. For each required worker with primary education in the Eastern region, there are six unemployed persons in the municipality of Shtip. However, this gap disappears for persons with secondary education. This implies the existence of potential underqualification. The educational institutions in the municipality of Shtip have potential to partially address the gap with deficient occupations. Greater efforts need to be taken to overcome the problem with the shortage of labour, which is a pressing issue (in particular for occupations at low and medium skill levels).

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Shtip and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Shtip is the biggest municipality in the Eastern region with population of 48,657¹, thus accounting for 28% of the total population in the Eastern region. Currently, the labour market in the Eastern region is favourable; it is ranked second in terms of the unemployment rate² and third in terms of the employment³ and activity rates as compared to the other seven regions.

In 2019, the unemployment rate of the population aged 15 and above was 7.8% (7.9% for women and 7.8% for men), the employment rate was 54.3%, while the activity rate was 58.9%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 30,407. This places the Eastern region in the middle of the rankings by the average salary (Regions in the Republic of North Macedonia, SSO, 2020). The region is characterized by favourable climate and hydrological predispositions, and, most likely, the dominance of this sector affects the level of the average salary. Furthermore, the municipality of Shtip is centrally located, which makes it attractive for foreign investors.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Southeast region (6.3%)

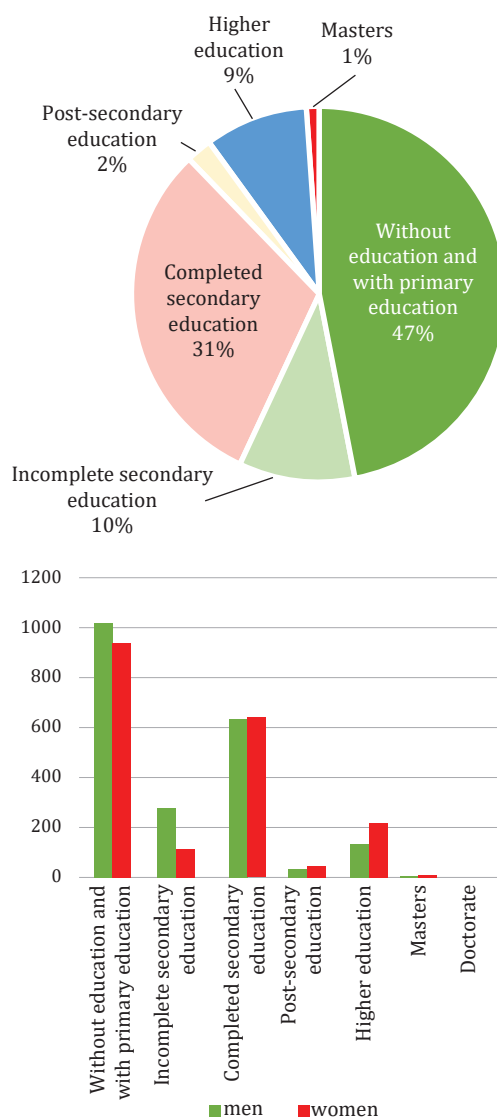
³After the Southeast region (63.3%) and the Vardar region (55.2%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Shtip in 2020, 52% were women and 48% were men. In terms of education, persons with lower educational attainment are predominant. More than one half (57%) of the unemployed were persons with primary or no education (47%) and incomplete secondary education (10%) (Figure 1).

Figure 1: Unemployed persons in the municipality of Shtip, by educational attainment

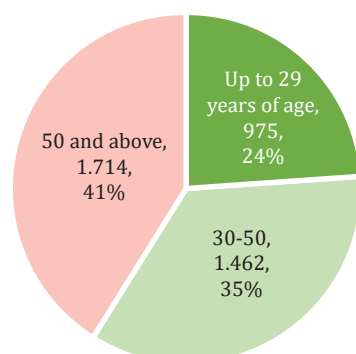


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed persons are aged 50 and more (41%). They are followed by persons aged 30-50.

Young people up to 29 years of age have the least share (Figure 2).

Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

60% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. The share of the unemployed persons decreases with the increase of the length of the unemployment spell, which is a positive development. However, 21% of the unemployed persons are waiting for employment for more than two years, which indicates a possibility of structural unemployment for this group.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a moderate share in the unemployed in the municipality of Shtip. According to the Employment Service Agency, this category includes 1,076 persons, which represents a share of 25% in the total number of active job seekers. One half of them are with primary or no education (35%) and incomplete secondary education (14%). This indicates that these persons are mostly with low educational attainment.

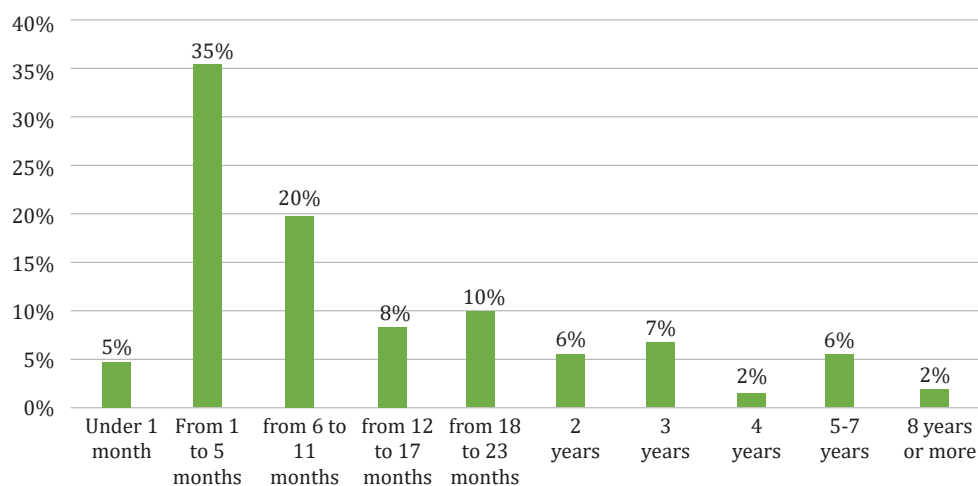
Furthermore, 14% of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2020, the total demand for the Pelagonija region is 2,546 jobs, which accounts for 61% of the unemployed labour force in the municipality of Shtip.

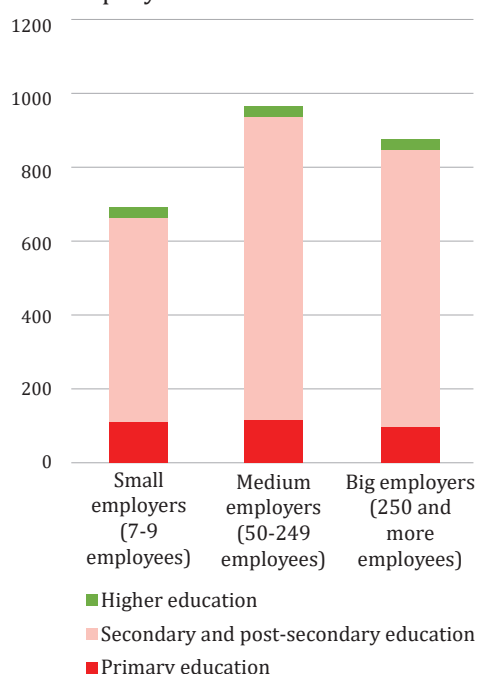
Figure 4 provides an overview of the labour demand by education and company size. There is a significant balance in the job creation in the municipality of Shtip, depending on the size of the company. It is expected that 38% of the vacancies will be generated by medium companies, additional 35% by big companies and 27% by small employers. This may also explain the structure of employers in the municipality of Shtip, where the companies are well diversified by size. In terms of the demand by education, the demand for workers who completed secondary (84%) and primary education (13%) is predominant.

Figure 3: Unemployed in the municipality of Shtip, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

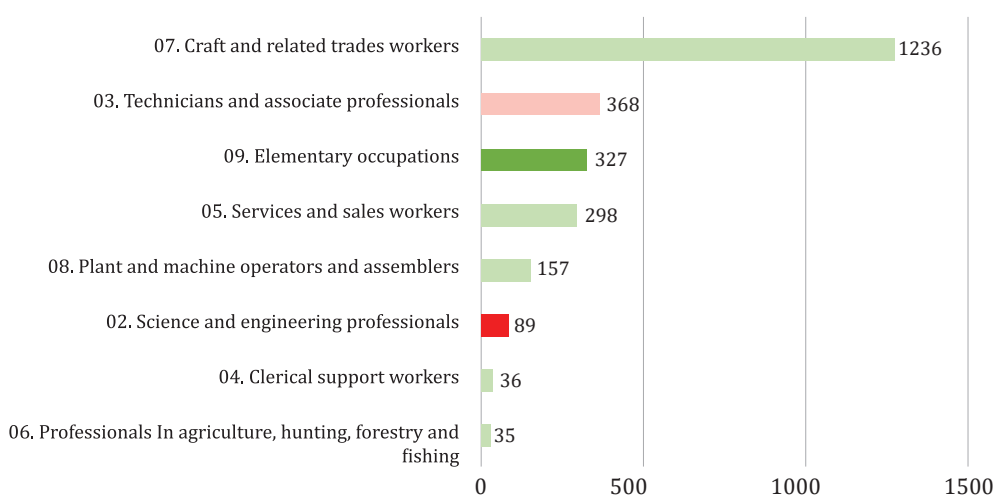
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers; manufacturing line labourer; labourers in mining; garment ironers, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. 49% of the total demand for workers and 70% of the demand for workers with secondary education is for craft and related

trades workers, including: sewers, welders, textile handicraft workers, carpenters, shoemakers, upholsterers, weavers, etc. They are followed by the occupations of services workers, including: salespersons, cashiers, waiters, cooks, and related occupations.

For persons with completed secondary and post-secondary education, the entire demand is for technicians and related occupations, including: machine maintenance operator, technician- operator, mechanical engineering technician.

All workers with higher education in demand on the market are in the occupation of professionals and science professionals. One half of them are mechanical engineers and wood processing engineers.

Figure 5: Demand by occupation

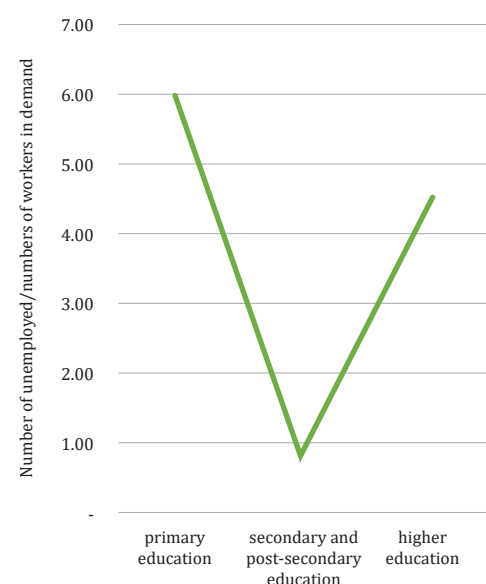


Source: ESARNM, regional labour market skills needs survey in RNM in 2020 ⁴

Labour market gap by education and occupation

The labour market gap in the municipality of Shtip is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have indicated that the gap is the greatest for primary education. For every worker with primary education required by the companies in the Eastern region, there are six unemployed persons in the municipality of Shtip, while for secondary and post-secondary education this ratio is 0.84, and for higher education it is 4.5.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Shtip. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green - moderate gap).

The results show that for higher level skills there is a mostly positive gap for eight out of ten occupations. For five of the occupations the gap is severe.

For two of the occupations with higher education there is a severe surplus gap: legal, social and cultural professionals; and teaching professionals. Furthermore, severe gaps for these occupations occur at any level of education, which indicates that there is insufficient demand for these occupations on the labour market in Shtip.

For the occupations at high skill level and secondary education the positive gap is owing to the lower demand. There is a severe gap for the occupation of health associate professionals. However, the mobility

of these profiles is higher, and the demand for this occupation at national level should also be taken into account. Thus, this gap should not be seen as a concerning one. There is a surplus gap, where the labour supply is greater than the demand, for persons with secondary education with the following occupations: business and administration associate professionals; and science and engineering associate professionals. Nevertheless, for both occupations the gap transforms into a deficiency gap with the increase of the educational attainment, which indicates a potential underqualification.

Deficiency gaps are prevailing for occupations at medium skill level. A moderate surplus gap where the labour supply is greater than the demand is found only in one out of 14 occupations (electrotechnology workers). There is also a moderate surplus gap for the following occupations: food preservers, wood, textile and leather workers and related occupations; and machine and plant operators) for persons with primary education. However, this gap disappears and transforms into severe deficiency gap for persons who completed secondary education, which implies that these are occupations with underqualification and that persons with primary education need upskilling. Besides these occupations, for the persons with completed secondary education there are severe deficiency gaps for additional four occupations, in particular: sales workers; building construction workers and related construction workers; operators of motor vehicles, mobile plants and deck crew; and machine and equipment assemblers.

In occupations at low skill level there is a severe deficiency gap for labourers in mining, construction, manufacturing, and transport; and for elementary workers, refuse collectors and related occupations; as well as severe surplus of labour for persons without occupation and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the labour market in the municipality of Shtip is facing a shortage of labour, mostly for occupations at medium level skills, shortage of elementary workers, and underqualification of persons with primary education and without occupation. To an extent, this may be owing to the emigration trend in the country. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	62	Fishery and hunting workers				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	82	Machinery and equipment assemblers				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are six secondary schools, one university with 16 faculties, and institution for validation of adult learning with upskilling and re-skilling in the municipality of Shtip. In the forthcoming two years these institutions are expected to produce 4,881 profiled professionals for the labour market. 80% of the total supply of educational profiles fall within five occupations, predominantly with higher education: legal, social and cultural professionals; health professionals; science and engineering professionals; business and administration professionals; and health associate professionals.

These results imply that the municipality of Shtip has a well-established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years.

The results show that vocational schools and adult education centres could be active factors in bridging some of the deficiency gaps in the municipality of Shtip. Thus, the deficiency gap for textile workers (sewers and textile handicraft

workers) may be mitigated with the profiles produced by the secondary school “Dimitar Miraschiev”, with upskilling to secondary education qualifications of the unemployed with this occupation who have completed primary education. The gap for the occupations: sales workers; and building construction workers and related construction workers may be mitigated by increasing the number of persons upskilled in this occupation by the Open Civil University “Joska Sveshtarot” from Strumica with its programme for validation of adult learning.

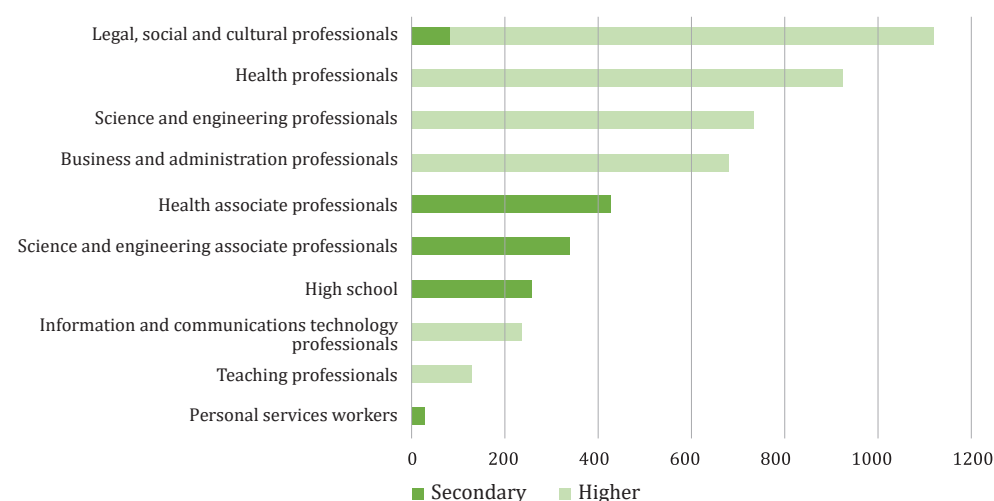
Some of the educational institutions in Shtip that produce high skill profiles, such as health professionals and associate professionals, generate a moderate surplus gap. However, taking into account that these occupations entail greater mobility on the labour market, and the likelihood that some of the persons who have completed secondary education would continue their education, this pressure does not amount to a threat. Nevertheless, any further production of the following education profiles: legal, social and cultural professionals; science and engineering associate professionals; and business and administration associate professionals would broaden the surplus gap and create further labour market disruptions.

In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the programme for validation of non-formal learning of adults could strengthen its role and engage actively in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Shtip has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For each required worker with primary education in the Eastern region, there are six unemployed persons in the municipality of Shtip. However, this gap disappears for persons with secondary education. This implies the existence of potential underqualification. There is a predominant deficiency gap in the municipality of Shtip, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. However, at the same time, surplus gaps have been identified for persons with high skills with supply drastically exceeding the demand for occupations that are challenging also at national level. The educational institutions in the municipality of Shtip have the potential to address the gap with deficient occupations. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by re-skilling the unemployed persons with general secondary education, upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Ministry of Education and Science of the Republic of North Macedonia

⁵World Bank (2020), Finding Solutions to Youth Unemployment in North Macedonia.

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

			Gaps				Supply from educational institutions	
skill level	Code	Occupation/Educational profile	Primary	Secondary	Post-secondary	Higher	Secondary	Higher
High skill level	21	Science and engineering professionals						735
	22	Health Professionals						926
	23	Teaching professionals						131
	24	Business and administration professionals						680
	25	Information and communications technology professionals						237
	26	Legal, social and cultural professionals					84	1034
	31	Science and engineering associate professionals					338	
	32	Health associate professionals					426	
	35	Information and communications technicians						
	33	Business and administration associate professionals						
Medium skill level	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks						
	51	Personal services workers					30	
	52	Sales workers						
	54	Security guards						
	61	Market-oriented skilled forestry						
	62	Fishery and hunting workers						
	71	Building construction workers and related construction workers						
	72	Metal workers, machine assemblers and related occupations						
	73	Precision mechanics, handicraft workers and printers						
	74	Electrotechnology workers						
	75	Food preservers, wood, textile and leather workers and related occupations						
	81	Machine and plant operators						
	82	Machinery and equipment assemblers						
	83	Drivers of motor vehicles, mobile plant operators and deck crew						
Low skill level	92	Agricultural, forestry and fishery labourers						
	93	Labourers in mining, construction, manufacturing and transport						
	96	Refuse workers and other elementary workers						
		No occupation						
		General secondary education					260	

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Shtip, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The centre for validation of adult education programmes, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1
- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance, salespersons, welders, cashiers)
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates. For instance, the deficiency gap for textile workers (sewers and textile handicraft workers) may

be mitigated with the profiles produced by the secondary school “Dimitar Miraschiev”, with upskilling to secondary education qualifications of the unemployed with this occupation who have completed primary education.

- o Stimulating and intensifying the validation of adult education programmes in cooperation with ESARNM and the Employment Centre

- o Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-programme for deficient occupations

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Shtip

- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with secondary vocational schools
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Shtip, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)

South - East Region

Labour market diagnostics in the municipality of Radovich

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Radovich, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Activation of passive job seekers of working age through a campaign for activation of passive job seekers, identification of the reasons for the passivity and strengthening the mechanisms preventing manipulations with the system
- Strengthening the educational infrastructure in Radovich and promotion of verification programs for adults and other potential centres to provide upskilling and re-skilling
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Radovich and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Radovich is facing a shortage of qualified labour force and a deficiency gap for medium and low skill occupations. For each required worker with primary education in the Southeast region, there are 2 unemployed persons in the municipality of Radovich. However, for the persons with primary education this gap is twice greater (five), and disappears for persons with higher education and transitions into deficiency gap in persons with secondary education. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Radovich have limited potential to address the gaps with deficient occupations. Greater efforts are needed to improve the educational infrastructure.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Radovich and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Radovich is the second biggest municipality in the Southeast region, with population of 56,961¹, thus accounting for 17% of the total population in the Southeast region. Currently, the labour market in the Southeast region is favourable; the region has the lowest unemployment rate, and

the highest employment and activity rates as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 4.3% (4.5% for women and 4.2% for men), the employment rate was 62.5%, while the activity rate was 65.3%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 32.660. This places the Southeast region in the second-to-last in the rankings by the average salary² (Regions in the Republic of North Macedonia, SSO, 2021). The region is characterized by favourable climate and pedological conditions for the development of agriculture, and, most likely, the dominance of this sector affects the level of the average salary.

¹ Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

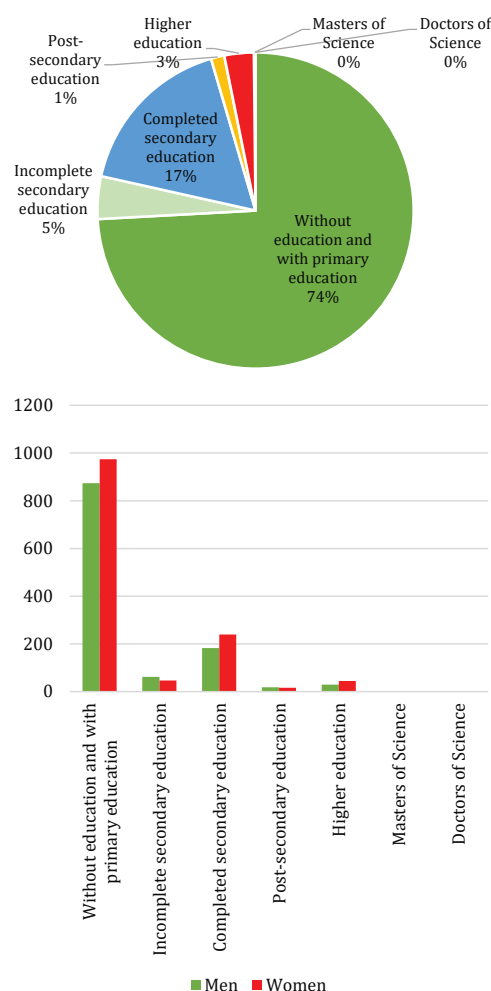
² After the Northeast region with MKD 32.483.

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Radovich in 2020, 53% were women and 47% were men. In terms of education, persons with lower educational attainment are predominant. 80% of the unemployed were persons with primary or no education (74%) and incomplete secondary education (5%) (Figure 1).

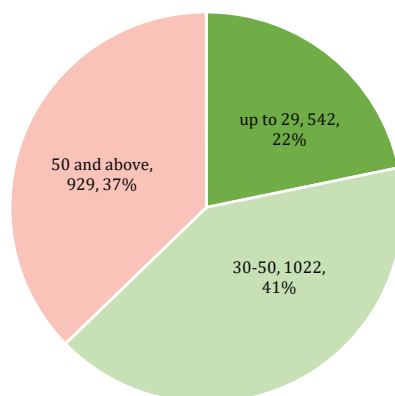
Figure 1: Unemployed persons in the municipality of Radovich, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed persons are aged 30 to 50 (41%). Followed by registered unemployed persons at the age of 50 and above, and lowest share of youths up to the age of 29 (Figure 2).

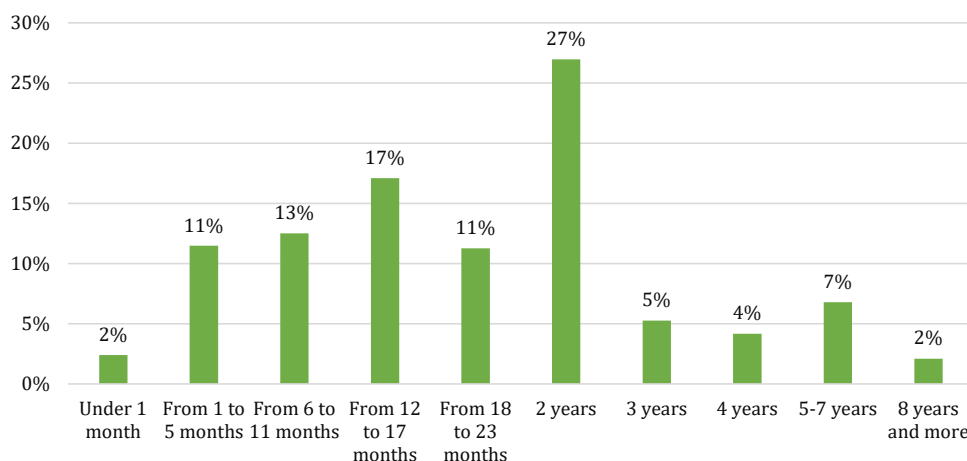
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

Half of the unemployed wait for employment from one to three years (Figure 3). Probably, the transition school to work is slower, and there are greater mismatches between the supply and labour market demand. Additional 18% of the unemployed persons are waiting for employment for more than two years, which indicates a possibility of structural unemployment. The share of those waiting for employment up to one year is 26%, out of which most of them wait for employment from six to eleven months. The individual characteristics (educational attainment, educational profile, age) of this group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year.

Figure 3 - Unemployed in the Municipality of Radovich according to the length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

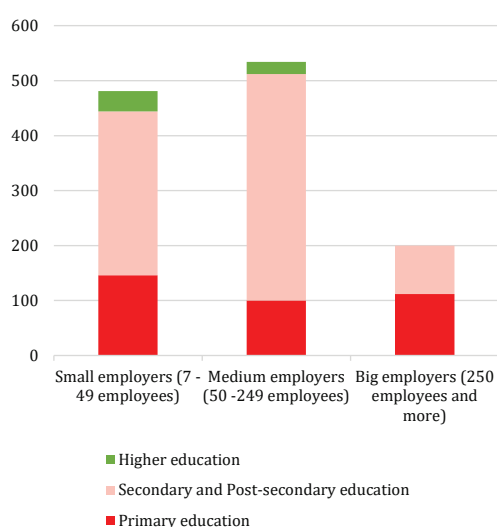
This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc.

In addition to the unemployed active job seekers, the share of the persons registered as passive job seekers is smaller in the municipality of Radovich. According to the Employment Service Agency, this category includes 881 persons, which represents a share of 19% in the total number of active job seekers. Two thirds of them are with primary or no education (54%) and incomplete secondary education (8%), 31% are with secondary education. Furthermore, only six per cent of this group have completed post-secondary and higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Southeast region is 1.215 jobs, which accounts for 49% of the unemployed labour force in the municipality of Radovich. Figure 4 provides an overview of the labour demand by education and company size. It is expected that 44% of the vacancies will be generated by medium companies, additional 40% by small companies and 16% by big employers. This may also explain the structure of employers in the municipality of Radovich, which is dominated by small and medium employers. In terms of the demand by education, the demand for workers who completed secondary (66%) and primary education (22%) is predominant.

Figure 4: Labour demand by education and company size



Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, followed by textile manufacture, building construction

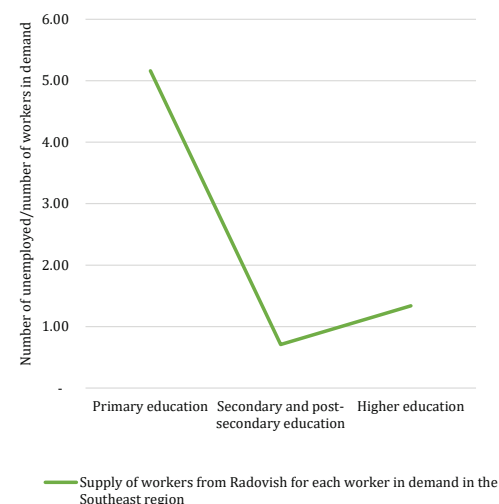
workers, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. Even for the elementary occupations, there is demand for workers with secondary education (construction machinery operators and PVC construction workers). 38 per cent of the total demand for workers and 58% of the demand for workers with secondary education is for craft and related trades workers, including: Sewers, construction workers, tailors, welders, locksmiths, fruit and vegetable preservers, metal construction erectors and similar occupations. They are followed by the occupations in customer services, including: Security (protection of persons and property), waiter, sales workers, cashiers, bartenders, cooks and similar occupations. All workers with higher education in demand on the market are in the occupation of professionals and science professionals: Mechanical engineer, computer science engineer, medical doctor, construction engineer, etc.

Labour market gap by education and occupation

The labour market gap in the municipality of Radovich is identified by cross-referencing the labour supply and demand, taking into account the educational

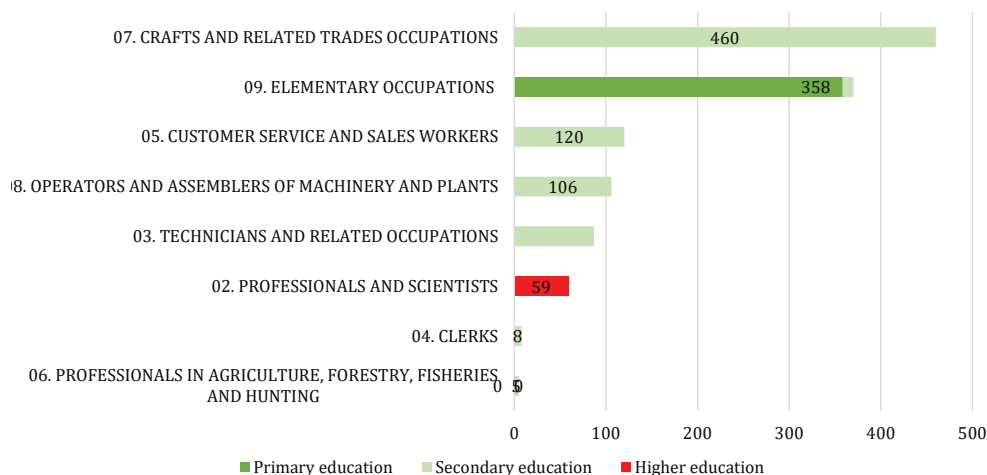
attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have indicated that the gap is the greatest for primary education. For every worker with primary education required by the companies in the Southeast region, there are five unemployed persons in the municipality of Radovich, while for secondary there is a shortage of workers, and for each demanded worker there are 0.7 in supply, while for higher education there is almost full matching and the ratio is 1.3.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

Figure 5: Labour demand by occupation and education for the Southeast region



Source: – ESARNM, Regional survey for the need of skills on the labor market in RNM for 2021

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Radovich. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green – moderate gap). Taking into consideration that the municipality of Radovich participates with 12% in the total population of the Southeast region, the gaps are indicative for the demand and supply of workforce on the labour market.

The results show that deficiency gaps are predominant in the Municipality of Radovich. In high skills level, there is a gap in nine out of eleven occupations. In seven occupations the gap is deficient and only two occupations show sufficiency gap. There is a severe sufficiency gap in legal, social and cultural professionals, and it is deepening with the increase of education. Furthermore, there is great supply and lack of demand for teaching professionals. In the occupation of associate professionals in science and engineering, the

sufficiency gap occurring with persons with secondary education disappears and turns into deficiency gap with higher level of education attainment, which indicates potential underqualification. Similarly, moderate deficiency gaps for persons with secondary education are deeper for persons with post-secondary education and the following occupations: Health associate professionals and business and administrative associates. For the occupations at high skill level and secondary education the positive gap is due to the lower demand. There is a moderate deficiency gap for science and engineering professionals and information and communications technology professionals.

For medium skill level occupations, there is a severe surplus gap, where the labour supply is significantly greater than the demand only for one of 14 occupations (precision mechanics, handicraft workers and printers). In three occupations the gap is moderately sufficient (metal workers, machine assemblers and related occupations; electrotechnology workers and food preservers, wood workers, textile, leather workers and related occupations), out of which in two the sufficiency gap is due to the lower level of education, and not inadequacy of occupation. This implies underqualification and a need to upskill persons with primary education. For eight occupations with secondary education there is a severe deficiency gap, in particular for: customer services workers; building construction workers and related construction workers; machine and plant operators; and operators of motor vehicles and mobile plants. This indicates a shortage of labour for these occupations.

In occupations at low skill level there is a severe deficiency gap for all occupations with primary education, mostly elementary workers and helpers in different activities, as well as severe surplus of labour for persons without occupation and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the labour market in the municipality of Radovich is facing a shortage of labour, mostly for occupations at medium level skills, shortage of elementary workers, and underqualification of persons with primary education and without occupation. To an extent, this may be owing to the emigration trend in the country. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social science and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas³.

³World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				Deficit
	22	Health professionals				Adequately matched
	23	Teaching professionals				Surplus
	24	Business and administration professionals				Adequately matched
	25	Information and communications technology professionals				Deficit
	26	Legal, social and cultural professionals			Surplus	Significant surplus
	31	Science and engineering associate professionals		Surplus	Significant deficit	
	32	Health associate professionals		Deficit	Significant deficit	
	34	Legal, social and cultural associate professionals		Deficit		
	35	Information and communications technicians		Deficit		
	33	Business and Administration associate professionals		Deficit	Significant deficit	
Medium skill level	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks		Deficit		
	44	Other office clerks		Deficit		
	51	Personal services workers	Adequately matched	Significant deficit		
	52	Sales workers		Significant deficit		
	53			Deficit		
	54	Security guards		Significant deficit		
	61			Deficit		
	71	building construction workers and related construction workers		Significant deficit		
	72	Metal workers, machine assemblers and related occupations	Surplus	Significant deficit		
	73	Precision mechanics, handicraft workers and printers	Significant surplus	Significant surplus		
	74	Electrotechnology workers		Surplus		
	75	food preservers, wood, textile and leather workers and related occupations	Surplus	Significant deficit		
Low skill level	81	Machine and Plant operators	Adequately matched	Significant deficit		
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew	Adequately matched	Significant deficit		
	91	Cleaners and helpers	Deficit			
	92	Agricultural, forestry and fishery elementary workers	Deficit			
	93	Labourers in mining, construction, manufacturing and transport	Significant deficit			
	96	Refuse workers and other elementary workers	Significant deficit			
	99			Significant deficit		
		No occupation	Significant surplus			
		General secondary education		Significant surplus		
	99			Deficit		
		No occupation	Significant surplus			
		General secondary education		Significant surplus		

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

Significant surplus Surplus Adequately matched Deficit Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There is one secondary school in the municipality of Radovich, one higher education institution, and two verified programs for adults for upskilling and re-skilling. In the forthcoming two years these institutions are expected to produce 667 profiled professionals for the labour market. These institutions produce profiles in three occupations. 65% of the total supply of educational profiles are in general education, classified as without occupation. Followed by 21% in the occupation of associate professionals in science and engineering, generated by the three departments of the secondary school “Kosta Susinov”: Geological and mining and metallurgical profile, metallurgical technician, electrical engineering, electrical engineering technician for computers and automation, three year study for electric engineering, electrical mechanic for computer equipment and automation. The Faculty of electrical engineering – Radovich generates higher education profiles for the occupation science and engineering professionals. Additionally, the Red Cross of the Republic of Macedonia has

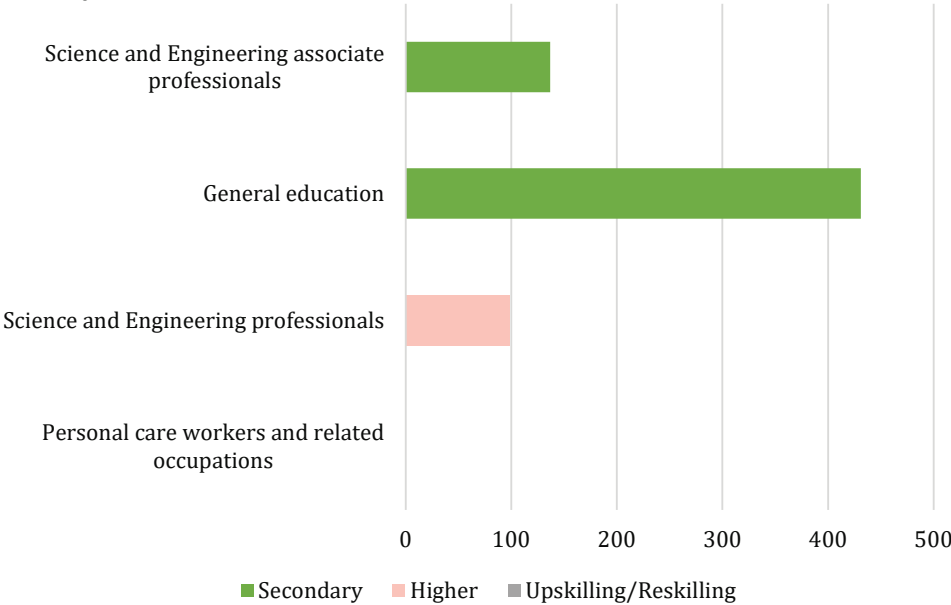
two verified programs for adults, for: Nursing aides for the elderly and persons with disabilities and personal assistants for persons with disabilities.

These results imply that the municipality of Radovich has established a modest educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years.

The results show that the educational institutions and verification programs have limited potential to contribute to overcoming the deficiency gaps in the Municipality of Radovich. Thus, the deficiency gap in science and engineering professionals (mechanical engineers, computer science engineers, etc.) may be mitigated by producing profiles from the Electrical engineering faculty in Radovich, with a pilot study program for engineers for computer science and by increasing the attractiveness of the school with young people. On the other hand, the secondary municipal

school “Kosta Susinov” generates profiles for sufficient occupations: Science and engineering associate professionals and general education. For occupations in the vocational profiles the gap is disappearing with increasing of the education, so, it is necessary for the students in these profiles to be motivated to increase their education attainment. Having in consideration the results of the overview of the labour market in the municipality of Radovich, The Municipal secondary school can provide room for pilot programs for new profiles in the occupations with severe deficiency, for the persons with secondary education, such as: Building construction workers and related construction workers and food preservers, wood, textile and leather workers and related occupations. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, in addition to the municipal secondary school, the verification programs of adult learning may play an active role in mitigating the deficient gaps. Currently, the two programs for verification of adult learning contribute to the reduction of the deficiency gap in occupations for personal care and related occupations. Programs for validation of non-formal learning of adults could strengthen their role and engage actively (through existing and creation of new) in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gaps and the offer of profiled professionals from the educational institutions in the following two years

skill level	Code	Occupation/profile	Pri- mary	Second- ary	Post-sec- ondary	higher	Secondary	високо3	upskill- ing and re-skilling
High skill level	21	Science and engineering professionals						99	
	22	Health professionals							
	23	Teaching professionals							
	24	Business and administration professionals							
	25	Information and communications technology professionals							
	26	Legal, social and cultural professionals							
	31	Science and engineering associate profession- als					137		
	32	Health associate professionals							
	34	Legal, social and cultural associate profession- als							
	35	Information and communications technicians							
	33	Business and Administration associate profes- sionals							
Medium skill level	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks							
	44	Other office clerks							
	51	Personal services workers							
	52	Sales workers							
	53	Personal care workers and related occupations							
	54	Security guards							
	61	Market-oriented skilled agricultural workers							
	71	building construction workers and related construction workers							
	72	Metal workers, machine assemblers and relat- ed occupations							
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers							
	75	food preservers, wood, textile and leather workers and related occupations							
	81	Machine and Plant operators							
	83	Drivers of motor vehicles, mobile plant opera- tors and ship deck crew							
	91	Cleaners and helpers							
Low skill level	92	Agricultural, forestry and fishery elementary workers							
	93	Labourers in mining, construction, manufac- turing and transport							
	96	Refuse workers and other elementary workers							
	99								
		No occupation							
		General secondary education							
	99								
		No occupation							
		General secondary education					431		

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Radovish has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For every worker with primary education required by the companies in the Southeast region, there are five unemployed persons in the municipality of Radovish, while for secondary there is a shortage of workers, and for each demanded worker there are 0,7 in supply, while for higher education there is almost full matching and the ratio is 1,3. To a certain extent this is due to the relatively low share of the municipality in the total region, according to population, with only 17%. There is a predominant deficiency gap in the municipality of Radovish, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Radovish do not have the potential to mitigate the gap with deficient occupations. At the same time, it is necessary to strengthen the role of the upskilling/re-skilling programs. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by re-skilling the unemployed persons with general secondary education, and upskilling the unemployed persons without any qualifications.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Radovish, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. Design adult education verification programs for the deficiency occupations, and in cooperation with ESARNM, design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1
- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance: Construction workers and related occupations, personal services workers, food preservers, wood, textile and leather workers and related occupations; operators of machinery and plant; drivers of motor vehicles, mobile plants and deck crew, etc.)
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Educational institutions

which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to produce more graduates. For instance, the deficiency gap for science and engineering professionals (mechanical engineers, computer science engineers, etc.) may be mitigated by producing profiles from the Electrical Engineering Faculty in Radovish

- Adult education verification programs, in cooperation with ESARNM and the Employment centre should be stimulated to intensify their work
- Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:
 - Regular internship for students of secondary vocational schools in relevant companies
 - Pilot programs for deficient occupations (for example, SMS “Kosta Susinov” should consider pilot programs for new profiles in the occupations with severe deficiency, for the persons with secondary education, such as: Construction workers and related occupations and food preservers, wood, textile and leather workers and related occupations.
- In the medium term, it is necessary to redesign the programs / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Radovish
 - The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Intensify the cooperation with the secondary vocational schools and the adult education verification programs
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the

jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Radovich, regional chambers of commerce and secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to

help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Strumica

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Strumica, such as:

- Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)
- Activation of passive job seekers of working age through a campaign for activation of passive job seekers, identification of the reasons for the passivity and strengthening the mechanisms preventing manipulations with the system
- Intensifying the cooperation between secondary vocational schools and the business sector
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Strumica and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Strumica is facing underqualification, shortage of qualified labour force and a deficiency gap for medium and low skill occupations. For each required worker with primary education in the Southeast region, there are seven unemployed persons in the municipality of Strumica. However, this gap disappears for persons with secondary education. This implies the existence of potential underqualification. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Strumica have the potential to partially address the gap with deficient occupations. Greater efforts need to be taken to overcome the problem with the shortage of labour, which is a pressing issue (in particular for occupations at low and medium skill levels).

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Strumica and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Strumica is the biggest municipality in the Southeast region with population of 56,961¹, thus accounting for 32% of the total population in the Southeast region. Currently, the labour market in the Southeast region is favourable; the region has the lowest

unemployment rate, and the highest employment and activity rates as compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 6.3% (5.1% for women and 7.9% for men), the employment rate was 63.3%, while the activity rate was 67.6%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 30,029. This places the Southeast region in the second-to-last in the rankings by the average salary² (Regions in the Republic of North Macedonia, SSO, 2020). The region is characterized by favourable climate and pedological conditions for the development of agriculture, and, most likely, the dominance of this sector affects the level of the average salary.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

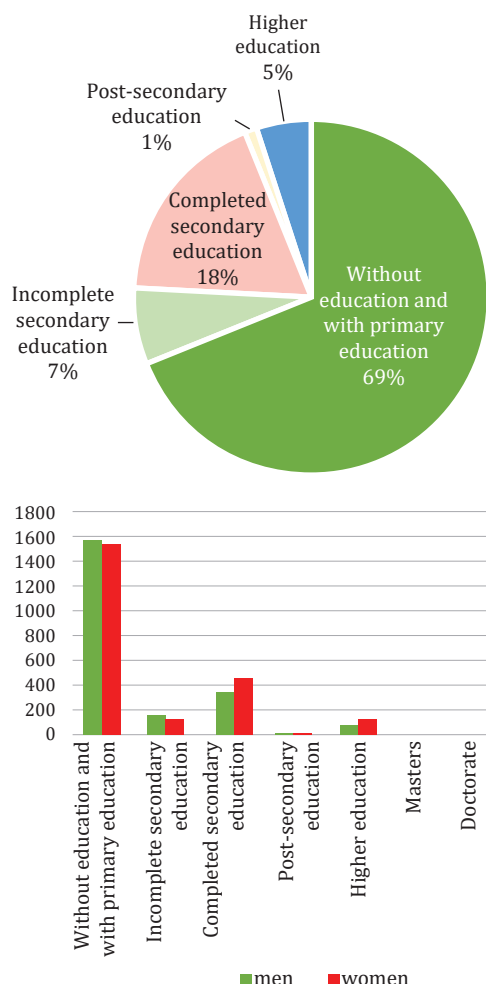
²After the Northeast region with MKD 29,131

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Strumica in 2020, 51% were women and 49 were men. In terms of education, persons with lower educational attainment are predominant. Three quarters (76%) of the unemployed were persons with primary or no education (69%) and incomplete secondary education (7%) and incomplete secondary education (seven per cent) (Figure 1).

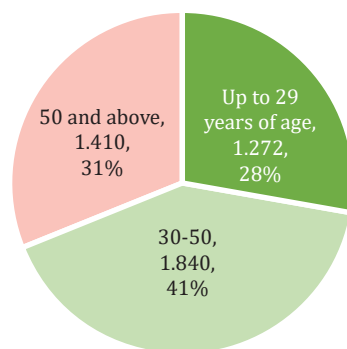
Figure 1: Unemployed persons in the municipality of Strumica, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed persons are aged 30 to 50 (41%). The figures for the registered unemployed among persons aged 50 and more and young people up to 29 years of age are lower and similar (Figure 2).

Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

50% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Although such structure may appear encouraging, 25% of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active

job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Strumica.

According to the Employment Service Agency, this category includes 3,334 persons, which represents a share of 74% in the total number of active job seekers. Two thirds of them are with primary or no education (55%) and incomplete secondary education (13%). This indicates that these persons are mostly with low educational attainment. Furthermore, only seven per cent of this group have completed higher education.

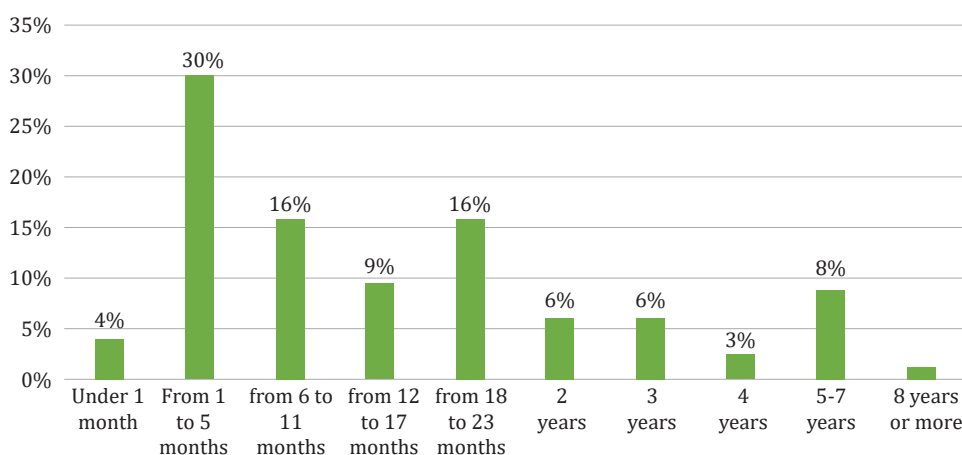
The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2020, the total demand for the Southeast region is 1,640 jobs, which accounts for 36% of the unemployed labour force in the municipality of Strumica.

Figure 4 provides an overview of

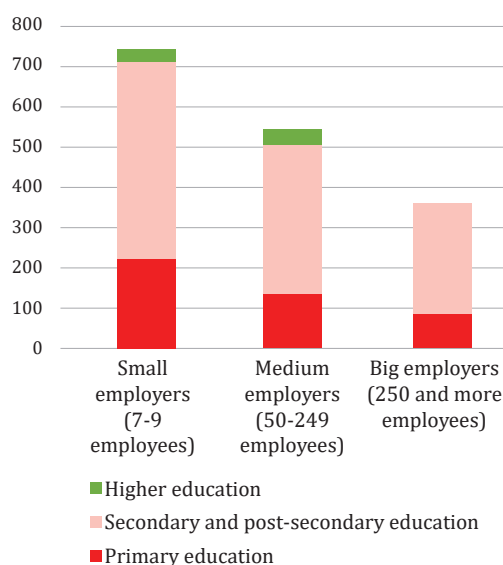
Figure 3: Unemployed in the municipality of Strumica, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

the labour demand by education and company size. It is expected that nearly one half of the vacancies will be generated by small employers, additional 33% by medium companies, and 22% by big employers. This may also explain the structure of employers in the municipality of Strumica, which is dominated by small employers. In terms of the demand by education, the demand for workers who completed secondary (69%) and primary education (27%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

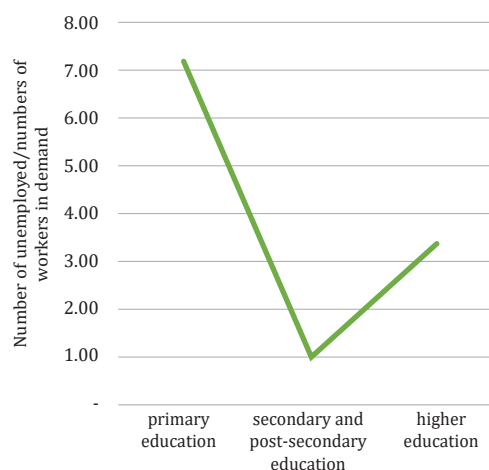
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, vending machine collectors, distributors, elementary workers in the manufacturing of construction materials, porters, hand packers, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. Even for elementary occupations there is a demand for workers with secondary education. 34 per cent of the total demand for

workers and 49% of the demand for workers with secondary education is for craft and related trades workers, including: sewers, construction workers, tailors, bricklayers, locksmiths, and similar occupations. They are followed by the occupations of services workers, including: waiters, salespersons, cashiers, bartenders, cooks, and related occupations. All workers with higher education in demand on the market are in the occupation of professionals and science professionals. Of them, one third relates to civil engineers and 19% to engineers - technologists.

Labour market gap by education and occupation

The labour market gap in the municipality of Strumica is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have indicated that the gap is the greatest for primary education. For every worker with primary education required by the companies in the Southeast region, there are seven unemployed persons in the municipality of Strumica, while for secondary and post-secondary there is full matching and the ratio is 1, while for higher education it is 3.3.

Figure 6: Supply and demand gap by educational attainment

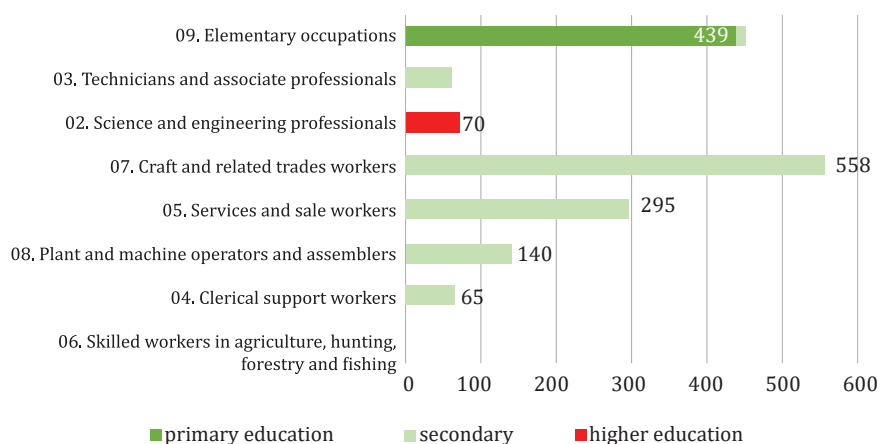


Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Strumica. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red - moderate gap). Light yellow indicates

Figure 5: Labour demand by occupation and education for the Southeast region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020³

³ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green - moderate gap).

The results show that for higher level skills there is a gap for five out of eleven occupations. For four of the occupations the gap is positive, and there is a deficiency gap only for one occupation. For the higher education occupations there is a potential higher overqualification for the occupation of legal, social and cultural professionals, and there is great supply and no demand for teaching professionals. For the occupations at high skill level and secondary education the positive gap is owing to the lower demand. There is a moderate deficiency gap for information and communications technology professionals and technicians. On the other hand, there is a positive gap for business and administration professionals.

For medium skill level occupations, there is a severe surplus gap, where the labour supply is significantly greater than the demand only for one of 16 occupations (electrotechnology workers), and a moderate gap for the occupation of market-oriented skilled agricultural workers. In the

latter case this is probably owing to the fact that this is a relatively new occupation and the market is yet to generate adequate demand. In view of the fact that the agricultural sector in the municipality of Strumica is highly developed, this gap is of temporary nature. For seven occupations with secondary education there is a severe deficiency gap, in particular for: services workers; building construction workers and related construction workers; machine and plant operators; and operators of motor vehicle and mobile plants. This indicates a shortage of labour for these occupations. On the other hand, for food preservers, wood, textile and leather workers and related occupations and precision mechanics, handicraft workers and printers, the positive gap disappears with the increase of the educational attainment from primary to secondary education. This implies underqualification and a need to upskill persons with primary education.

In occupations at low skill level there is a severe deficiency gap for all occupations with primary education, mostly elementary workers and helpers in different activities, as well as severe surplus of labour for persons without occupation and persons with general secondary education. Therefore, the gap in low

skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the labour market in the municipality of Strumica is facing a shortage of labour, mostly for occupations at medium level skills, shortage of elementary workers, and underqualification of persons with primary education and without occupation. To an extent, this may be owing to the emigration trend in the country. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁴.

⁴World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technology technicians				
	33	Business and administration associate professionals				
Medium skill level	42	Customer services clerks				
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
	99	Construction machine operators				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are three secondary schools, two faculties of the dispersed studies of higher education institutions and one upskilling and re-skilling centre. In the forthcoming two years these institutions are expected to produce 2,023 profiled professionals for the labour market. 80% of the total supply of educational profiles fall within five occupations: science and engineering associate professionals; health associate professionals; legal and social professionals; accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; and persons with general secondary education, who are classified as persons without occupation.

These results imply that the municipality of Strumica has a relatively well-established educational infrastructure to produce profiled labour force. In order to identify

to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years.

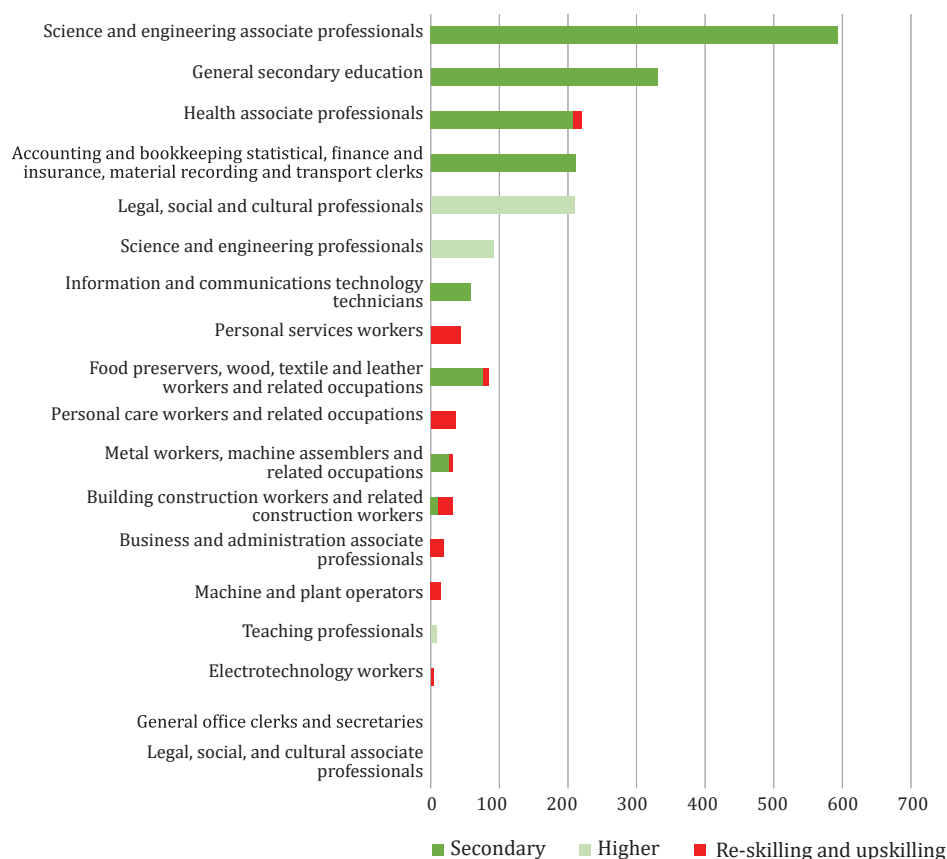
The results show that vocational schools and the upskilling centre could be key active factors in overcoming part of the deficiency gap in the municipality of Strumica. Thus, the deficiency gap for textile workers (tailors, sewers, and textile handicraft workers) may be mitigated with the profiles produced by the secondary school “Nikola Karev”, with upskilling to secondary education qualifications of the unemployed with this occupation who have completed primary education. The gap for the occupation of building construction workers and related construction workers may be mitigated by increasing the number of persons upskilled in this occupation by the Open Civil University “Joska Sveshtarot” from Strumica. Furthermore, the civil university is

already producing profiles for the occupation of personal services workers. It may continue working in this direction, by upskilling the most demanded profiles in this occupation: waiters, bartenders, cooks. Caution should be taken with the production of accountants, because this profile is in demand with higher education and belongs to the group of occupations with a surplus gap.

Some of the educational institutions in Strumica that produce high skill profiles, such as health associate professionals, generate a moderate surplus gap. However, taking into account that these occupations entail greater mobility on the labour market, and the likelihood that some of the persons who have completed secondary education would continue their education, this pressure does not amount to a threat. Nevertheless, any further production of the following education profiles: legal, social and cultural professionals; science and engineering associate professionals; and business and administration associate professionals would broaden the surplus gap and create further labour market disruptions.

In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centre could strengthen its role and engage actively in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Educational institutions within the territory of the municipality of Strumica, data collected by the municipality of Strumica

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

Skill level	Code	Occupation/Educational profile	Gaps				Supply from educational institutions		
			Primary	Secondary	Post-secondary	Higher	Secondary	Higher	upskilling and re-skilling
High skill level	21	Science and engineering professionals						94	
	22	Health Professionals							
	23	Teaching professionals						10	
	24	Business and administration professionals							
	25	Information and communications technology professionals							
	26	Legal, social and cultural professionals						211	
	31	Science and engineering associate professionals					595		
	32	Health associate professionals					210		12
	34	Legal, social and cultural associate professionals							
	35	Information and communications technology technicians					61		
	33	Business and administration associate professionals							22
Medium skill level	41	General office clerks and secretaries							1
	42	Customer services clerks							
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					214		
	44	Other office clerks							
	51	Personal services workers							46
	52	Sales workers							
	53	Personal care workers and related occupations							38
	54	Security guards							
	61	Market-oriented skilled agricultural workers							
	71	Building construction workers and related construction workers					13		21
	72	Metal workers, machine assemblers and related occupations					28		7
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers							6
	75	Food preservers, wood, textile and leather workers and related occupations					86		8
	81	Machine and plant operators							18
	83	Drivers of motor vehicles, mobile plant operators and deck crew							
	91	Cleaners and helpers							
	92	Agricultural, forestry and fishery labourers							
Low skill level	93	Labourers in mining, construction, manufacturing and transport							
	94	Food preparation assistants							
	96	Refuse workers and other elementary workers							
	99	Construction machine operators							
		No occupation							
		General secondary education					330		

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Strumica has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For each required worker with primary education in the Southeast region, there are seven unemployed persons in the municipality of Strumica. However, this gap disappears for persons who completed secondary education, which implies the existence of potential underqualification. There is a predominant deficiency gap in the municipality of Strumica, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations.

For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Strumica have the potential to partially address the gap with deficient occupations. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by re-skilling the unemployed persons with general secondary education, upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Strumica, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The Open Civil University “Joska Sveshtarot”, in

cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- The gap for the occupation of building construction workers and related construction workers may be mitigated by increasing the number of persons upskilled in this occupation by the Open Civil University “Joska Sveshtarot” from Strumica.

- The Open Civil University should continue its activities for upskilling and re-skilling profiles for personal services workers in greatest demand: waiters, bartenders, cooks. Caution should be taken with the production of accountants, because this profile is in demand with higher education and belongs to the group of occupations with a surplus gap.

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance, customer services clerks, personal services workers, security guards, etc.)

- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o Educational institutions which have established programmes in the deficient occupations

should increase the attractiveness and enrollment quotas so as to produce more graduates. Thus, the deficiency gap for textile workers (tailors, sewers, and textile handicraft workers) may be mitigated with the profiles produced by the secondary school “Nikola Karev”, with upskilling to secondary education qualifications of the unemployed with this occupation who have completed primary education.

- o The upskilling and re-skilling centres, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work

- o Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-projects for deficient occupations (e.g., personal services (hospitality))

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Strumica

- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with secondary vocational schools and the Open Civil University
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Strumica, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



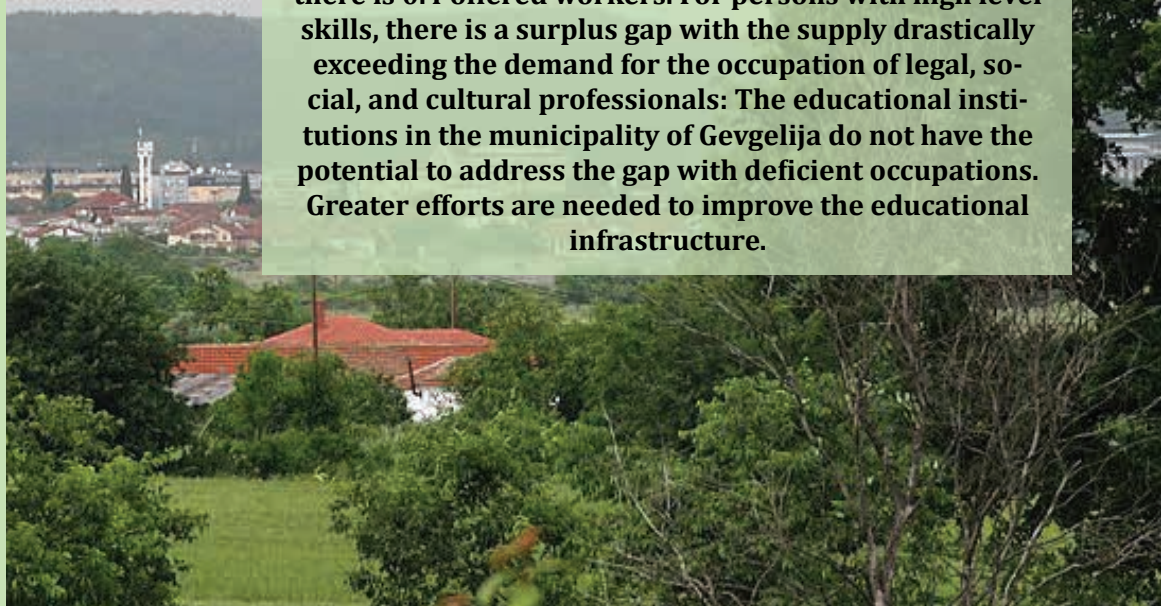
Labour market diagnostics in the municipality of Gevgelija

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Gevgelija, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Activation of passive job seekers of working age through a campaign for activation of passive job seekers, identification of the reasons for the passivity and strengthening the mechanisms preventing manipulations with the system
- Strengthening the educational infrastructure in Gevgelija and promotion of verification programs for adults and other potential centres to provide upskilling and re-skilling
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Gevgelija and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Gevgelija is facing a shortage of qualified labour force and a deficiency gap for medium and low skill occupations. For every worker with higher education required by the companies in the Southeast region, there are 1.7 unemployed persons in the municipality of Gevgelija, and the coefficient is similar for primary education, 1.5. For secondary education there is shortage of workers and for each demanded worker there is 0.4 offered workers. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Gevgelija do not have the potential to address the gap with deficient occupations. Greater efforts are needed to improve the educational infrastructure.



OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Gevgelija and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Gevgelija is one of the biggest municipalities in the Southeast region with population of 22.764¹, thus accounting for 13% of the total population in the Southeast region. Currently, the labour market in the Southeast region is favourable; the region has the

lowest unemployment rate, and the highest employment and activity rates as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 4.3% (4.5% for women and 4.2% for men), the employment rate was 62.5%, while the activity rate was 65.3%. Nevertheless, such favourable trend does not reflect on the average gross salary, which is moderate at MKD 32.660. This places the Southeast region in the second-to-last in the rankings by the average salary² (Regions in the Republic of North Macedonia, SSO, 2021). The region is characterized by favourable climate and pedological conditions for the development of agriculture, and, most likely, the dominance of this sector affects the level of the average salary.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

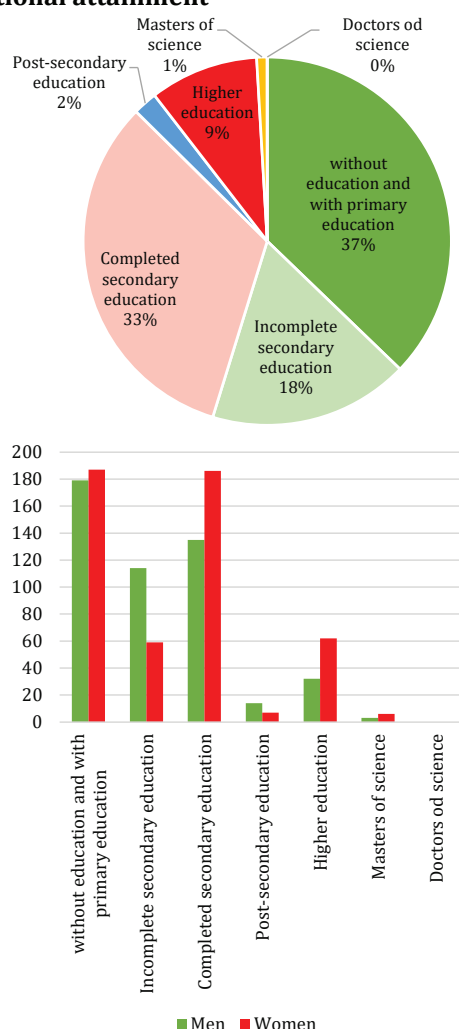
²After the Northeast region with MKD 32.483.

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Gevgelija in 2020, 52% were women and 48% were men. In context of education, the structure is heterogeneous. 55% of the unemployed were persons without primary or no education (37%) and incomplete secondary education (18%) (Figure 1). One third have completed secondary education and 12% have completed higher education.

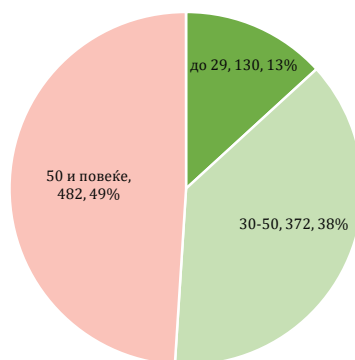
Figure 1: Unemployed persons in the municipality of Gevgelija, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 50 and above (49%), followed by the unemployed aged 30 to 50 (38%), and the lowest share with youth up to 29 years of age (Figure 2).

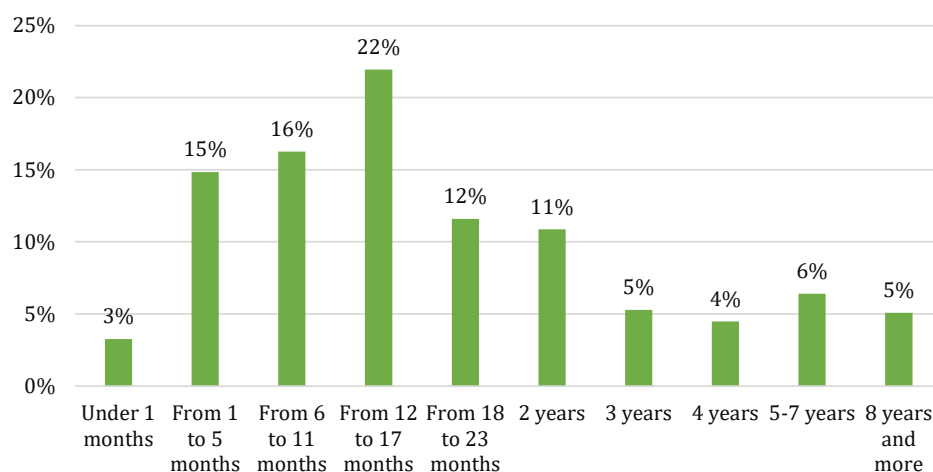
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

Almost half of the unemployed (43%) wait for employment from one to three years (Figure 3). Probably, the transition school to work is slower, and there are greater mismatches between the offer and labour market demand. Additional 27% of the unemployed persons are waiting for employment for more than three years, which indicates a possibility of structural unemployment. The share of those waiting for employment up to one year is 30%, out of which most of them wait for employment from six to eleven months. The individual characteristics (educational attainment, educational profile, age) of this group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a

Figure 3 - Unemployed in the Municipality of Gevgelija according to unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc.

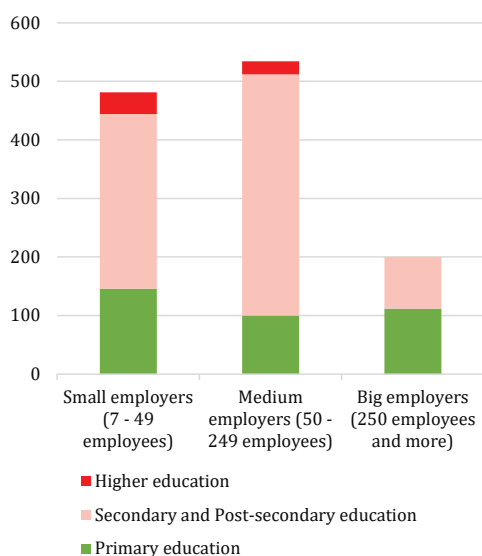
In addition to the unemployed active job seekers, there are also persons registered as passive job seekers in the municipality of Gevgelija. According to the Employment service agency, this category has 367 persons, which in absolute size is relatively small number compared to other municipalities, although in percentage, this category represents 37% of the total number of active job seekers. Half of them are with primary (34%) and incomplete secondary education (21%), 36% are with secondary education. Furthermore, only nine per cent of this group have completed post-secondary and higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

DEMAND

According to the regional labour demand survey in 2021, the total demand for the Southeast region is 1,215 jobs, which accounts for more than the unemployed labour force in the municipality of Gevgelija.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that 44% of the vacancies will be generated by medium companies, additional 40% by small companies and 16% by big employers. This may also explain the structure of employers in the municipality of Gevgelija, which is dominated by small and medium employers. In terms of the demand by education, the demand for workers who completed secondary (66%) and primary education (22%) is predominant.

Figure 4: Labour demand by education and company size



Source: – ESARNM, Regional survey for the need of skills on the labor market in RNM for 2021

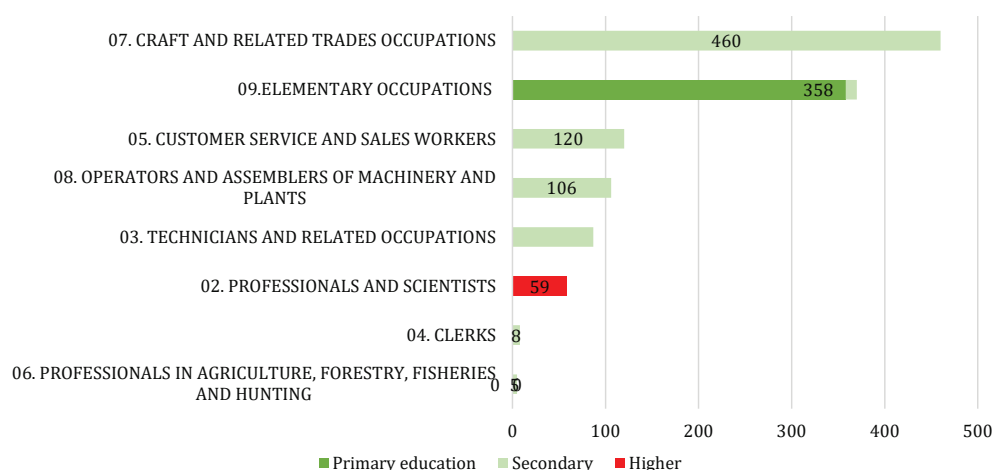
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, followed by textile manufacture, building construction workers, etc.). The demand for workers

with secondary education is more heterogeneous in terms of occupations. Even for the elementary occupations, there is demand for workers with secondary education (construction machinery operators and PVC construction workers). 38 per cent of the total demand for workers and 58% of the demand for workers with secondary education is for trades and related trades workers, including: Sewers, construction workers, tailors, welders, locksmiths, fruit and vegetable preservers, metal construction erectors and similar occupations. They are followed by the occupations in customer services, including: Security (protection of persons and property), waiters, sales workers, cashiers, bartenders, cooks and similar occupations. All workers with higher education in demand on the market are in the occupation of professionals and science professionals: Mechanical engineer, computing engineer, medical doctor, construction engineer, etc.

Labour market gap by education and occupation

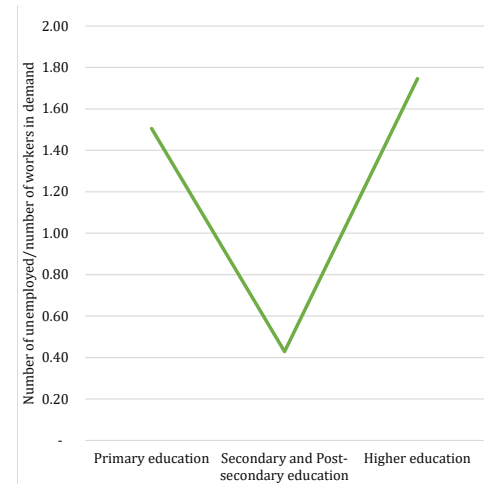
The labour market gap in the municipality of Gevgelija is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results showed that there is a match between the offer and demand in the municipality of Gevgelija, and the gap is moderate. Whereas, the gap with the persons with primary and higher education is positive. For every worker with higher education required by the companies in the Southeast region, there are 1.7 unemployed persons in the municipality of Gevgelija, and the coefficient is similar for primary education, 1.5. For secondary education there is shortage of workers and for each demanded worker there is 0.4 offered workers. A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Figure 5: Labour demand by occupation and education for the Southeast region



Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Gevgelija. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green - moderate gap).

The results show that deficiency gaps are predominant in the Municipality of Gevgelija. In high skills level, there is a gap in ten out of eleven occupations. In seven occupations the gap is deficient and only three occupations show sufficiency gap. There is a severe sufficiency gap in legal, social and cultural professionals, and it is deepening with the increase of education. Furthermore, there is great supply and lack of demand for teaching professionals.

There is a moderate deficiency gap for science and engineering professionals, health professionals and information and communication technology professionals. In the occupation of associate professionals in science and engineering, the sufficiency gap occurring with persons with secondary education disappears and turns into deficiency gap with higher level of education attainment, which indicates potential underqualification. Similarly, moderate deficiency gaps for persons with secondary education occur for persons with post-secondary education and the following occupations: Information and communication technology technicians and business and administrative associate professionals, while for the occupation of associate professionals in science and engineering, the severe sufficiency gap for the persons with secondary education turns into deficiency gap with the increase of education attainment. For the occupations at high skill level and secondary education the positive gap is due to the lower demand.

In occupations with medium skill level, there are moderate sufficiency gaps for three occupations, and deficiency gaps for four occupations (of which in three severely) of total 13. There is moderate sufficiency gap in the following occupations: Electrotechnology workers, personal service workers and accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks. For three occupations with secondary education there is a severe deficiency gap, in particular for: Security guards; building construction workers and related construction workers; and Food preservers, wood, textile and leather workers and related occupations. This indicates a shortage of labour for these occupations.

In occupations at low skill level there is a deficiency gap for all occupations with primary education, mostly elementary workers and helpers in different activities, as well as severe surplus of unemployed labour force in persons without occupation and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or reskilling measures for persons with general secondary education.

The overall conclusion is that the labour market in the municipality of Gevgelija is facing a shortage of labour force, mostly for occupations at medium level skills, shortage of elementary workers, and underqualification of persons with primary education and without occupation. To an extent, this may be owing to the emigration trend in the country. There are surplus gaps (where the supply is greater than the demand) for high skill occupations such as the social and teaching occupations, which is a result of the overall educational strategy at national level in the previous decade. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas³.

³ World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	52	Sales workers				
	53	Personal care workers and related occupations				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
	81	Machine and Plant operators				
Low skill level	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
	99	Elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There is one secondary school and one higher education institution and one validation program of non-formal learning of adults in the Municipality of Gevgelija. In the forthcoming two years these institutions are expected to produce 1.778 profiled professionals for the labour market. These institutions produce profiles in several occupations. 61% of the total offer of profiles is for business and administration professionals, produced by the Faculty of Tourism and Business Logistics – Gevgelija, which produces professionals in five profiles: Business-administration; business-logistics; gastronomy and nutrition; tourism; hospitality and restaurants (the last three are adequate to the occupation personal services workers). 19% of the profiles are in general education, classified as without occupation. Followed by 11% in the occupation of associate professionals in science and engineering, generated by the two departments of the secondary school “Josif Josifovski”: Mechanical – auto-technician-mechatronics; and mechanical - mechanical technician for motor vehicles. Although in lower numbers, the same school also generates profiles in the following

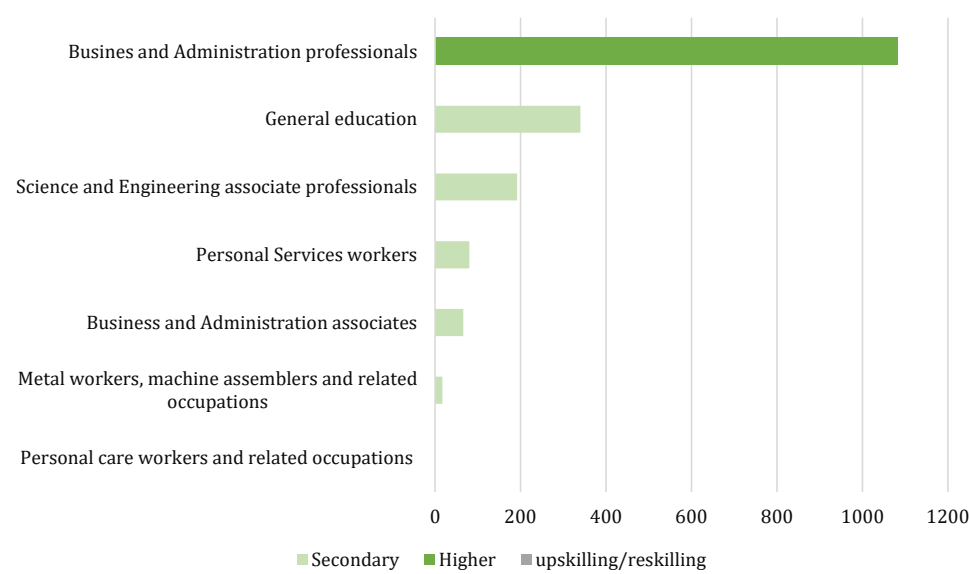
occupations: Metal workers, machine assemblers and related occupations; business and administrative associates and personal services workers. Additionally, there is one program for verification of adult learning for: Child care worker.

These results imply that the municipality of Gevgelija has established a modest educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years.

The results show that the educational institutions and verification programs do not have the potential to contribute to overcoming the deficiency gaps in the Municipality of Gevgelija. Educational institutions predominantly generate profiles for occupations with sufficiency gap. On the other hand, the secondary school “Josif Josifovski” generates associate professionals for science and engineering, where the gap is reducing with increase of education attainment, so the students from these profiles should be motivated to further their education. Having in consideration the results of the

overview of the labour market in the municipality of Gevgelija, The Municipal secondary school considered the possibility for pilot programs for new profiles in the occupations with severe deficiency, for the persons with secondary education, such as: Building Construction workers and related construction occupations, preservers of food, wood, textile, leather workers and related occupations; In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, in addition to the municipal secondary school, the verification programs of adult learning may play an active role in mitigating the deficient gaps. Currently, the one verification program is not sufficient to reduce deficiency gaps. Programs for validation of non-formal learning of adults could strengthen their role and engage actively (through existing and creation of new) in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions within the territory of the municipality of Tetovo, data collected by the municipality of Tetovo

Table 2: Matching the gaps and the supply of profiled professionals from the educational institutions in the following four years

skill level	Code	Occupation/Profile	Gaps according to education				Supply from educational institutions	
			Primary	Secondary	Post-secondary	higher	Secondary	higher
High skill level	21	Science and engineering professionals						
	22	Health professionals						
	23	Teaching professionals						
	24	Business and administration professionals						1083
	25	Information and communications technology professionals						
	26	Legal, social and cultural professionals						
	31	Science and engineering associate professionals					192	
	32	Health associate professionals						
	34	Legal, social and cultural associate professionals						
	35	Information and communications technicians						
	33	Business and Administration associate professionals					66	
Medium skill level	41	General office clerks and secretaries						
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks						
	44	Other office clerks						
	51	Personal services workers					80	
	52	Sales workers						
	54	Security guards						
	61	Market-oriented skilled agricultural workers						
	71	building construction workers and related construction workers						
	72	Metal workers, machine assemblers and related occupations					17	
	73	Precision mechanics, handicraft workers and printers						
	74	Electrotechnology workers						
	75	food preservers, wood, textile and leather workers and related occupations						
Low skill level	81	Machine and Plant operators						
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew						
	91	Cleaners and helpers						
	92	Agricultural, forestry and fishery elementary workers						
	93	Labourers in mining, construction, manufacturing and transport						
	94	Food preparation assistants						
	96	Refuse workers and other elementary workers						
	99	Elementary workers						
		No occupation						
		General secondary education					340	

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The overview of the labour market of the Municipality of Gevgelija showed that there is a match between the supply and demand, and the gap is moderate. Whereas, the gap with the persons with primary and higher education is positive. For every worker with higher education required by the companies in the Southeast region, there are 1.7 unemployed persons in the municipality of Gevgelija, and the coefficient is similar for primary education, 1.5. For secondary education there is shortage of workers and for each demanded worker there is 0.4 offered workers. There is a predominant deficiency gap in the municipality of Gevgelija, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: The educational institutions in the municipality of Gevgelija do not have the potential to address the gap with deficient occupations. At the same time, it is necessary to strengthen the role of the upskilling/re-skilling programs. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by reskilling the unemployed persons with general secondary education, and upskilling the unemployed persons without any qualifications.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Gevgelija, in particular:

- Skilling of persons with primary education and no occupation

into elementary workers. Design adult education verification programs for the deficiency occupations, and in cooperation with ESARNM, design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations with secondary education (for instance, construction workers and related occupations, personal services workers; preservers of food, wood, textile, leather workers and related occupations; operators of machinery and plants; drivers of motor vehicles, mobile plants and ship deck crew, etc.)
- Activation of passive job seekers able to work. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Adult education verification programs, in cooperation with ESARNM and the Employment center should be stimulated to intensify their work
 - Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for

students of secondary vocational schools in relevant companies

- Pilot programs for deficient occupations (for example, SMS “Josif Josifovski” should consider pilot programs for new profiles in the occupations with severe deficiency, for the persons with secondary education, such as: Building Construction workers and related construction occupations and food preservers, wood, textile and leather workers and related occupations.
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Gevgelija
 - The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Intensify the cooperation with the secondary vocational schools and the adult education verification programs
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Gevgelija, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Pelagonija Region

Labour market diagnostics in the municipality of Resen

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Resen, such as:

- Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)
- Activate of passive job seekers of working age through a campaign for activation of passive job seekers
- Production of profiles by the upskilling and re-skilling centres in the Pelagonija region for the most demanded occupations: tobacco preparers, sewers, salespersons, heavy truck and lorry drivers
- Strengthening the cooperation between the secondary vocational school “Car Samuil” and the relevant companies in the municipality
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Resen and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Resen is facing a shortage of qualified labour force and a deficiency gap for medium and low skill occupations. For each worker with primary education required by the companies in the Pelagonija region, there are 0.42 unemployed persons in the municipality of Resen. There is a predominant deficiency gap in the municipality of Resen, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations. For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupation of legal, social, and cultural professionals: At the same time, there is a severe surplus gap created by persons who completed primary education and have no occupation and by those who completed general secondary education. The educational institutions in the municipality of Resen have a moderate potential to address the gap with deficient occupations. Furthermore, they should be careful with any further production of profiles that broaden the surplus gap. Greater efforts need to be taken to overcome the problem with the shortage of labour.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Resen and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Resen is the third biggest municipality in the Pelagonija region, with population of 16.352¹, thus accounting for 7% of the total population in the Pelagonija region.

Currently, the labour market in the Pelagonija region is favourable; it is ranked fourth² in terms of the unemployment rate and second³ in terms

of the employment and activity rates as compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 13.1% (12.4% for women and 13.6% for men), the employment rate was 56%, while the activity rate was 64.5%. The favourable trend is also reflected in the average gross salary: with MKD 35,177, the Pelagonija region is ranked second (Regions in the Republic of North Macedonia, SSO, 2020). The favourable location, highly arable agricultural land, as well as the biggest coal deposits sites in the region make up the natural prerequisites for favourable labour market performance. Furthermore, the region is attractive to foreign investments and several big companies are located there, thus contributing significantly to the employment in the region.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²Following the Vardar region (10.8%), Eastern region (7.8%) and the Southeastern region (6.3%)

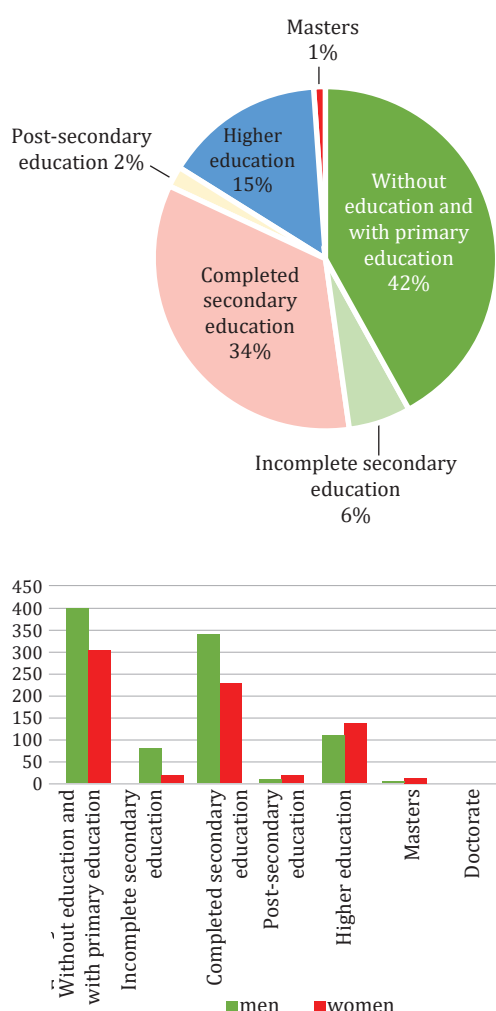
³Following the Southeastern region (63.3%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Resen in 2020, 43% were women and 57% were men. In terms of education, persons with lower educational attainment are predominant. Nearly one half (48%) of the unemployed were persons with primary or no education (42%) and incomplete secondary education. However, 15% of the unemployed are with higher education (Figure 1).

Figure 1: Unemployed persons in the municipality of Resen, by educational attainment

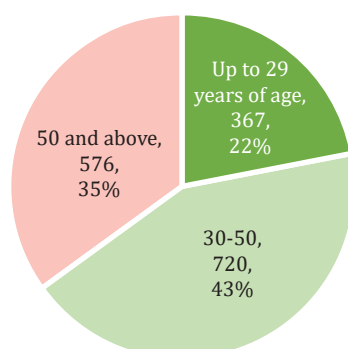


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 30-50 (43%), followed by the unemployed aged 50 or more (35%) (Figure 2).

The relatively low share of young people in the total structure (22%) is probably owing to the late activation on the labour market due to education, as well as to the proportionally lower share of young people in the population.

Figure 2: Structure of unemployed by age



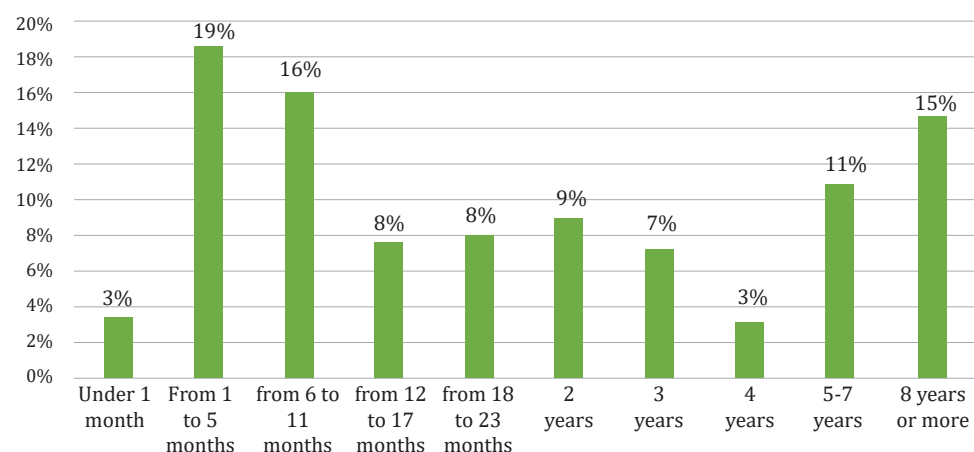
Source: Employment Service Agency of the Republic of North Macedonia

39% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage,

the time required to apply for a job and the process of recruitment to employment, etc. However, long-term unemployment is one of the more serious problems in the municipality of Resen. 46% of the unemployed persons are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a moderate share in the unemployed in the municipality of Resen. According to the Employment Service Agency, this category includes 597 persons, which represents a share of 35% in the total number of active job seekers. One half (49%) have no education or primary education, 41% are with secondary education (34%) or incomplete secondary education (7%). Furthermore, only eight per cent of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Figure 3: Unemployed persons in the municipality of Resen, by length of unemployment spell



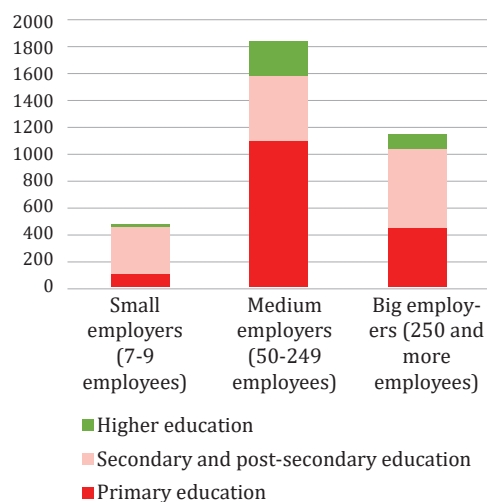
Source: Employment Service Agency of the Republic of North Macedonia

Demand

According to the regional labour demand survey in 2020, the total demand for the Pelagonija region is 3,491 jobs, which accounts for 48% of the unemployed labour force in the municipality of Resen.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that one half of the vacancies will be generated by medium to large employers, additional 33% by big companies and 13% by small employers. In terms of the demand by education, the demand for workers who completed primary (47%) and secondary education (40%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, tobacco preparers and labourers in loading, unloading and transport of cargo). The demand for workers with secondary education is more heterogeneous in terms of occupations. In absolute figures, the demand for occupations with secondary vocational school is greater than the one for those with general secondary education. 16% of the total demand for workers and 40% of the demand for workers

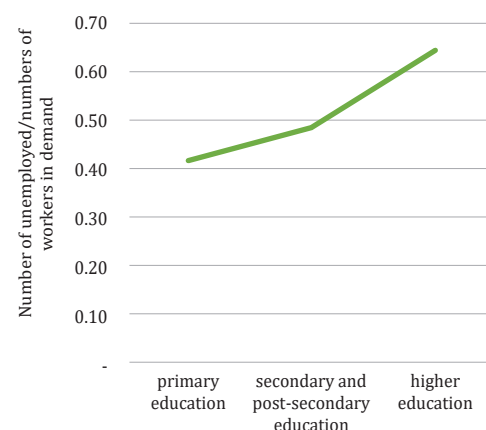
with secondary and post-secondary education are for technicians and related occupations, with nearly 90% concerning technicians-operators. It is followed by occupations of craft and related trade workers, including: sewers, shopkeepers, heavy truck and lorry drivers, waiters, locksmiths, stock clerks, welders, cooks, and similar occupations. Next on the list of workers with secondary education are services and sales workers and plant and machine operators and assemblers. All workers with higher education in demand on the market are in the occupation of professionals and science professionals. One third of them are systems administrators and 17% are programmers.

Labour market gap by education and occupation

The labour market gap in the municipality of Resen is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results indicate that the municipality of Resen can cover for 48% of the total labour demand in the Pelagonija region. As opposed to other municipality where there are usually more unemployed persons for each newly created jobs, the situation in the municipality of Resen is reverse and the supply is less than the demand. To a certain extent this is owing to the fact that the municipality's share in the

total population of the region is relatively small, i.e., it is only seven per cent. Thus, for every worker with primary education required by the companies in the Pelagonija region, there are 0.42 unemployed persons in the municipality of Resen, with similar ratio for secondary and post-secondary education (0.49), while for higher education the ratio is higher at 0.64.

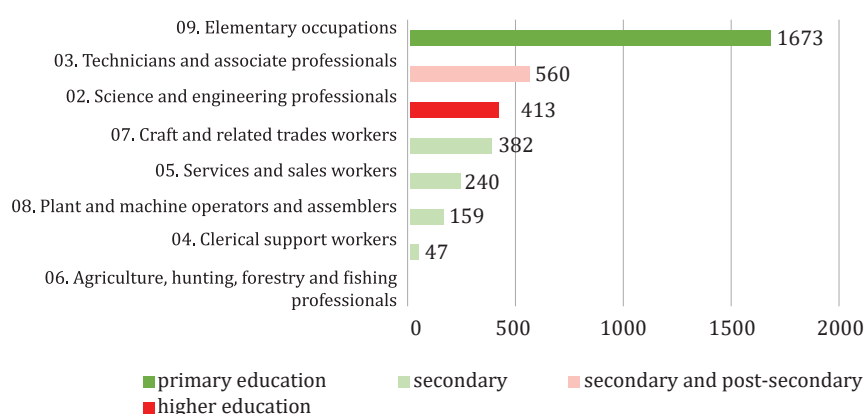
Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Resen. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations.

Figure 5: Labour demand by occupation and education for the Pelagonija region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020⁴

The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green – moderate gap).

The results show that for higher level skills there is a gap for nine out of ten occupations. For six occupations the gap is positive, while for two occupations with higher education the gap is severe (teaching professionals; and legal, social and cultural professionals). There is also a surplus gap for three occupations with secondary education (science and engineering associate professionals; health associate professionals; and business and administration associate professionals), but the magnitude of the gap declines or it transforms into a deficiency gap with the transition to higher education. This indicates the presence of occupations with potential underqualification. There is a deficiency gap for the occupation of information and communications technology professionals and technicians.

There is a prevailing deficiency gap for nearly all occupations at medium skill level. A moderate surplus gap where the labour supply is greater

than the demand is found only in three occupations with primary education: personal services workers; metal workers, machine assemblers and related occupations; and food preservers, wood, textile and leather workers and related occupations. However, it disappears and turns into a deficiency gap for persons who completed secondary education. This implies the existence of a potential underqualification and inadequate education. There is a deficiency gap for other occupations at medium skill level, and for five of them the gap is severe: accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; sales workers; plant and machine operators; operators of motor vehicles, mobile plants and deck crew.

There is a shortage of labour for occupations at low skill level. Except for persons with primary education and no occupation, there is a deficiency gap for the remaining four occupations, while for the occupations: refuse workers and other elementary workers; and labourers in mining, construction, manufacturing, and transport the deficiency gap is severe. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education. Therefore, the gap in low skill occupations could be reduced if

the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the surplus gap (when the supply exceeds the demand) occurs for higher skill level occupations, in particular with social sciences and educational occupations. There is a predominant deficiency gap for occupations at medium and low skill levels, with a shortage of workers with secondary education for various occupations. To an extent, this may be owing to the emigration trend in the country. Nevertheless, when compared to occupations at high skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important.

A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs.

The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁴ [The survey](#) has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	42	Customer services clerks				
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There is one secondary school and one institution for validation of non-formal learning of adults.

In the forthcoming four years the secondary school is expected to produce 318 profiled professionals for the labour market. However, 82% of the profiles produced are will general secondary education, classified as persons without occupation, while the remaining 18% are with the occupation of science and engineering associate professionals (agronomy technician and phytomedicine technician/ agricultural-veterinary profile, and technician in farming production / agricultural-veterinary technician).

These results imply that the municipality of Resen has a moderately well-established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on

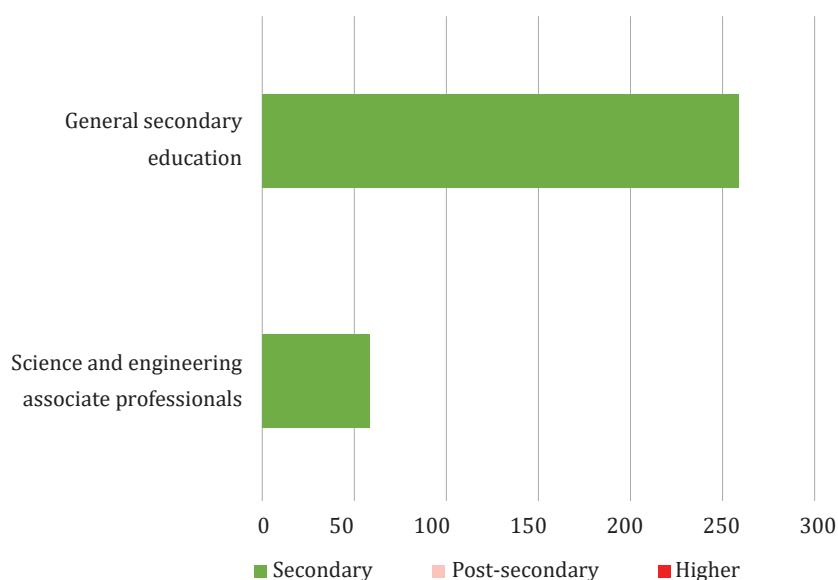
the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years.

The results show that the occupations and profiles supplied by educational institutions largely fail to bridge the existing gap in the labour market. Furthermore, the profiles produced only broaden the surplus gap. There is already a severe surplus gap caused by the production of profiles with general secondary education. On the other hand, for the occupation of science and engineering associate professionals, there is a surplus gap for persons with secondary education, and the gap disappears with the increase of the educational attainment. Therefore, the production of such profiles may not have a detrimental effect on the labour market if these persons continue their education. In view of mitigating the deficiency gap, the municipal secondary school “Car Samuil” - Resen should consider the introduction of new profiles for deficient occupations:

personal services workers; sales workers; food preservers, wood, textile and leather workers and related occupations; and plant and machine operators. Furthermore, the deficiency gap may be addressed by re-skilling the persons who completed general secondary education, in cooperation with the upskilling and re-skilling centres in the adjacent municipalities.

In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centres in the neighbouring municipalities in the Pelagonija region could improve their roles and engage actively in the mitigation of the deficiency gap for elementary workers with primary education by upskilling and re-skilling unemployed persons who have no occupation.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions within the territory of the municipality of Resen, data collected by the Municipality of Resen and the Ministry of Education and Science of the Republic of North Macedonia

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

			Labour market gap				Profiles produced by educational institutions
Skill level	Code	Occupation/Educational profile	Primary	Secondary	Post-secondary	Higher	Secondary
High skill level	21	Science and engineering professionals					
	22	Health Professionals					
	23	Teaching professionals					
	24	Business and administration professionals					
	25	Information and communications technology professionals					
	26	Legal, social and cultural professionals					
	31	Science and engineering associate professionals - agronomy technician and phytomedicine technician/ agricultural-veterinary profile - technician in farming production / agricultural-veterinary technician					59
	32	Health associate professionals					
	35	Information and communications technicians					
	33	Business and administration associate professionals					
Medium skill level	42	Customer services clerks					
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					
	51	Personal services workers					
	52	Sales workers					
	54	Security guards					
	71	Building construction workers and related construction workers					
	72	Metal workers, machine assemblers and related occupations					
	74	Electrotechnology workers					
	75	Food preservers, wood, textile and leather workers and related occupations					
	81	Machine and plant operators					
	83	Drivers of motor vehicles, mobile plant operators and deck crew					
Low skill level	91	Cleaners and helpers					
	92	Agricultural, forestry and fishery labourers					
	93	Labourers in mining, construction, manufacturing and transport					
	96	Refuse workers and other elementary workers					
		No occupation					
		General secondary education					259

Source: Employment Service Agency of the Republic of North Macedonia, Ministry of Education and Science of the Republic of North Macedonia, data delivered by the Municipality of Resen and the Ministry of Education and Science of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Resen has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For every worker with secondary education required in the Pelagonija region, there are 0.5 unemployed persons in the municipality of Resen, for those with primary education the ratio is 3.8, while for those with higher education the ratio is 4.5. To a certain extent this is owing to the fact that the municipality's share in the total population of the region is relatively small, i.e., it is only seven per cent. There is a predominant deficiency gap in the municipality of Resen, which implies a shortage of qualified labour force that is particularly prominent for medium and low skill occupations.

For persons with high level skills, there is a surplus gap with the supply drastically exceeding the demand for the occupations of legal, social, and cultural professionals; and teaching professionals. The educational institutions in the municipality of Resen have a moderate potential to address the gap with deficient occupations. Furthermore, they should be careful with any further production of profiles that broaden the surplus gap. Greater efforts should be made to overcome the problem with the shortage of labour force, and this problem may be potentially mitigated by re-skilling the unemployed persons with general secondary education, upskilling the unemployed persons without any qualifications and by activating the passive job seekers.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design **upskilling and re-skilling training** within the active labour market measures for the unemployed

active job seekers in the municipality of Resen, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres from the neighbouring municipalities in the Pelagonija region, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1
- Production of profiles by the upskilling and re-skilling centres in the Pelagonija region for the most demanded occupations: sales workers, locksmiths, tobacco preparers, labourers in loading, unloading and transport of cargo, manufacturing line labourers)
- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, sewers, sales workers, heavy truck and lorry drivers, waiters, locksmiths, etc.)

To design a process for **certification of informally acquired skills**, in cooperation with ESARNM and the upskilling and re-skilling centres in the region.

To increase the labour supply by activation of the passive job seekers at working age. The Employment Centre should carry out a campaign for activation of passive job seekers and identification of the reasons for their passivity. To enhance the mechanisms preventing the manipulations of the system and consistent application of the law on suspension of minimum guaranteed assistance in case of refusal of offered work.

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o The municipal secondary school "Car Samuil" - Resen should consider the introduction of new

profiles for deficient occupations: food preservers, wood, textile and leather workers and related occupations

- o The upskilling and re-skilling centres in the Pelagonija region, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work.

- o Secondary vocational schools should improve their cooperation with the private sector. The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-projects for deficient occupations

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Resen

- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with the secondary vocational school "Car Samuil"
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

- To provide incentives and working conditions for parents by organizing transport to the remote and rural areas, flexible working arrangements and remote work

For the Municipality of Resen, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational

pathways

- To intensify the investments in kindergartens and homes for the elderly, thus enabling the activation of the passive unemployed on the labour market who are not active because they are providing care for the children and the elderly

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Bitola

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Bitola, such as:

- Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)
- Strengthening the cooperation between the secondary vocational schools and the business sector, in particular with foreign investors in the municipality of Bitola, including piloting dual education in two or three occupations (in line with the strategy of the Ministry of Education and Science)
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Bitola and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Bitola is facing overqualification, occupational mismatch and labour shortage. For each required worker with higher education in the Pelagonija region, there are 2.5 unemployed in the municipality of Bitola. The supply exceeds the demand for the occupations at higher skill levels: education professionals; legal and social professionals and professionals in the field of culture; and science and engineering professionals. The demand exceeds the supply for the high skill level occupation - IT professionals, and for the low skill level occupations: information and communications technology technicians; labourers in mining, construction, manufacturing, and transport; and refuse workers and other elementary workers. The lack of workers in elementary occupation in the municipality of Bitola is alarming.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Bitola and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Bitola is one of the biggest municipalities in the Pelagonija region with a population of 92,203¹, thus accounting for 40% of the total population in the Pelagonija region.

Currently, the labour market in the Pelagonija region is favourable; it is ranked fourth² in terms of the unemployment rate and second³ in terms of the employment and activity rates as

compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 13.1% (12.4% for women and 13.6% for men), the employment rate was 56⁴, while the activity rate was 64.5%. The favourable trend is also reflected in the average gross salary: with MKD 35,177, the Pelagonija region is ranked second (Regions in the Republic of North Macedonia, SSO, 2020).

The favourable location, highly arable agricultural land, as well as the biggest coal deposits sites in the region make up the natural prerequisites for favourable labour market performance. Furthermore, the region is attractive to foreign investments and several big companies are located in the immediate vicinity of Bitola, thus contributing significantly to the employment in the region, in general, and in the municipality of Bitola, in particular.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²Following the Vardar region (10.8%), Eastern region (7.8%) and the Southeastern region (6.3%)

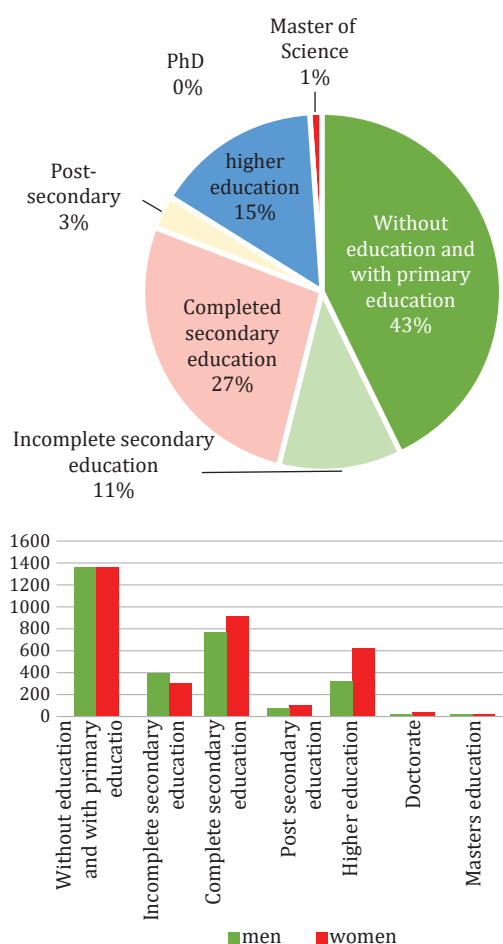
³Following the Southeastern region (63.3%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Bitola in 2020, 53% were women and 47 were men. In terms of education, persons with lower educational attainment are predominant. More than one half (54%) of the unemployed were persons with primary or no education (43%) and incomplete secondary education (43%) and incomplete secondary education (Figure 1).

Figure 1: Unemployed persons in the municipality of Bitola, by educational attainment

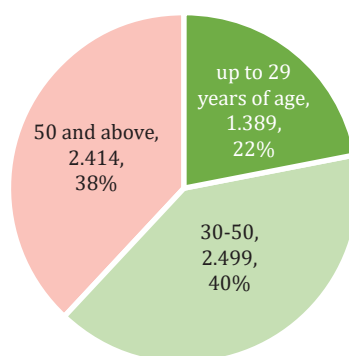


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 30-50 (40%), and the share of unemployed aged 50 or more is similar (38%) (Figure 2). The relatively low share of young people in the total structure (33%) is probably owing to the late activation on the labour market due to education,

as well as to the proportionally lower share of young people in the population.

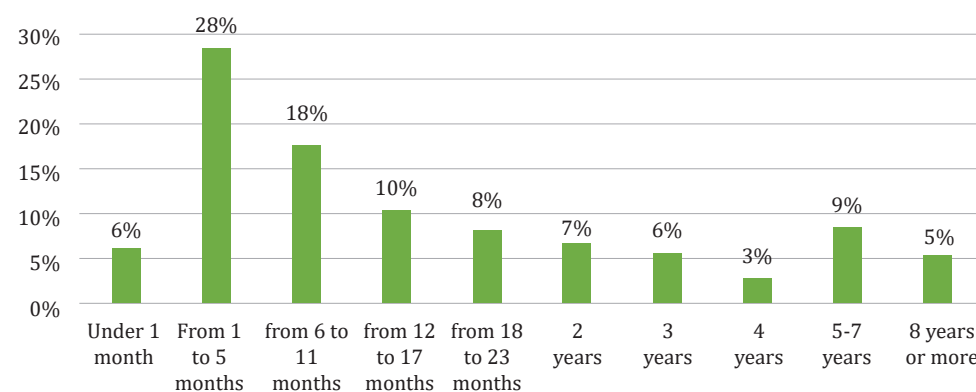
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

52% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Although such structure may appear encouraging, one third of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

Figure 3: Unemployed in the municipality of Bitola, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Bitola. According to the Employment Service Agency, this category includes 4,274 persons, which represents a share of 80% in the total number of active job seekers. 39% of the passive job seekers have completed primary education, while additional 11% of them have incomplete secondary education. This indicates that these persons are mostly with low educational attainment.

However, 13% of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

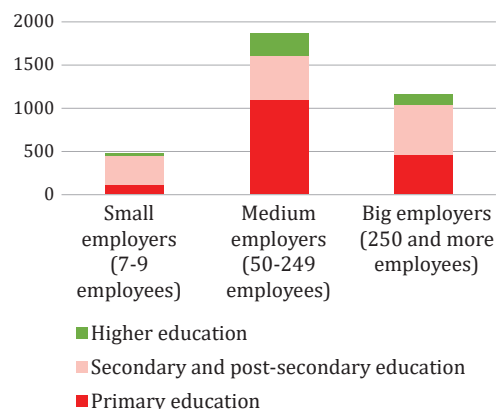
Demand

According to the regional labour demand survey in 2020, the total demand for the Pelagonija region is 3,491 jobs, which accounts for 55.4% of the unemployed labour force in the municipality of Bitola.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that one

half of the vacancies will be generated by medium to large employers, additional 33% by big companies and 13% by small employers. In terms of the demand by education, the demand for workers who completed primary (47%) and secondary education (40%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, tobacco preparers and labourers in loading, unloading and transport of cargo). The demand for workers with secondary education is more heterogeneous in terms of occupations. In absolute figures, the demand for occupations with

secondary vocational school is greater than the one for those with general secondary education. 16% of the total demand for workers and 40% of the demand for workers with secondary and post-secondary education are for technicians and related occupations, with nearly 90% concerning technicians-operators. It is followed by occupations of craft and related trade workers, including: sewers, shopkeepers, heavy truck and lorry drivers, waiters, locksmiths, stock clerks, welders, cooks, and similar occupations. Next on the list of workers with secondary education are services and sales workers and plant and machine operators and assemblers. All workers with higher education in demand on the market are in the occupation of professionals and science professionals. One third of them are systems administrators and 17% are programmers.

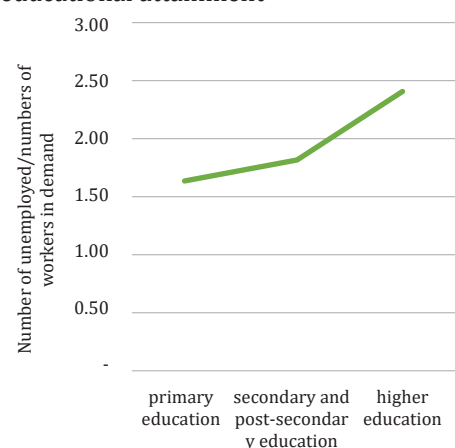
Labour market gap by education and occupation

The labour market gap in the municipality of Bitola is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation.

Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according

to the educational attainment. The results have indicated that the gap is the greatest for higher education. For every worker with higher education required by the companies in the Pelagonija region, there are 2.5 unemployed persons in the municipality of Bitola, while for secondary and post-secondary education this ratio is 1.8, while for primary education it is the lowest at 1.6.

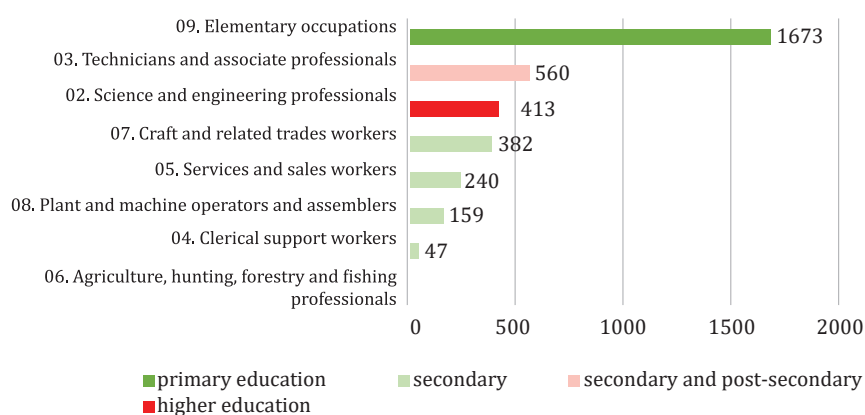
Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Figure 5: Labour demand by occupation and education for the Pelagonija region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020⁴

⁴ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the municipality of Bitola.

The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green – moderate gap).

The results show that for higher level skills there is a gap for eight out of nine occupations. For five of the occupations the gap is positive, of which for three higher education occupations there is a potential overqualification (education professionals; legal and social professionals and professionals in the field of culture; and science and engineering professionals). There is a severe surplus gap for occupations of science and engineering associate professionals; business and administration associate professionals with secondary education, but the magnitude of the gap declines or it transitions into a deficiency gap with the transition to higher education. This indicates the presence of occupations with potential underqualification. There is a deficiency gap for four occupations, of which two with a severe gap (information and communications technology professionals and technicians), which implies that it is an occupation in demand, notwithstanding the educational attainment. On the other hand, there is a deficit of labour force with higher education in the business and administration occupations.

For medium skill level occupations, there is a surplus gap, where the labour supply exceeds the demand,

only for one of 11 occupations (metal workers, machinery fitters and related occupations) for any level of education, which indicates a surplus in this occupation. For other occupations at medium skill level, there is either a moderate surplus or deficiency gap. Occupations in moderate surplus are precision mechanics, handicraft workers, printers and electrotechnology workers), which may be explained by discrepancies of temporary nature. On the other hand, for food preservers, wood, textile and leather workers and related occupations the positive gap disappears with the increase of the educational attainment from primary to secondary education. This indicates that the persons with primary education require upskilling. The following occupations are also moderately deficient: accounting and bookkeeping clerks, statistical, finance and insurance clerks, material recording and transport clerks; personal services workers; sales workers; security guards; building construction workers and related construction workers; machine and plant operators and drivers of motor vehicles, mobile plant operators and deck crew.

In occupations at low skill level the gap is typically owing to inadequate education. There is a deficit of labourers in mining, construction, manufacturing and transport and elementary workers, refuse workers and other elementary workers with secondary education, which is not the case for those workers with primary education. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the surplus gap (when the supply exceeds the demand) occurs for higher skill level occupations, in particular with social sciences and educational occupations. There is a predominant deficiency gap for occupations at medium and low skill levels, with a shortage of workers with secondary education for various occupations. Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation – educational profile

Skill	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
Low skill level	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
■ Surplus

■ Adequately matched
■ Deficit
■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

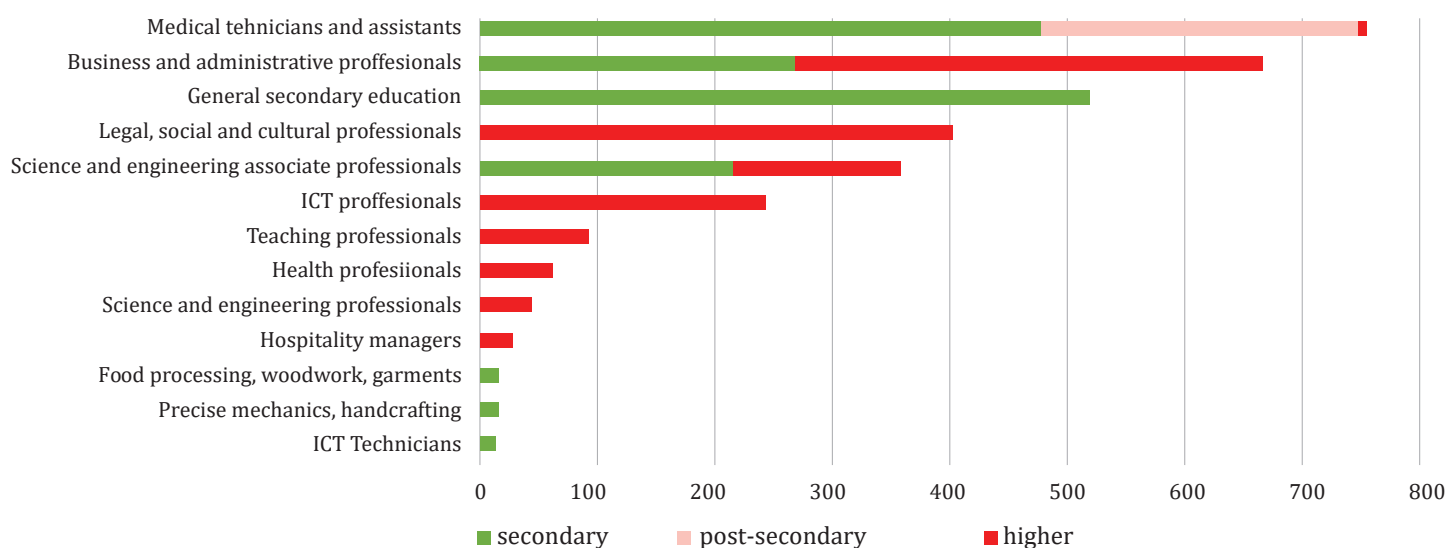
There are six secondary schools, 15 higher education institutions and one upskilling and re-skilling centre in the municipality of Bitola. In the forthcoming two years these institutions are expected to produce 3,194 profiled professionals for the labour market. 84% of the total supply of educational profiles fall within five occupations: health associate professionals and technicians; business and administration professionals; legal and social professionals; science and engineering associate professionals and persons who completed general secondary education, classified as persons without occupation. These results indicate that the municipality of Bitola has established an educational infrastructure to produce profiled labour force, in particular higher education and vocational profiles in several areas. In order to identify to which extent are those profiles matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years. The results show that the deficiency gap for information

and communications technology professionals may be bridged by the production of graduates of the Faculty of Information and Communications Technologies in Bitola. Those persons who have completed secondary education for the technician profile will need additional education to the post-secondary level.

On the other hand, any further production of the educational profiles: teaching professionals; legal, social and cultural professionals; and business and administration associate professionals would broaden the surplus gap and create further labour market disruptions. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centres are relatively under-represented and these institutions should received incentives to develop programmes that would help produce profiles in the deficient occupations, in particular those at low skill level.



Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Educational institutions within the territory of the municipality of Bitola, data collected by the municipality of Bitola

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

Code	Occupation/Educational profile	Gaps				Supply from educational institutions		
		Primary	Secondary	Post-secondary	Higher	Secondary	Post-secondary	Higher
14	Hospitality, retail and wholesale trade and other services managers							27
21	Science and engineering professionals							42
22	Health Professionals							61
23	Teaching professionals							91
24	Business and administration professionals							0
25	Information and communications technology professionals							242
26	Legal, social and cultural professionals							400
31	Science and engineering associate professionals					214		142
32	Health associate professionals					477	269	6
35	Information and communications technicians					12		
33	Business and administration associate professionals					267		397
43	Accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks							
51	Personal services workers							
52	Sales workers							
54	Security guards							
71	Building construction workers and related construction workers							
72	Metal workers, machine assemblers and related occupations							
73	Precision mechanics, handicraft workers and printers					14		
74	Electrotechnology workers							
75	food preservers, wood, textile and leather workers and related occupations					15		
81	Machine and plant operators							
83	Drivers of motor vehicles, mobile plant operators and deck crew							
92	Agricultural, forestry and fishery labourers							
93	Labourers in mining, construction, manufacturing and transport							
96	Refuse workers and other elementary workers							
	No occupation							
	General secondary education					518		

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

Significant surplus
Surplus

Adequately matched
Deficit
Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Bitola has shown that the greatest education-to-occupation gap is the one for the persons with higher education. For each required worker with higher education in the Pelagonija region, there are 2,5 unemployed persons in the municipality of Bitola. For the persons with high level skills, there is a severe surplus gap for the following occupations: teaching professionals; legal, social and cultural professionals; and science and engineering professionals. There is a deficiency gap with a demand greater than the supply for the occupation of information and communications technology professionals. With regard to low skill levels, there is a deficiency gap for the following occupations: information and communications technology technicians; labourers in mining, construction, manufacturing, and transport; and refuse workers and other elementary workers. The educational institutions in the municipality of Bitola have the potential to address the gap in deficient occupations, but some of them are only broadening the gap for the surplus occupations by intensive and mass production of surplus educational profiles.

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Bitola, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, information and communications technology technicians)
- Upskilling/re-skilling of persons with secondary education in the occupation of business and administration associate professionals in the following occupations: accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; personal services workers; sales workers; security guards; building construction workers and related construction workers
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:
 - o Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - o Work with high skill requirements for persons with high level skills in surplus occupations (learning support for students belonging to the vulnerable groups, support to schools and kindergartens, etc.)

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates
 - o The upskilling and re-skilling centres, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work

o Secondary vocational schools should improve their cooperation with the private sector, in particular with big companies and foreign investors located in the municipality of Bitola or the immediate vicinity (for instance, Kromberg&Schubert, Genterm, etc.). The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot-project for deficient occupations (e.g., technicians-operators)
- Potential matching of companies and secondary vocational schools: "Gjorgji Naumov", having potential to produce ICT technicians, could be matched with the following foreign companies: Kromberg&Schubert, Genterm, and VIK; "Jovan Kalauzi", having potential to produce health technicians and assistants, could be matched with the private hospital "Plodnost"; "Taki Daskalo" should be matched with the textile companies in the municipality and its immediate surrounding

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Bitola
- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Bitola, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Prilep

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Prilep, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Strengthening the cooperation between the secondary vocational schools and the business sector, in particular with foreign investors in the municipality of Prilep, including piloting dual education in two or three occupations (in line with the strategy of the Ministry of Education and Science)
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Prilep and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand.

In the municipality of Prilep predominant are deficiency gaps, lower qualifications in certain occupations and shortage of workforce for elementary occupations. For each required worker with higher education in the Pelagonija region, there are 2.2 unemployed in the municipality of Prilep. There is greater supply than demand for occupations at high skill levels, especially in social occupations, while for the occupations with medium and low skills there is predominantly deficiency gap, with a shortage of workers with secondary education for various occupations. Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. Educational institutions in the Municipality of Prilep have the potential to address the deficiency gap, however, they need to adapt current programs to the new trends. Nevertheless, part of them additionally deepen the gap in sufficient occupations.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Prilep and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Prilep is one of the biggest municipalities in the Pelagonija region with a population of 75.484¹, thus accounting for 33% of the total population in the Pelagonija region. Currently, the labour market in the Pelagonija region is favourable; it is ranked fourth² in terms of the unemployment rate and second³ in terms of the employment and activity rates as

compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 13.5% (14.3% for women and 12.9% for men), the employment rate was 55.1%, while the activity rate was 63.7%. The favourable trend is also reflected in the average gross salary: with MKD 35,177, the Pelagonija region is ranked second (Regions in the Republic of North Macedonia, SSO, 2021). The favourable location, highly arable agricultural land, as well as the biggest coal deposits sites in the region make up the natural prerequisites for favourable labour market performance. Furthermore, the region is attractive to foreign investments and several big companies are located in the immediate vicinity of Prilep, thus contributing significantly to the employment in the region, in general, and in the municipality of Prilep, in particular.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Vardar region (11.1%), Eastern region (8.1 %) and Southeast region (4.3 %)

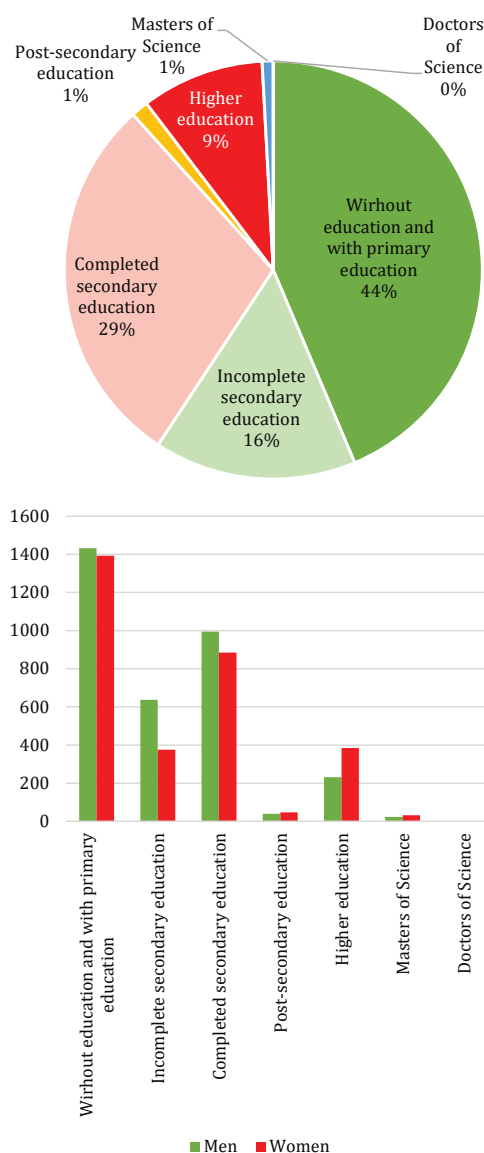
³After the Southeast region (62.5 %)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Prilep in 2021, 48% were women and 52 were men. In terms of education, persons with lower educational attainment are predominant. Almost two thirds (60%) of the unemployed were persons with primary or no education (44%) and incomplete secondary education (Figure 1).

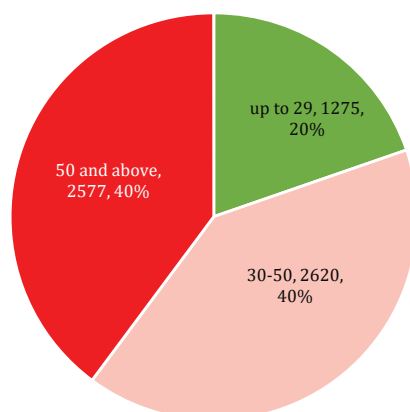
Figure 1: Unemployed persons in the municipality of Prilep, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed range between 30 to 50 years of age (40%), similarly to the unemployed aged 50 or more (40%) (Figure 2). The relatively low share of young people in the overall structure (20%) is probably due to the delayed activation on the labour market, as a result of education, also the lower coverage of young population.

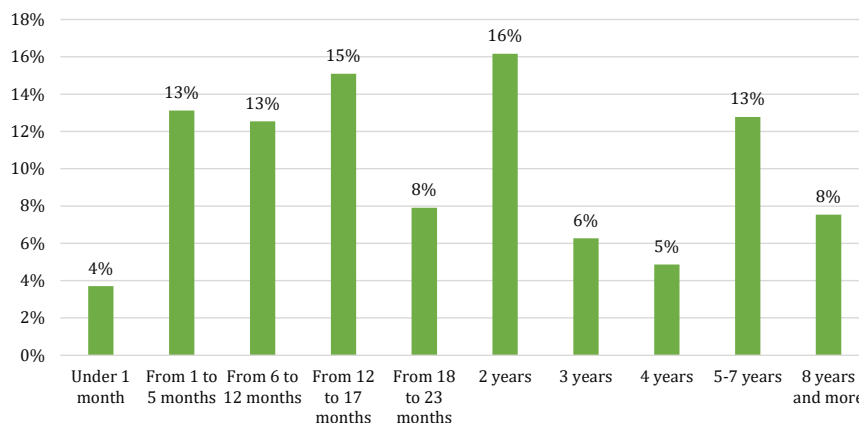
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

29% of the unemployed wait for a job up to a year, most of them from one up to five months, and from six to twelve months (Figure 3). Probably the individual characteristics of this category unemployed (educational attainment, educational profile, age) are better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment,

Figure 3: Unemployed in the municipality of Sveti Nikole, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Yet, most of the unemployed, 39%, wait for employment from one to three years, and the percentage is decreasing to 31% with persons waiting for employment more than three years. This indicates probable gaps due to the mismatch between the offer and the demand on the labour market and structural unemployment for persons waiting for employment more than three years.

In addition to the unemployed active job seekers, there are also persons registered as passive job seekers in the municipality of Prilep. According to the Employment Service Agency, this category includes 1.962 persons, which represents a share of 30% in the total number of active job seekers, which is moderate. 36% of the passive job seekers have completed primary education, while additional 19% of them have incomplete secondary education. This indicates that these persons are mostly with low educational attainment. However, 10% of this group have completed higher education, and 35% with secondary education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but

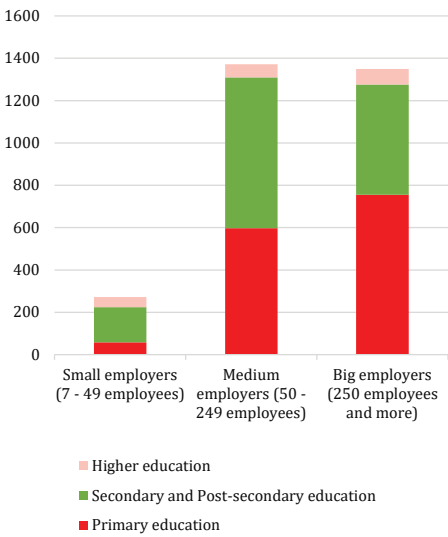
remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Pelagonija region is 2.993 jobs, which accounts for 46% of the unemployed labour force in the municipality of Prilep.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that 91% of the vacancies will be generated by medium to big companies (46%), and by big companies (45%), and only 9% by small employers. In terms of the demand by education, the demand for workers who completed primary (47%) and secondary education (47%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that

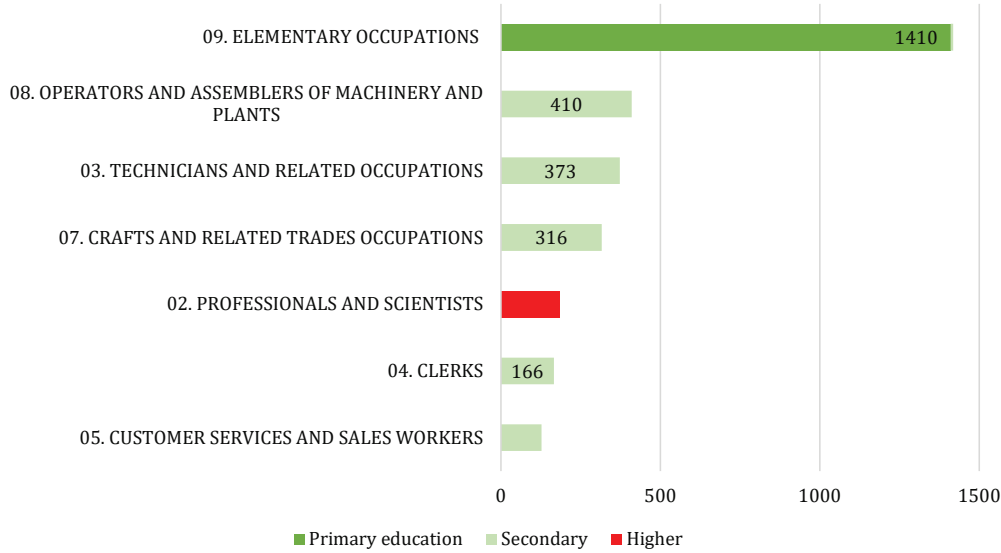
the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, simple assembly work labourers, labourers in loading, unloading, manufacturing line labourers, manual packer, agricultural worker, etc.). The demand for workers with secondary education is more heterogeneous in terms of occupations. 14 per cent of the total demand for workers and 29% of the demand for workers with secondary and post-secondary education is for operators of machinery and plants, mainly, worker on a tobacco production line, and drivers of various vehicles. Following is the demand for technicians and related occupations, including: Computer system professionals, chemical lab-technician, emergency medicine technician, administrator, technician-operator, quality controller, agent for sale of securities, mechanical technician, etc. Related occupations for trades, out of which

two thirds are for the occupation sewer. The demand for clerks and customer service workers and sales is lowest.

Labour market gap by education and occupation

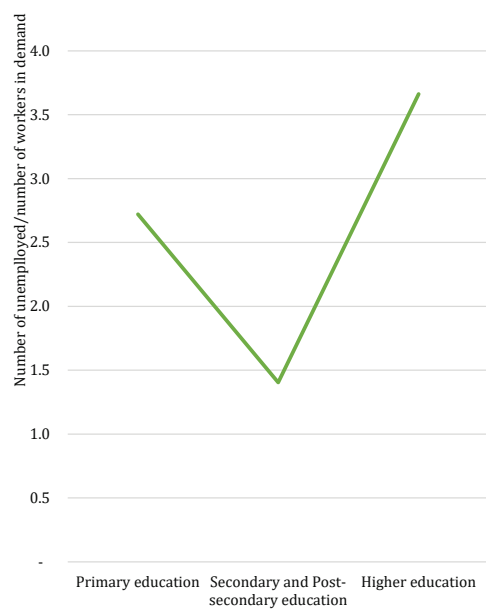
The labour market gap in the municipality of Prilep is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results showed that for every worker required by the companies in the Pelagonija region, there are 2.2 unemployed persons in the municipality of Prilep. There is largest gap for higher education, and it is 3.7 unemployed persons to one demanded worker with higher education, for primary education it is 2.7, and for secondary and post-secondary is lowest 1.4.

Figure 5: Labour demand by occupation and education for the Pelagonija region



Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Prilep. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green - moderate gap).

The results indicate that in the Municipality of Prilep there are predominantly deficiency gaps (when the demand is greater than the supply). In high skills level,

there is a gap in eight out of eleven occupations. For three occupations the supply is greater than the demand (teaching professionals; and legal, social and cultural professionals) and a severe gap is identified. There is a severe surplus gap for occupations of science and engineering associate professionals; business and administration associate professionals with secondary education, but the magnitude of the gap declines or it transitions into a deficiency gap with the transition to higher education. Similarly, there is also a moderate sufficiency gap for persons with secondary education for the occupation health associate professionals and it disappears for the persons with post-secondary education. This implies that the occupations are adequate, however, there is potential underqualification. In addition to the occupation for which the gap transitions from sufficiency to deficiency, there is a deficiency gap in three additional occupations from the group of high skill level, regardless of the level of education attainment. Thus, there is a severe deficiency gap for information and communication technology technicians, and a moderate deficiency gap for the following occupations: Business and administration professionals; and Information and communications technology professionals.

In the occupations with medium skills, out of 11 occupations, for five there is a sufficiency gap, deficiency gap for five, and different gap depending on education for one occupation. There are severe sufficiency gaps for sellers and electrotechnology workers. These gaps may be explained by the insufficient vacancies and potentially informal engagement of master professionals in the occupation of electrotechnology. There is a severe deficiency gap for the occupation clerks in bookkeeping, finance, statistics and material recording

and transport, mainly as a result of greater demand for insurance clerks. Probably it is because this occupation is expanding. In the case of food preservers, wood, textile, leather workers and related occupations, the severe positive gap disappears with the increase of the level of education from primary to secondary. This indicates that the persons with primary education require upskilling. For other occupations at medium skill level, there is either a moderate surplus or deficiency gap. Moderately sufficient occupations are clerks for general office work and secretaries; metal workers, machine assemblers and related occupations and market oriented agricultural professionals. This may also be explained with the market mismatches of temporary nature. The following occupations are moderately deficient: Customer services workers; security guards for protection of persons and property; building construction workers and related construction workers; and precision mechanics, handicraft workers and printers.

There is a general shortage of labour at low skill level in almost all occupations. There is only a moderate sufficiency gap for the occupation operators of machinery and plant, for persons with primary education, which disappears and transitions into severely sufficient gap for the persons with secondary education. There is deficiency for elementary workers in mining, construction, manufacturing, and transport; elementary workers, refuse collectors and related occupations; cleaners and helpers; labourers in agriculture, forestry and fisheries. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched

to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The general conclusion is that there are predominantly deficiency gaps in the Municipality of Prilep. There is sufficiency gap (when the supply is greater than the demand) for occupations at high skill levels,

especially in social occupations, while for the occupations with medium and low skills there is predominantly deficiency gap, with a shortage of workers with secondary education for various occupations. Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations

are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas.⁴

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
	41	General office clerks and secretaries				
	42	Customer services clerks				
Medium skill level	43	accounting and bookkeeping statistical, finance and insurance, material re-cording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
	81	Machine and Plant operators				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
	99	Elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

Significant surplus Surplus Adequately matched Deficit Significant deficit

⁴World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Educational profiling as a factor in bridging or broadening the gaps

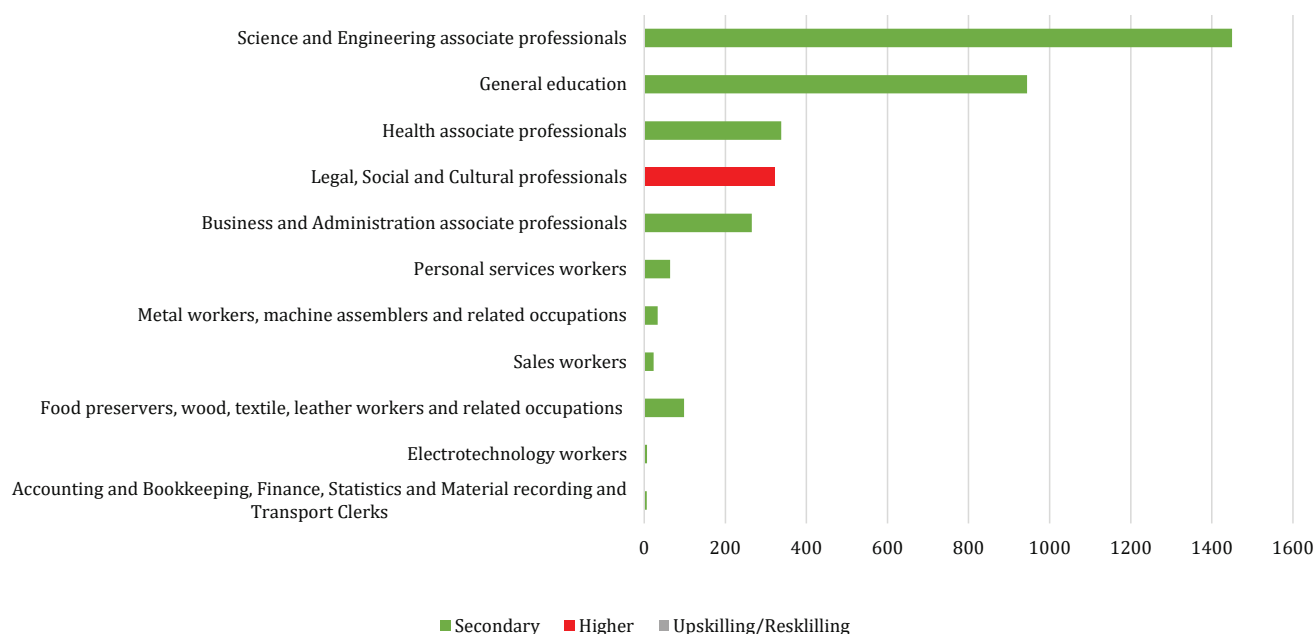
There are five secondary schools and one higher educational institution and one centre for upskilling and re-skilling in the municipality of Prilep. In the forthcoming four years these institutions are expected to produce 3.549 profiled professionals for the labour market, out of which 91% profiles with secondary education. Half of the total offer of education profiles are in two occupations: Science and engineering associate professionals (53%) and health associate professionals (10%). One third (27%) are persons with completed general secondary education, classified as without occupation.

These results indicate that the municipality of Prilep has established an educational infrastructure to produce profiled labour force, in particular secondary vocational education profiles in various areas. In order to identify to which extent are those profiles matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years. Results show

that these generated profiles may moderately overcome the gaps. Generated profiles in the textile and leather department and the forestry and wood processing department in the municipal secondary school “Gjorche Petrov” will contribute to overcoming the deficiency gap for the occupation food preservers, wood, textile, leather workers and related occupations. Similarly, profiles in the economic departments in the secondary vocational school “Kuzman Josifovski-Pitu” may help in producing professionals with secondary education for the occupation clerks in book keeping, finance, statistics and material recording and transport. Nevertheless, it is necessary to modify the profiles in accordance with the demand on the labour market and the new trends (for example, to match the demand for insurance clerks). The profiles generated by the municipal secondary school “Riste Risteski-Richko” are for sufficient occupations with secondary education on the labour market, however, for these occupations, the gap transitions into deficiency gap as the education level increases. Thus, producing these profiles is not a threat to the labour

market. By proper direction of these profiles to upskilling, they can help in addressing the deficiency gaps for these occupations. In addition, MSS “Riste Risteski-Richko” may consider opening new profiles and modify the existing in order to produce profiled workforce in the occupation information and communication technology technicians, for which there is a severe deficiency gap. On the other hand, any further production of the educational profiles: legal, social and cultural professionals; and sales workers, would broaden the surplus gap and create further labour market disruptions. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centres are relatively under-represented and these institutions should receive incentives to develop programmes that would help produce profiles in the deficient occupations, in particular those at low skill level.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

skill level	Code	Occupation/profile	Gaps				Supply from educational institutions		
			Primary	Second-ary	Post-sec-ondary	higher	Secondary	higher	Upskilling and re-skill-ing
High skill level	21	Science and engineering professionals							
	22	Health professionals							
	23	Teaching professionals							
	24	Business and administration profession-als							
	25	Information and communications tech-nology professionals							
	26	Legal, social and cultural professionals						321	
	31	Science and engineering associate profes-sionals					1450		
	32	Health associate professionals					338		
	34	Legal, social and cultural associate pro-fessionals							
	35	Information and communications tech-nicians							
	33	Business and Administration associate professionals					265		
Medium skill level	41	General office clerks and secretaries							
	42	Customer services clerks							
	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					6		
	44	Other office clerks							
	51	Personal services workers					64		
	52	Sales workers					23		
	54	Security guards							
	61	Market-oriented skilled agricultural workers							
	71	building construction workers and relat-ed construction workers							
	72	Metal workers, machine assemblers and related occupations					33		
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers					7		
	75	food preservers, wood, textile and leather workers and related occupations					98		
	81	Machine and Plant operators							
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew							
Low skill level	91	Cleaners and helpers							
	92	Agricultural, forestry and fishery elemen-tary workers							
	93	Labourers in mining, construction, manu-facturing and transport							
	96	Refuse workers and other elementary workers							
	99	Elementary workers							
		No occupation							
		General secondary education					944		

Source - Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:
■ Significant surplus
■ Surplus
■ Adequately matched
■ Deficit
■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic overview of the labour market of the Municipality showed predominantly deficiency gaps. The results showed that for every worker required by the companies in the Pelagonija region, there are 2.2 unemployed persons in the municipality of Prilep. There is largest gap for higher education, and it is 3.7 unemployed persons to one demanded worker with higher education, for primary education it is 2.7, and for secondary and post-secondary is lowest 1.4. There is a sufficiency gap (when the supply is greater than the demand) in occupations with high skills, especially for the social science professionals, while for the occupations with medium and low skills there is predominantly deficiency gap, with shortage of workers with secondary education for various occupations. Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Educational institutions in the Municipality of Prilep have the potential to address the deficiency gap, however, they need to adapt current programs to the new trends. Nevertheless, part of them additionally deepen the gap in sufficient occupations.

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Prilep, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with

ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, information and communications technology technicians or insurance clerks)
- Upskilling/re-skilling of persons with secondary education in the occupation of business and administration associate professionals in the following occupations: accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:
 - Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - Work with advanced skills for persons with advanced skills in sufficient occupations (learning support for students from vulnerable categories, support in the schools and kindergartens, etc.).

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to produce more graduates

- The upskilling and re-skilling centres, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work
- Secondary vocational schools should improve their cooperation with the private sector, in particular with big companies and foreign investors located in the municipality of Prilep or the immediate vicinity (for instance, “Genterm” “Kromberg&Schubert”, “Komfi Angel”, etc.). The cooperation could be promoted through:
 - Regular internship for students of secondary vocational schools in relevant companies
 - Pilot-project for deficient occupations (for instance, operators of machinery and plant, technicians for information and communication technology, insurance clerks)
 - Potential matching of companies and secondary vocational schools: MSS “Gjorche Petrov”, with the potential to produce wood workers, textile and leather workers, and may cooperate with the textile company “Comfi Angel” and other textile companies in the municipality; MSS “Riste Risteski-Richko” with foreign companies: “Genterm”, Kromberg&Schubert, and VIK
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in

demand on the labour market in the municipality of Prilep

- The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Prilep, regional chambers of commerce and secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to

help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



South-West Region

Labour market diagnostics in the municipality of Kichevo

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Kichevo, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)
- Improving the municipality's capacity to attract foreign investors in the Technological Industrial Development Zone (TIDZ)
- Strengthening the cooperation between the secondary vocational schools and the business sector, in particular with foreign investors in the municipality of Kichevo, including piloting dual education in two or three occupations (in line with the strategy of the Ministry of Education and Science)
- Redesigning the curricula/profiles and skills conferred by the qualifications obtained, in line with the occupations in demand on the labour market in the municipality of Kichevo and the skills required (for instance, skills relating to STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Kichevo is facing a lack of job opportunities, underqualification and shortage of medium skilled labour force. For each required worker with primary education in the Southwest region, there are 11 unemployed persons in the municipality of Kichevo. The supply exceeds the demand for the occupations at higher skill levels: teaching professionals; legal, social and cultural professionals. In all other occupations with surplus gaps, those gaps disappear or are transformed into deficiency gaps with the increase of the educational attainment. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. The educational institutions in the municipality of Kichevo need significant restructuring so as to be able to address the gap in deficient occupations, and some of them are only broadening the gap for the surplus occupations by intensive and mass production of surplus educational profiles.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Kichevo and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Kichevo is one of the bigger municipalities in the Southwest region with a population of 57.107¹, thus accounting for 26% of the total population in the region. Currently, the labour market in the Southwest region is moderately unfavourable; it is ranked third² in terms of the unemployment rate and third³ from the back in terms of the employment rate, and fourth in terms of the activity rate as

compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 24.4% (26.4% for women and 23.1% for men), the employment rate was 43.1%, while the activity rate was 57%. The moderately unfavourable trend is also reflected in the average gross salary in the amount of MKD 33,099 (Regions in the Republic of North Macedonia, SSO, 2020). Nevertheless, the region is favourably positioned, has a great and underutilized hydro potential, as well as development tourism in the Lake Ohrid area. Furthermore, the region is attractive to foreign investments and several big companies are located in the immediate vicinity of Kichevo, thus contributing significantly to the employment in the region, in general, and in the municipality of Kichevo, in particular.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Northeast region (33%) and the Polog region (28.5%)

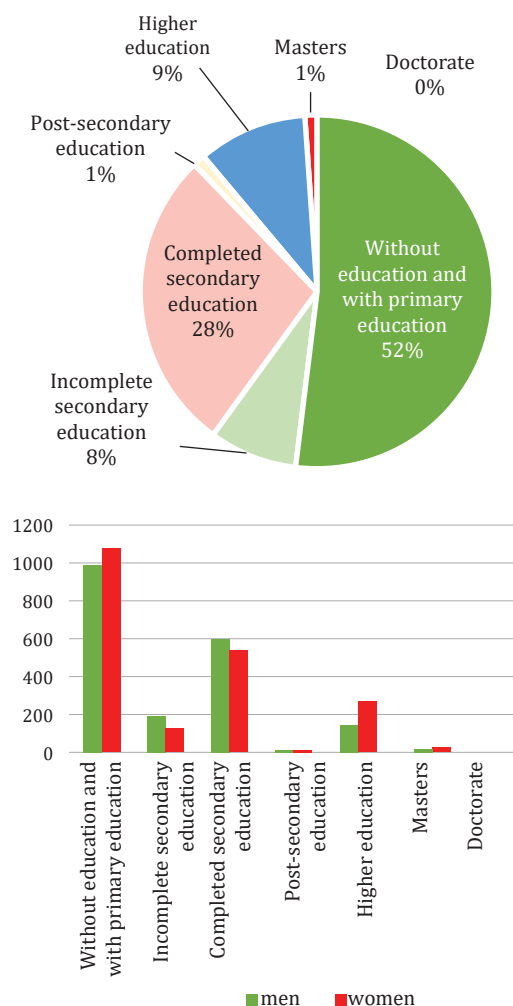
³After the Southeast region (63.3%)

STRUCTURE OF THE LABOUR MARKET

Supply

Women and men have equal shares in the the total registered unemployed who were active job seekers in the municipality of Kichevo in 2020. In terms of education, persons with lower educational attainment are predominant. More than one half (60%) of the unemployed were persons with primary or no education (52%) and incomplete secondary education (52%) and incomplete secondary education (Figure 1).

Figure 1: Unemployed persons in the municipality of Kichevo, by educational attainment

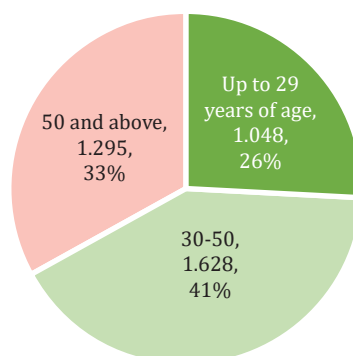


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 30-50 (41%), followed by the unemployed aged 50 or more (33%) (Figure 2). The relatively low share of young people in the total structure (26%) is probably owing to the late activation on the labour market

due to education, as well as to the proportionally lower share of young people in the population.

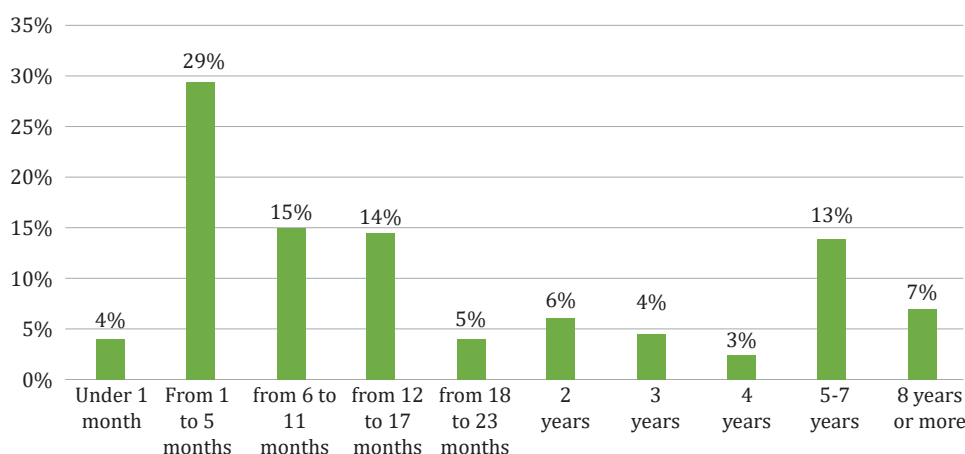
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

48% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Although such

Figure 3: Unemployed in the municipality of Kichevo, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

structure may appear encouraging, one third of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Kichevo. According to the Employment Service Agency, this category includes 2,817 persons, which represents a share of 70% in the total number of active job seekers. 57% of the passive job seekers have completed primary education, while additional 9% of them have incomplete secondary education. This indicates that these persons are mostly with low educational attainment. Only 5% of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

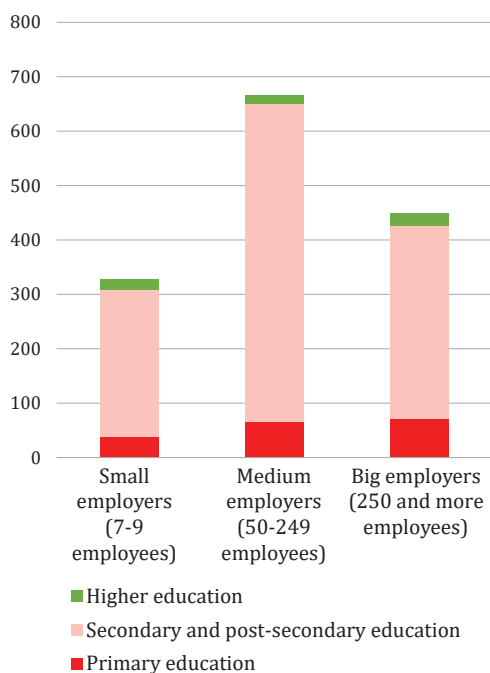
Demand

According to the regional labour demand survey in 2020, the total demand for the Southwest region is 1,448 jobs, which accounts for 36.4% of the unemployed labour force in the municipality of Kichevo.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly one half (46%) of the vacancies will be generated by medium to large employers, additional 31% by big companies and 23% by small employers.

In terms of the demand by education, the demand for workers who completed secondary education (83%) is predominant, while the demand for primary education (12%) and higher education (4%) is relatively low.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers

who completed primary education concerns the group of elementary occupations (predominantly for elementary workers). The demand for workers with secondary education is more heterogeneous in terms of occupations. 36% of the total demand for workers and 78% of the demand for workers with secondary education are for services and sales workers (waiters, salespersons, telephone salespersons, cooks, bartenders, etc.). The next demanded workers with secondary education are plant and machine operators and assemblers. They are followed by occupations of craft and related trade workers, including: sewers, bakers, occupational hygienists, construction workers, reinforcement iron workers, electrical fitters, etc.

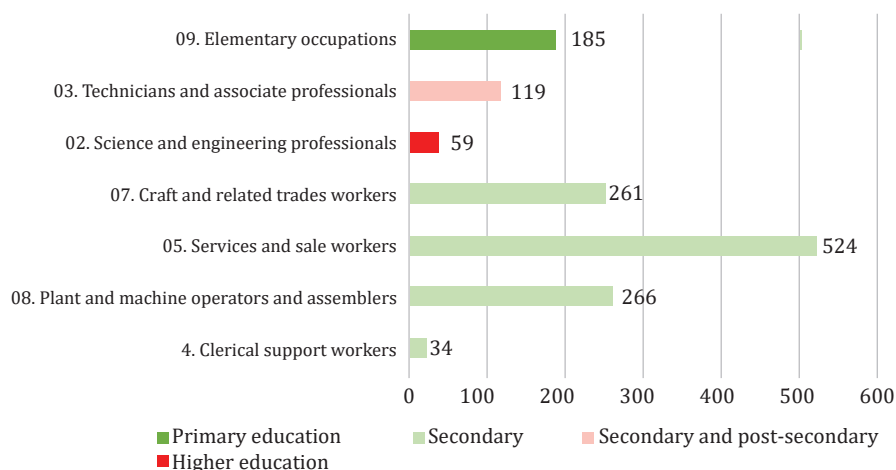
All demanded workers with higher education are in the occupation of technicians and related occupations and are in more heterogeneous occupations, including: mechanical engineers, accountants, engineering

technologists, programmers, electrical design engineers, electrical maintenance engineers, etc.

Labour market gap by education and occupation

The labour market gap in the municipality of Kichevo is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have indicated that the gap is the greatest for primary education. For every worker with primary education required by the companies in the Southwest region, there are 11 unemployed persons in the municipality of Kichevo, while for secondary and post-secondary education this ratio is 1.2, and for higher education it is 7.5.

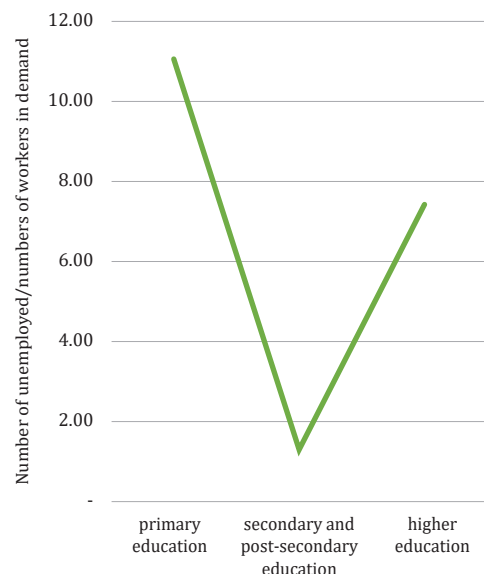
Figure 5: Labour demand by occupation and education for the Southwest region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020 ⁴

⁴ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Kichevo. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green - moderate gap).

The results show that for higher level skills there is a gap for five out of eleven occupations.

For two occupations the gaps are positive and severe, notwithstanding

the educational attainment (teaching professionals, legal, social and cultural professionals). This implies that for those occupations the supply is greater than the demand.

There is a severe surplus gap for occupations of science and engineering associate professionals; health associate professionals; business and administration associate professionals with secondary education, but the magnitude of the gap declines or it transforms into a deficiency gap with the transition to higher education. This indicates the presence of occupations with potential underqualification. There is a moderate deficiency gap for one occupation, information and communications technology professionals and technicians.

There is a deficiency gap for most of the medium skill occupations (seven out of thirteen), which is particularly prominent for persons who have completed secondary education.

This indicates a shortage of workers with secondary education in medium skill occupations. There are severe gaps for secondary education occupations for: personal services workers; sales workers; security guards; and plant and machine operators. There is a moderate deficiency gap with the following occupations: clerks in service activities; accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; building construction workers and related construction workers; precision mechanics, handicraft workers and printers. There is a severe surplus gap for three out of 13 occupations (metal workers, machine assemblers and related occupations; food preservers, wood, textile and leather workers and related occupations; drivers of motor vehicles, mobile plants and deck crew) for persons with primary education. Nevertheless, the gap transforms into a deficiency gap for these occupations with the increase of the educational

attainment. This indicates that the persons with primary education require upskilling.

In occupations at low skill level there is a deficit of elementary workers, refuse collectors and related occupations with primary education. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education. Therefore, the gap in low skill occupations could be reduced if the person without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the municipality of Kichevo has a shortage of workers in different occupations at medium skill level and with secondary education. The surplus gap (when the supply exceeds the demand) occurs for higher skill level occupations, in particular with social sciences and educational occupations. On the other hand, for low skill level occupations there is a deficiency gap for elementary workers, paired with severe surplus gap for persons without any occupation. Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	42	Customer services clerks				
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
	94	Food preparation assistants				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

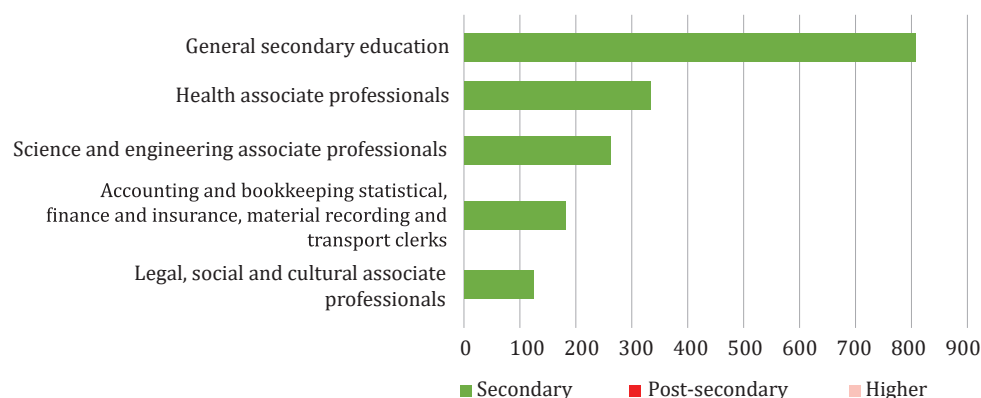
There are two secondary schools and one centre for upskilling and re-skilling in the municipality of Kichevo. In the forthcoming two years these institutions are expected to produce 1,704 profiled professionals for the labour market. One half of the total supply of educational profiles are persons with general secondary education classified as persons without occupation.

These results imply that the municipality of Kichevo has established a modest educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years. The results show that the existing gaps could not be overcome by the current setup of the educational infrastructure. Four of the five occupations produced by the educational institutions in the municipality of Kichevo are surplus occupations. Only the graduates with the educational profile of accounting

and bookkeeping, statistical, finance and insurance, material recording and transport clerks would contribute to bridging the moderate deficiency gap.

However, at the same time the overproduction of profiles could transform it into a moderate surplus gap if the new job creation in this occupation is slower than the production of new trained workers. The issue of the deficit of labour force in occupations for medium skill level and secondary education remains unaddressed. It creates an opportunity to consider the creation of educational profiles for which there is a severe deficit on the labour market. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects. Finally, the upskilling and re-skilling centres are relatively under-represented and these institutions should received incentives to develop programmes that would help produce profiles in the deficient occupations, in particular those at low skill level.

Figure 7: Supply of profiled labour force by educational institutions in the next two years⁶



Source: Educational institutions within the territory of the municipality of Kichevo, data collected by the municipality of Kichevo

⁶The data on dispersed studies on the territory of the municipality of Kichevo have not been delivered by the higher education institutions

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

Code	Occupation/Educational profile	Gaps				Supply from educational institutions		
		Primary	Secondary	Post-secondary	Higher	Secondary	Post-secondary	Higher
21	Science and engineering professionals							
22	Health Professionals							
23	Teaching professionals							
24	Business and administration professionals							
25	Information and communications technology professionals							
26	Legal, social and cultural professionals					124		
31	Science and engineering associate professionals					260		
32	Health associate professionals					335		
34	Legal, social and cultural associate professionals							
35	Information and communications technicians							
33	Business and administration associate professionals							
41	General office clerks and secretaries							
42	Customer services clerks							
43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					181		
44	Other office clerks							
51	Personal services workers							
52	Sales workers							
54	Security guards							
71	Building construction workers and related construction workers							
72	Metal workers, machine assemblers and related occupations							
73	Precision mechanics, handicraft workers and printers							
74	Electrotechnology workers							
75	Food preservers, wood, textile and leather workers and related occupations							
81	Machine and plant operators							
83	Drivers of motor vehicles, mobile plant operators and deck crew							
91	Cleaners and helpers							
92	Agricultural, forestry and fishery labourers							
93	Labourers in mining, construction, manufacturing and transport							
96	Refuse workers and other elementary workers							
94	Food preparation assistants							
	No occupation							
	General secondary education					804		

Source: Employment Service Agency of the Republic of North Macedonia; municipality of Kichevo, newly produced trained workers, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Kichevo has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For each required worker with primary education in the Southwest region, there are 11 unemployed persons in the municipality of Kichevo. For the persons with high level skills, there is a severe surplus gap for the following occupations: teaching professionals; and legal, social and cultural professionals. There is also a severe surplus gap for persons without occupation and those who completed only general secondary education. In all other occupations with surplus gaps, those gaps disappear or are transformed into deficiency gaps with the increase of the educational attainment. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. The municipality of Kichevo has a shortage of workers in different occupations at medium skill level and with secondary education. The educational institutions in the municipality of Kichevo need significant restructuring so as to be able to address the gap in deficient occupations, and some of them are only broadening the gap for the surplus occupations by intensive and mass production of surplus educational profiles.

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Kichevo, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses

and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, operators of automated and semi-automated sewing machines, sewers, waiters, salespersons)
- Upskilling of persons with primary education in the following occupations: food preservers, wood, textile and leather workers and related occupations; drivers of motor vehicles, mobile plants and deck crew
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:
 - o Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - o Work with high skill requirements for persons with high level skills in surplus occupations (learning support for students belonging to the vulnerable groups, support to schools and kindergartens, etc.)

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o The upskilling and re-skilling centres, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work
 - o Secondary vocational schools should improve their cooperation with the private sector, in particular with big companies and foreign investors

located in the municipality of Kichevo, and the technological and industrial development zone in Kichevo (for instance, “Key Safety Systems”, etc.). The cooperation could be promoted through:

- Regular internship for students of secondary vocational schools in relevant companies
- Pilot programmes for deficient occupations (e.g., food preservers, wood, textile and leather workers and related occupations; machine and plant operators)
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Kichevo
 - o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Improving the municipality’s capacity to attract foreign investors in the Technological Industrial Development Zone (TIDZ)
- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the Municipality of Kichevo, regional chambers, secondary schools

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Struga

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the education and skills mismatch on the labour market in the municipality of Struga, such as:

- Skilling the unemployed with no occupation into elementary occupations (skill level 1) (in cooperation with ESARNM)
- Improving the municipality's capacity to attract foreign investors in the Technological Industrial Development Zone (TIDZ)
- Strengthening the cooperation between the secondary vocational school "Niko Nestor" and the business sector, in particular with foreign investors in the municipality of Struga, including piloting dual education in two or three occupations (in line with the strategy of the Ministry of Education and Science)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Struga is facing a lack of job opportunities, underqualification and shortage of medium skilled labour force. For each required worker with primary education in the Southwest region, there are 14 unemployed persons in the municipality of Struga. The supply exceeds the demand for the occupations at high skill levels: teaching professionals; and legal, social and cultural professionals. In all other occupations with surplus gaps, those gaps disappear or are transformed into deficiency gaps with the increase of the educational attainment. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. The educational institutions in the municipality of Struga have a sound foundation to address the deficiency gap; they just have to further align to the requirements of the labour market and link with the business sector, in particular with foreign investors and big companies in the region.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Struga and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Struga is one of the biggest municipalities in the Southwest region with a population of 65,485¹, thus accounting for 30% of the total population in the region. Currently, the labour market in the Southwest region is moderately unfavourable; it is ranked third² in terms of the unemployment rate and third-to-last³ in terms of the employment rate, and fourth in terms of the activity rate as compared to the other seven regions.

In 2019, the unemployment rate of the population aged 15 and above was 24.4% (26.4% for women and 23.1% for men), the employment rate was 43.1%, while the activity rate was 57%. The moderately unfavourable trend is also reflected in the average gross salary: MKD 33,099, (Regions in the Republic of North Macedonia, SSO, 2020). Nevertheless, the region is favourably positioned, has a great and underutilized hydro potential, as well as development tourism in the Lake Ohrid area. Furthermore, the region is attractive to foreign investments and several big companies are located in the immediate vicinity of Struga, thus contributing significantly to the employment in the region, in general, and in the municipality of Struga, in particular.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Northeast region (33%) and the Polog region (28.5%)

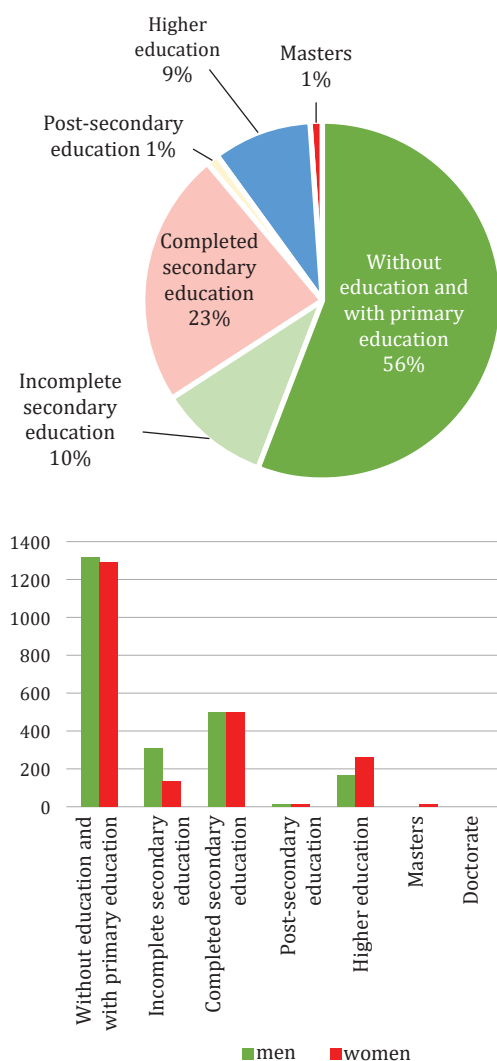
³After the Southeast region (63.3%)

STRUCTURE OF THE LABOUR MARKET

Supply

Women and men have equal shares in the the total registered unemployed who were active job seekers in the municipality of Struga in 2020. In terms of education, persons with lower educational attainment are predominant. More than one half (60%) of the unemployed were persons with primary or no education (56%) and incomplete secondary education (56%) and incomplete secondary education (Figure 1).

Figure 1: Unemployed persons in the municipality of Struga, by educational attainment

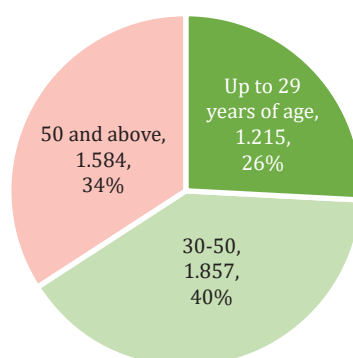


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 30-50 (40%), followed by the unemployed aged 50 or more (34%) (Figure 2). The relatively low share of young people in the total structure (26%) is probably owing to the late

activation on the labour market due to education, as well as to the proportionally lower share of young people in the population.

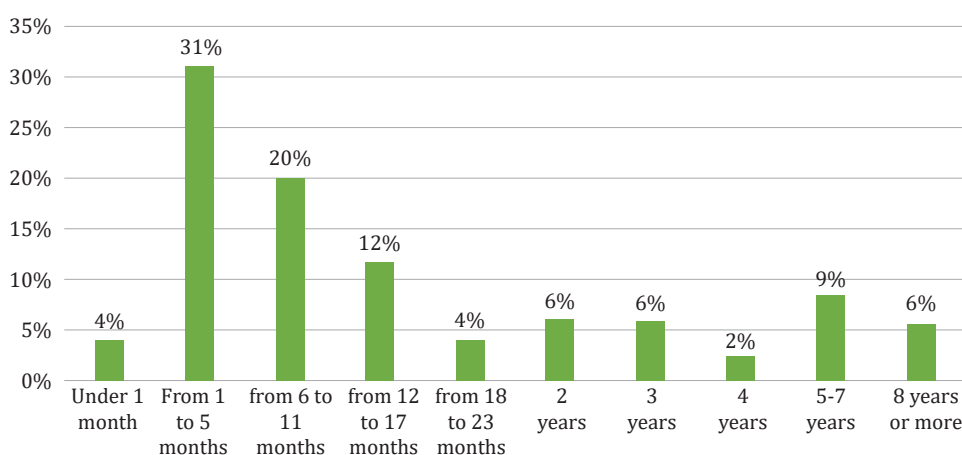
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

55% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc.

Figure 3: Unemployed in the municipality of Struga, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

Although such structure may appear encouraging, one third of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Struga.

According to the Employment Service Agency, this category includes 2,886 persons, which represents a share of 62% in the total number of active job seekers. 74% of the passive job seekers have completed primary education or no education, while additional eight per cent have incomplete secondary education. This indicates that these persons are mostly with low educational attainment. Only three per cent of this group have completed higher education. The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

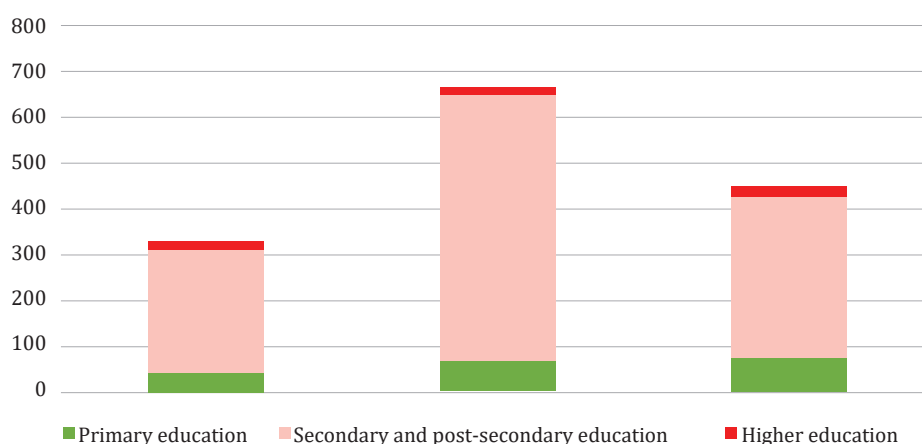
Demand

According to the regional labour demand survey in 2020, the total demand for the Southwest region is 1,448 jobs, which accounts for 32% of the unemployed labour force in the municipality of Struga.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly one half (46%) of the vacancies will be generated by medium to large employers, additional 31% by big companies and 23% by small employers.

In terms of the demand by education, the demand for workers who completed secondary education (83%) is predominant, while the demand for primary education (12%) and higher education (4%) is relatively low.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers). The demand for workers with secondary education is more heterogeneous in terms of occupations. 36% of the total demand for workers and 78% of the demand for workers with secondary education are for services and sales workers (waiters, salespersons, telephone salespersons, cooks, bartenders, etc.). The next demanded workers with secondary education are plant and machine operators and

assemblers. They are followed by occupations of craft and related trade workers, including: sewers, bakers, occupational hygienists, construction workers, reinforcement iron workers, electrical fitters, etc.

All demanded workers with higher education are in the occupation of technicians and related occupations and are in more heterogeneous occupations, including: mechanical engineers, accountants, engineering technologists, programmers, electrical design engineers, electrical maintenance engineers, etc.

Labour market gap by education and occupation

The labour market gap in the municipality of Struga is identified by cross-referencing the labour supply and demand, taking into

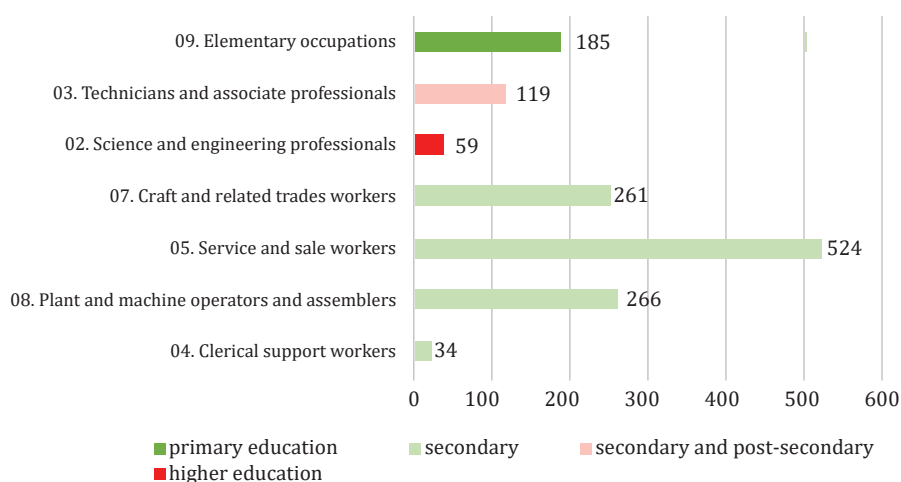
account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have indicated that the gap is the greatest for primary education. For every worker with primary education required by the companies in the Southwest region, there are 14 unemployed persons in the municipality of Struga, while for secondary and post-secondary education this ratio is 1.3, and for higher education it is 8.3.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

Figure 5: Labour demand by occupation and education for the Southwest region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020⁴

⁴ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Struga. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red - severe gap, light red – moderate gap). Light yellow indicates that the matching of the supply and demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green - severe gap, light green – moderate gap).

The results show that for higher level skills there is a gap for five out of eleven occupations. For two occupations the gap is positive and severe, notwithstanding the educational attainment (teaching professionals; and legal, social and cultural professionals). This implies that for those occupations the supply is greater than the demand. There is a severe surplus gap for three occupations: science and engineering associate professionals; health associate professionals; and business and administration associate professionals with secondary education, but the magnitude of the gap declines or it transforms into a deficiency gap with the transition to higher education. This indicates the presence of occupations with potential underqualification. There

is a moderate deficiency gap for one occupation, health professionals.

For occupations at medium skill level there is a potential underqualification and a prevailing deficiency gap for persons who completed secondary education. There is a deficiency gap for ten out of fourteen occupations with secondary education. For four of those occupations the gap is severe (personal services workers; sales workers; food preservers, wood, textile and leather workers and related occupations; and plant and machine operators). This indicates a shortage of workers with secondary education in medium skill occupations.

Within these occupations there is a shortage of workers for: operators of automated and semi-automated sewing machines, sewers, waiters, salespersons, telephone salespersons, cooks, bartenders. There is a moderate deficiency gap for the following occupations: customer services clerks; accounting and bookkeeping clerks, statistical, finance and insurance clerks, material recording and transport clerks; personal care workers and related occupations; security guards; building construction workers and related construction workers; and drivers of motor vehicles, mobile plant operators and deck crew. There is a surplus gap for persons with primary education. However, with almost all occupations facing a surplus gap, its magnitude decreases or it transforms into a deficiency gap with the increase in educational attainment.

This indicates that the persons with primary education require upskilling. In occupations at low skill level there is a deficit of elementary workers, refuse collectors and related occupations; food preparation

assistants; and cleaners and helpers. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education.

Therefore, the gap in low skill occupations could be reduced if the persons without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or re-skilling measures for persons with general secondary education.

The overall conclusion is that the municipality of Struga has a lack of job creation, underqualification and shortage of workers in different occupations at medium skill level and with secondary education. Surplus gap (when the supply exceeds the demand) occurs for higher skill level occupations, in particular with social sciences and educational occupations. On the other hand, for occupations at low skill level there is a deficiency gap for elementary workers, together with a severe surplus gap for persons without occupation.

Nevertheless, when compared to occupations at higher skill levels, the educational gap is more present with occupations at medium and low skill levels. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	42	Customer services clerks				
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	53	Personal care workers and related occupations				
	54	Security guards				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
	94	Food preparation assistants				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are two secondary schools and two institutions validating adult learning. In the forthcoming two years these institutions are expected to produce 1,016 profiled professionals for the labour market. One third of the total supply of educational profiles are persons with general secondary education classified as persons without occupation. 38 per cent are various profiles in the occupation of science and engineering associate professionals (civil engineering technicians, construction technicians, surveying technicians, electrical engineering technicians, textile and leather industry technicians, etc.). They are followed by occupations of accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; and health technicians and assistants.

These results imply that the municipality of Struga has established an educational infrastructure to

produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next two years.

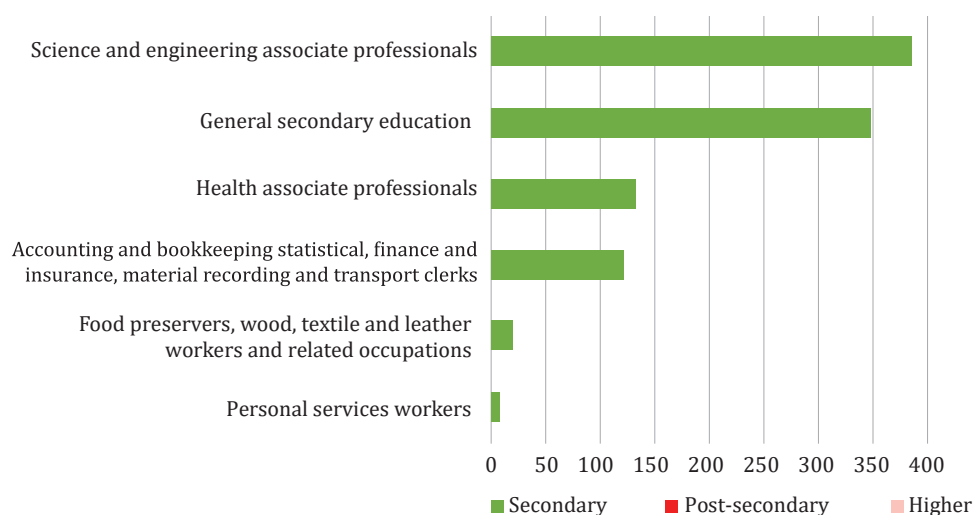
The results indicate that the moderate gap would be bridged with the current setup of the educational infrastructure. Three of the six occupations produced by the educational institutions in the municipality of Struga are occupations with a deficiency gap, and thus they would contribute to reducing such gap. For two of the occupations (science and engineering associate professionals; and health technicians and assistants) there is a severe surplus gap for persons with secondary education.

However, for the produced profiles – technicians this gap disappears with the increase of the educational attainment, while for health technicians and assistants there is also a higher mobility. Therefore, overproduction of the profiles for both

occupations should not necessarily present a serious threat. Nevertheless, concrete steps should be taken to match adequately the produced profiles with the companies in the region and direct them appropriately to upskilling. The issue of the deficit of labour force in occupations for medium skill level and secondary education remains unaddressed. This leaves room for considering whether to introduce new educational profiles that are severely deficient on the labour market. In terms of profiles with general secondary education, the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with only general secondary education, they would diminish their prospects.

Finally, the municipality should consider establishing an upskilling and re-skilling centre, which should then be stimulated to develop programmes that would help produce profiles in the deficient occupations, in particular those at low skill level.

Figure 7: Supply of profiled labour force by educational institutions in the next two years⁶



Source: Educational institutions within the territory of the municipality of Struga, data collected by the municipality of Struga

⁶The data on dispersed studies on the territory of the municipality of Struga have not been delivered by the higher education institutions

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

			Labour market gap				Profiles produced by educational institutions
Skill level	Code	Occupation/Educational profile	Primary	Secondary	Post-secondary	Higher	Secondary
High skill level	21	Science and engineering professionals					
	22	Health Professionals					
	23	Teaching professionals					
	24	Business and administration professionals					
	25	Information and communications technology professionals					
	26	Legal, social and cultural professionals					
	31	Science and engineering associate professionals					386
	32	Health associate professionals					133
	35	Information and communications technicians					
	33	Business and administration associate professionals					
Medium skill level	41	General office clerks and secretaries					
	42	Customer services clerks					
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					122
	51	Personal services workers					8
	52	Sales workers					
	54	Security guards					
	71	Building construction workers and related construction workers					
	72	Metal workers, machine assemblers and related occupations					
Low skill level	73	Precision mechanics, handicraft workers and printers					
	74	Electrotechnology workers					
	75	Food preservers, wood, textile and leather workers and related occupations					19
	81	Machine and plant operators					
	83	Drivers of motor vehicles, mobile plant operators and deck crew					
	91	Cleaners and helpers					
	92	Agricultural, forestry and fishery labourers					
	93	Labourers in mining, construction, manufacturing and transport					
	96	Refuse workers and other elementary workers					
	94	Food preparation assistants					
		No occupation					
		General secondary education					348

Source: Employment Service Agency of the Republic of North Macedonia; municipality of Struga, newly produced trained workers, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Struga has shown that the greatest education-to-occupation gap is the one for the persons with primary education. For every worker with primary education required by the companies in the Southwest region, there are 14 unemployed persons in the municipality of Struga, while for secondary and post-secondary education this ratio is more balanced at 1.3, while for higher education it is 8.3. This indicates that the problem with the lack of job creation is alarming. For the persons with high level skills, there is a severe surplus gap for the following occupations: teaching professionals; and legal, social and cultural professionals. There is also a severe surplus gap for persons without occupation who completed only general secondary education.

In all other occupations with surplus gaps, those gaps disappear or are transformed into deficiency gaps with the increase of the educational attainment. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. The municipality of Struga has a shortage of workers in different occupations at medium skill level and with secondary education. The educational institutions in the municipality of Struga have a sound foundation to address the deficiency gap; they just have to further align to the requirements of the labour market and link with the business sector, in particular with foreign investors and big companies in the region.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Struga, in particular:

Training and upskilling

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling

and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, operators of automated and semi-automated sewing machines, sewers, waiters, salespersons, telephone salespersons)
- Upskilling of persons with primary education in the following occupations: Food preservers, wood, textile and leather workers and related occupations; and machine and plant operators

Active labour market measures

- Active measures that stimulate formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/ education profiles with significant surplus gap:
 - o Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - o Work with high skill requirements for persons with high level skills in surplus occupations (learning support for students belonging to the vulnerable groups, support to schools and kindergartens, etc.)

For educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates
- For instance, the deficiency gap for personal services workers and food preservers, wood,

textile and leather workers and related occupations (waiters, cooks, bakers) could be mitigated by the production of graduates of the already existing profiles at the secondary school “Niko Nestor” through upskilling to secondary education the unemployed persons in those occupations who have completed only primary education

o To consider establishing an upskilling and re-skilling centre, which, in cooperation with ESARNM, would carry out the upskilling of persons in deficient occupations

o The secondary vocational school “Niko Nestor” should enhance its cooperation with the private sector, in particular the big companies and foreign investors located in the municipality of Struga, the technological industrial development zone in Struga and Kosel, Ohrid (e.g., “ODV Electric”, “Kostal”, “LTH Castings” etc.). The cooperation could be promoted through:

- Regular internship for students of the secondary vocational school “Niko Nestor” in relevant companies
- Pilot programmes for deficient occupations (e.g., food preservers, wood, textile and leather workers and related occupations; and machine and plant operators) in cooperation with foreign investors

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Struga

o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical

skills, critical thinking, etc.)

o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Improving the municipality's capacity to attract foreign investors in the Technological Industrial Development Zone (TIDZ)
- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads

For the municipality of Struga

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications
- To reduce the registration requirements and to simplify the administrative procedure for

business legalization

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

- To decrease the parafiscal taxes for the business sector

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



Labour market diagnostics in the municipality of Ohrid

Policy brief

The present policy brief recommends undertaking concrete actions to create new jobs and reduce the education and skills mismatch on the labour market in the municipality of Ohrid, such as:

- Skilling the unemployed with no occupation into elementary occupations (in cooperation with ESARNM)

- Improving the municipality's capacity to attract foreign investors in the Technological Industrial Development Zone (TIDZ)

- Strengthening the cooperation between the secondary vocational schools and the business sector, in particular with foreign investors in the municipality of Ohrid, including piloting dual education in two or three occupations (in line with the strategy of the Ministry of Education and Science) and the hospitality sector

- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Ohrid is facing a lack of job opportunities, under-qualification and shortage of medium skilled labour force. For each required worker with primary education in the Southwest region, there are 9.4 unemployed persons in the municipality of Ohrid. This gap is the widest for persons with higher education. For the persons with high level skills, there is a severe surplus gap for the following occupations: Teaching professionals, business and administration professionals, legal, social and cultural professionals, and business and administrative associates. There is deficiency gap of greater demand than supply only for elementary workers, refuse collectors and related occupations with primary education and food preservers, wood, textile, leather workers and related occupations with secondary education. The educational institutions in the municipality of Ohrid have a sound foundation to address the deficiency gap; they just have to further align to the requirements of the labour market and link with the business sector, in particular with foreign investors and big companies in the region.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Ohrid and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Ohrid is one of the biggest municipalities in the Southwest region with a population of 51.855¹, thus accounting for 24% of the total population in the region. Currently, the labour market in the Southwest region is moderately unfavourable; it is ranked third² in terms of the unemployment rate and third-to-last³ in terms of the

employment rate, and fourth in terms of the activity rate as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 24% (24.5% for men and 23.2% for women), the employment rate was 42.1%, while the activity rate was 55.4%. The moderately unfavourable trend is also reflected in the average gross salary: MKD 36.469, (Regions in the Republic of North Macedonia, SSO, 2021). Nevertheless, the region is favourably positioned, has a great and underutilized hydro potential, as well as development tourism in the Lake Ohrid area. Furthermore, the region is attractive to foreign investments and several big companies are located in the immediate vicinity of Ohrid, thus contributing significantly to the employment in the region, in general, and in the municipality of Ohrid, in particular.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Northeast region (32.4 %) and after the Polog region (24.8 %)

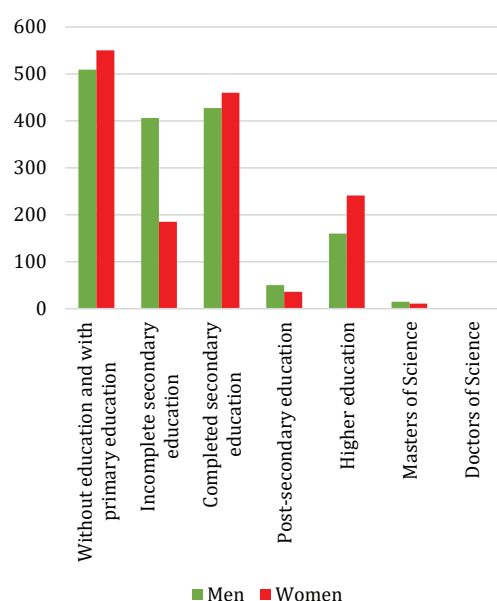
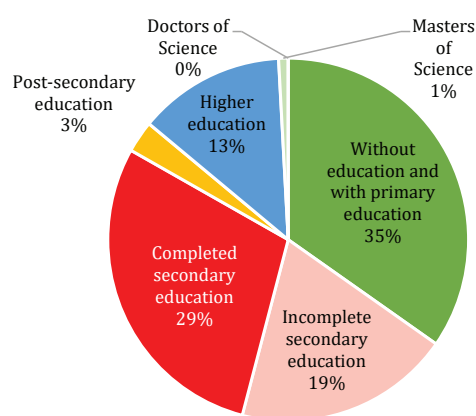
³After the Southeast region (62.5 %), Vardar region (53.7 %) and Eastern region (53.1 %)

STRUCTURE OF THE LABOUR MARKET

Supply

Women and men have equal shares in the total registered unemployed who were active job seekers in the municipality of Ohrid in 2020 (51% men, and 49% women). In terms of education, persons with lower educational attainment are predominant. More than one half (54%) of the unemployed were persons with primary or no education (35%) and incomplete secondary education (Figure 1). However, 13% are with higher education.

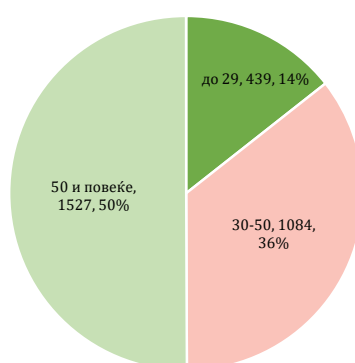
Figure 1: Unemployed persons in the municipality of Ohrid, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Half of the unemployed are at the age of 50 and above, followed by the unemployed between 30 to 50 years of age (36%), and lowest share of young unemployed up to the age of 29 (14%) (Figure 2). The relatively low share of young people in the overall structure is probably due to the delayed activation on the labour market, as a result of education, also the lower coverage of young population.

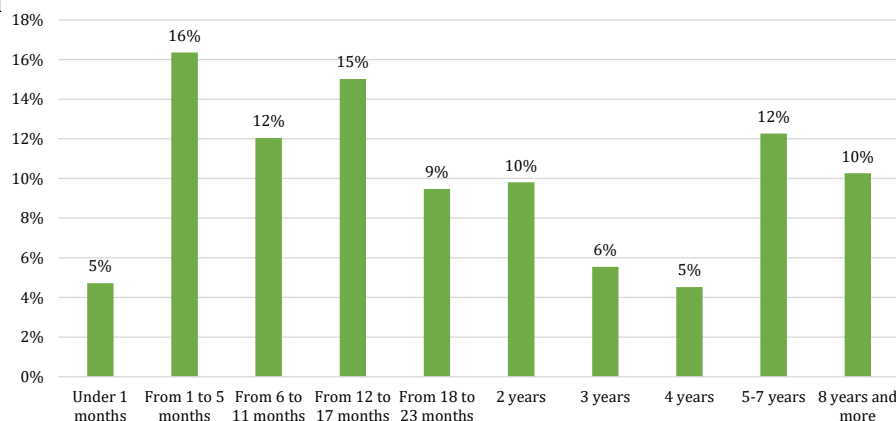
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

36% of the unemployed wait for a job up to a year, most of them from one up to five months (Figure 3). Probably the individual characteristics of this category unemployed (educational attainment, educational profile, age) are better suited to the labour market demand when compared with those with unemployment spells exceeding one

Figure 3: Unemployed in the municipality of Ohrid, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Yet, most of the unemployed, 40%, wait for employment from one to three years, and the percentage is decreasing to 24% with persons waiting for employment more than three years. This indicates probable gaps due to the mismatch between the supply and the demand on the labour market and structural unemployment for persons waiting for employment more than three years.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Ohrid. According to the Employment Service Agency, this category includes 1.645 persons, which represents a share of 54% in the total number of active job seekers. 36% of the passive job seekers have no education or completed primary education, while additional 22% of them have incomplete secondary education. This indicates that, in general, these persons are with low education attainment. Nevertheless, the share of persons with completed higher education is significant (10%).

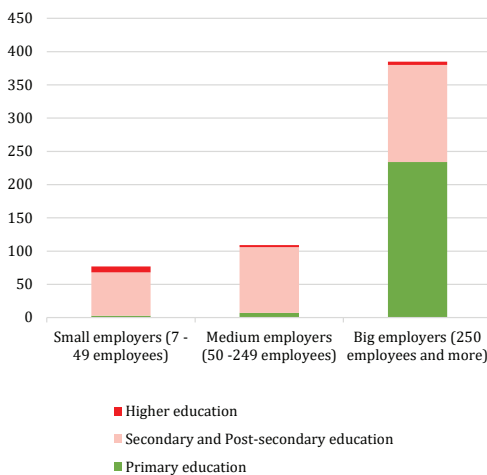
The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Southwest region is 571 jobs, which accounts for 19% of the unemployed labour force in the municipality of Ohrid.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly two thirds (67%) of the vacancies will be generated by large employers, additional 19% by medium to big companies and 13% by small employers. This structure may be due to the presence of foreign investments in the region, mainly big companies. In terms of the demand by education, the demand for workers who completed secondary education (54%) is predominant, while the demand for primary education (43%) and higher education (3%) is relatively low.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

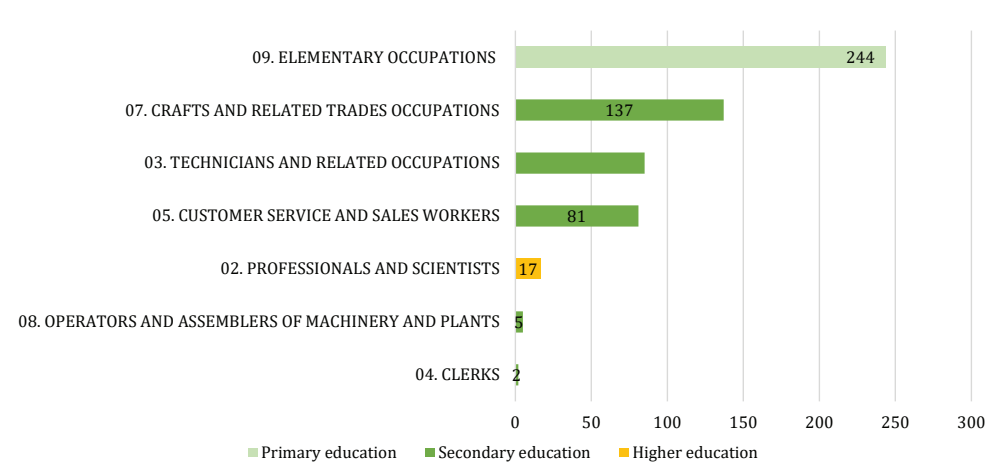
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers). The demand for workers with secondary education is more heterogeneous in terms of occupations. 24 per cent of the total demand for workers and 44% of the demand for workers with secondary education is for crafts and related

trades workers, including: Sewers, locksmiths, construction workers. 15% of the demand falls within technical and related occupations for workers with secondary education, mainly, mechanical technicians and partially for construction technicians, data processing administrators, merchandisers, etc. They are followed by customer services and sale (waiters, sales workers, cooks, bar tenders, etc.). All demanded workers with higher education are in the occupation of technicians and related occupations and are in more heterogeneous occupations, including: Mechanical engineers, construction engineer, medical doctors, nursing professionals, architects, economists, geodetic engineer, etc.

Labour market gap by education and occupation

The labour market gap in the municipality of Ohrid is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in

Figure 5: Labour demand by occupation and education for the Southwest region

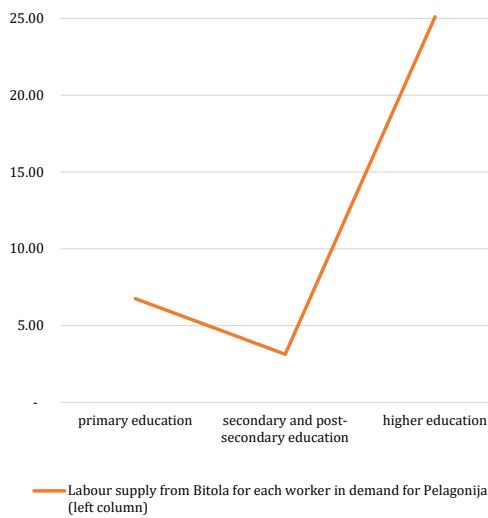


Source: – ESARNM, Regional survey for the need of skills on the labor market in RNM for 2021¹

³ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

demand, according to the educational attainment. The results have indicated that the gap is the greatest for higher education. For every worker with primary education required by the companies in the Southwest region, there are 25 unemployed persons in the municipality of Ohrid, while for secondary and post-secondary education this ratio is 3.1, and for primary education it is 6.7.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply.

Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Ohrid. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. The gap where the supply is greater than the demand is marked in red (dark red – severe gap, light red - moderate gap). Light yellow indicates that the matching of the supply and

demand is nearly complete and there is no gap. The green shading marks a deficiency gap, where the demand for jobs is greater than the supply (dark green – severe gap, light green - moderate gap).

The results indicate that in the Municipality of Ohrid there are predominantly surplus gaps (when the supply is greater than the demand). In high skills level, there is a gap in seven out of ten occupations. Out of these, only in one occupation, associate professionals in science and engineering, there is a moderate deficiency gap, while in the rest of the occupations there is surplus gap. For four occupations the gap is positive and severe, regardless of the educational attainment (teaching professionals; business and administration associates; and legal, social and cultural professionals). This situation may be due to the insufficient vacancies for these occupations. In two occupations there is a moderate sufficiency gap, for: Health associate professionals; and information and communication technology technicians. In the occupation associate professionals for science and engineering, the moderate surplus gap for the persons with secondary education converts into a moderately deficiency gap with the transition to higher education. This indicates the presence of occupations with potential underqualification.

In the occupations with medium skills there is potential mismatch of the supply and demand, although there is a significant presence of severe sufficiency gaps. In three out of nine occupations with secondary education there is a severe sufficiency gap, whose size changes or transitions into deficiency, depending on education and occupation. Thus, for the occupation personal services workers there is no gap for persons with primary education and it transitions into

severely sufficient gap for persons with secondary education. Similarly, for the occupation machinery and plant operators, the size of the sufficiency gap increases from moderate to severely sufficient. In two occupations (metal workers, machinery assemblers and related occupations; and electrotechnology workers) the gap is severely sufficient, regardless of education attainment. In the case of food preservers, woodwork, textile, leather and related occupations, the gap transitions from severely sufficient into severely deficient with the increase of the level of education from primary to secondary. This indicates that the persons with primary education require upskilling. There is a moderate deficiency gap for the following occupations: Sellers and building construction workers and related construction workers.

In occupations at low skill level there is a deficit of elementary workers, refuse collectors and related occupations with primary education. At the same time, there is greater supply than demand for elementary workers, labourers in mining, construction, manufacturing and transportation; elementary workers in agriculture, forestry and fisheries, and operators of machinery and plants. On the other hand, there is a surplus of unemployed workforce with persons without occupations and persons with general secondary education. Therefore, the gap in low skill occupations could be reduced if the persons without occupation are upskilled to the level of elementary workers and are adequately matched to the demand for such occupation. It would be necessary to undertake upskilling and/or reskilling measures for persons with general secondary education.

The overall conclusion is the municipality of Ohrid has a significant job creation deficit. The sufficiency gap (when the supply

is greater than the demand) is predominant and occurs regardless of the level of skills or education attainment. Besides the gap in terms of formal education, the quality of

the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the

companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas.⁵

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	35	Information and communications technicians				
	33	Business and Administration associate professionals				
Medium skill level	51	Personal services workers				
	52	Sales workers				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
Low skill level	81	Machine and Plant operators				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery elementary workers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

Significant surplus Surplus Adequately matched Deficit Significant deficit

⁴World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Educational profiling as a factor in bridging or broadening the gaps

There are four secondary schools in the Municipality of Ohrid, one University with five schools and one upskilling institution. In the forthcoming two years these institutions are expected to produce 2.455 profiled professionals for the labour market. One third of the total supply of educational profiles are persons with general secondary education classified as persons without occupation. 31% are profiles with secondary education in the occupation associate professionals for science and engineering (electrical technicians, mechanical technicians and traffic technicians). 13% are profiles in the occupation business and administrative associate professionals with secondary education. Followed by similar profiles with higher education in the occupation science and engineering professionals (engineers for computer systems, visualization, digital multimedia and animation; for computer science and engineering; communication networks and security; and machine intelligence and robotics). The profiles from the following occupations are represented to a

smaller extent: Health associate professionals, sellers and personal services workers.

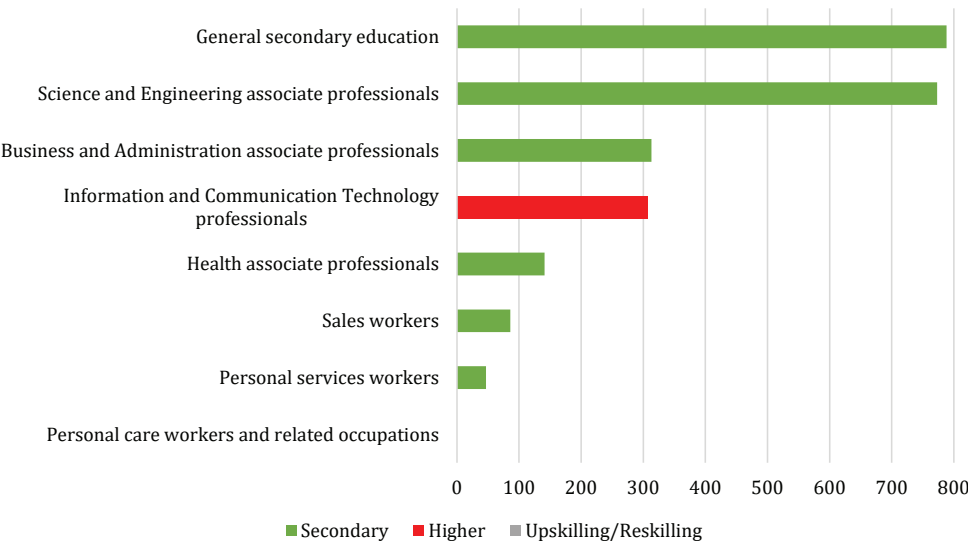
These results imply that the municipality of Ohrid has established an educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles are matching the demand on the labour market, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years.

The results indicate that the moderate gap would be bridged with the current setup of the educational infrastructure. One of the seven occupations (sellers) produced by the educational institutions in the municipality of Ohrid are occupations with a deficiency gap, and thus they would contribute to reducing such gap. In one occupation, information and communication technology professionals, produced by the higher education institutions within the University of Information Science and Technology “St. Apostle Paul”, the produced profiles correspond to the demand. In addition, the profiles are from the occupations with high mobility and

the demand on a national level. Thus, generating this type of profiles should be further encouraged.

In two occupations (business and administrative associate professionals and personal services workers), there is a severe sufficiency gap for the persons with secondary education. In the economic and legal profiles and trade-economics technicians, one should be careful in producing such profiles due to the generally high supply of this profile on a national level. While, in the hospitality and tourist occupations (waiters and cooks), profiling is not problematic considering that Ohrid is the main tourist centre, and the severe sufficiency gap may be due to the effects of the pandemic when hospitality was severely affected sector. For the generated profiles – associate professionals for science and engineering, this gap disappears with increase of education. The Municipality of Ohrid has higher education institutions which may provide additional education for the profiles with secondary education in this occupation, and the same infrastructure should be used to provide adequate guidance of these profiles. In the case of health associate professionals, there is a high mobility in this occupation. Therefore, overproduction of the profiles for both occupations should not necessarily present a serious threat. Nevertheless, concrete steps should be taken to match adequately the produced profiles with the companies in the region and direct them appropriately to upskilling. The issue of the deficit of labour force in occupations for medium skill level and secondary education (building construction workers and food preservers, wood, textile, leather workers and related occupations) remains unaddressed. This leaves room for considering whether to introduce new educational profiles that are severely deficient on the labour market. In terms of profiles with general secondary education,

Figure 7: Supply of profiled labour force by educational institutions in the next four years⁵



Source: Ministry of Education and Science of the Republic of North Macedonia

the labour market opportunities would depend solely on whether these persons would upskill to deficient or surplus occupations, but in any case if they remain with

only general secondary education, they would diminish their prospects. Finally, the municipality should consider establishing an upskilling and re-skilling centre, which should

then be stimulated to develop programmes that would help produce profiles in the deficient occupations, in particular those at low skill level.

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

skill level	Code	Occupation/profile	Labour market gap				Profiles produced by educational institutions	
			Pri- mary	Sec- ond- ary	Post-sec- ondary	high- er	Second- ary	high- er
High skill level	21	Science and engineering professionals						
	22	Health professionals						
	23	Teaching professionals						
	24	Business and administration professionals						
	25	Information and communications technology professionals						307
	26	Legal, social and cultural professionals						
	31	Science and engineering associate professionals					773	
	32	Health associate professionals					141	
	35	Information and communications technicians						
	33	Business and Administration associate professionals					313	
Medium skill level	51	Personal services workers					47	
	52	Sales workers					86	
	54	Security guards						
	61	Market-oriented skilled agricultural workers						
	71	building construction workers and related construction workers						
	72	Metal workers, machine assemblers and related occupations						
	73	Precision mechanics, handicraft workers and printers						
	74	Electrotechnology workers						
	75	food preservers, wood, textile and leather workers and related occupations						
Low skill level	81	Machine and Plant operators						
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew						
	91	Cleaners and helpers						
	92	Agricultural, forestry and fishery elementary workers						
	93	Labourers in mining, construction, manufacturing and transport						
	94	Food preparation assistants						
	96	Refuse workers and other elementary workers						
		No occupation						
		General secondary education					788	

Source: Employment Service Agency of the Republic of North Macedonia, Ministry of Education and Science of the Republic of North Macedonia, calculations by the author

Caption:

Significant surplus Surplus Adequately matched Deficit Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Ohrid has shown a significant deficit in job creation. The sufficiency gap (when the supply is greater than the demand) is predominant and occurs regardless of the level of skills or education attainment. For every worker required by the companies in the Southeast region, there are 9.4 unemployed persons in the municipality of Ohrid. This gap is the widest for persons with higher education. For the persons with high level skills, there is a severe surplus gap for the following occupations: Teaching professionals, business and administration professionals, legal, social and cultural professionals, and business and administrative associates. There is deficiency gap of greater demand than supply only for elementary workers, refuse collectors and related occupations with primary education and food preservers, wood, textile, leather workers and related occupations with secondary education.

RECOMMENDATIONS

Recommendations to overcome the problem with the shortage of qualified labour for the Employment Centre and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Ohrid, in particular:

Training and upskilling

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling/re-skilling of persons who completed general secondary education in some of the deficient occupations (for instance, sewers, sales workers, construction workers, reinforced concrete placers)
- Upskilling of persons with primary education in the following occupations: food preservers, wood, textile and leather workers and related occupations; and personal services workers

Active labour market measures

- Active measures that stimulation formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:
 - Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - Work with advanced skills for persons with advanced skills in sufficient occupations (learning support for students from vulnerable categories, support in the schools and kindergartens, etc.).

For educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to produce more graduates. For example, the deficiency gap of sales workers may be mitigated by producing

profiles by the municipal secondary school “St. Cyril and Methodius”, through narrowing the already existing profile for trade and economic technician into sales worker. Furthermore, through upskilling to secondary education for the unemployed persons in this occupation, and with completed primary education

- To consider establishing an upskilling and re-skilling centre, which, in cooperation with ESARNM, would carry out the upskilling of persons in deficient occupations
- The vocational secondary school MEMS “St. Naum Ohridski” to improve cooperation with the private sector, especially big companies and foreign investors located in and near the Municipality of Ohrid, TIDZ in Struga and Kosel in Ohrid (for example, “ODV Electric”, “Kostal”, LTH Castings”, etc). The cooperation could be promoted through:
 - Regular internships for the students from the secondary vocational school “St. Naum Ohridski” in adequate companies
 - Pilot programmes for deficient occupations (e.g., food preservers, wood, textile and leather workers and related occupations; and machine and plant operators) in cooperation with foreign investors
- The secondary vocational school for hospitality and tourism “Vancho Pitosheski” should improve cooperation with the private hospitality sector.
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Ohrid
- The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the business sector

- Increase attractiveness of the municipality in order to attract foreign investors in the Trade Industrial Development zone, taking into consideration the current profiled workforce.

- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- When recruiting elementary workers, to make persons without occupation eligible to apply to the vacancy ads
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

For the municipality of Ohrid

- To reduce the registration requirements and to simplify the administrative procedure for business legalization

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways
- To decrease the parafiscal taxes for the business sector

For the State Statistical Office

- To collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)



North-East Region

Labour market diagnostics in the municipality of Kumanovo

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the shortage of jobs and the education and skills mismatch on the labour market in the municipality of Kumanovo, such as:

- Improving the municipality's capacity to attract big business entities and create new jobs
- Active labour market measures for formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/ education profiles with significant surplus gap
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Kumanovo has a significant shortage of newly created jobs and prominent surplus gaps in high skill occupations. For every worker required by the companies in the Southeast region, there are 12 unemployed persons in the municipality of Kumanovo. The gap is the greatest for higher education, where this ratio is 36, followed by primary education with a ratio of 18, while the gap is the narrowest for the secondary education with eight unemployed persons for each job created. The municipality of Kumanovo is facing a pressing shortage of newly created jobs.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Kumanovo and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Kumanovo is the biggest municipality in the Southeast region with population of 108.942¹, thus accounting for 62% of the total population in the Southeast region. Currently, the labour market in the Southeast region is unfavourable; the region has the highest unemployment rate, the lowest employment rate and it is ranked third-

to-last² in terms of the activity rate, as compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 33% (32.2% for women and 33.5% for men), the employment rate was 37%, while the activity rate was 55.2%. Furthermore, such unfavourable trend is reflected in the average gross salary: at MKD 29,131 it is the lowest one when compared to the other seven regions (Regions in the Republic of North Macedonia, SSO, 2020). The region is characteristic for the mountainous areas, favourable for the development of animal husbandry and the dairy industry. Furthermore, there are several sites of lead and zinc ore deposits and exploitation plants in the region.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

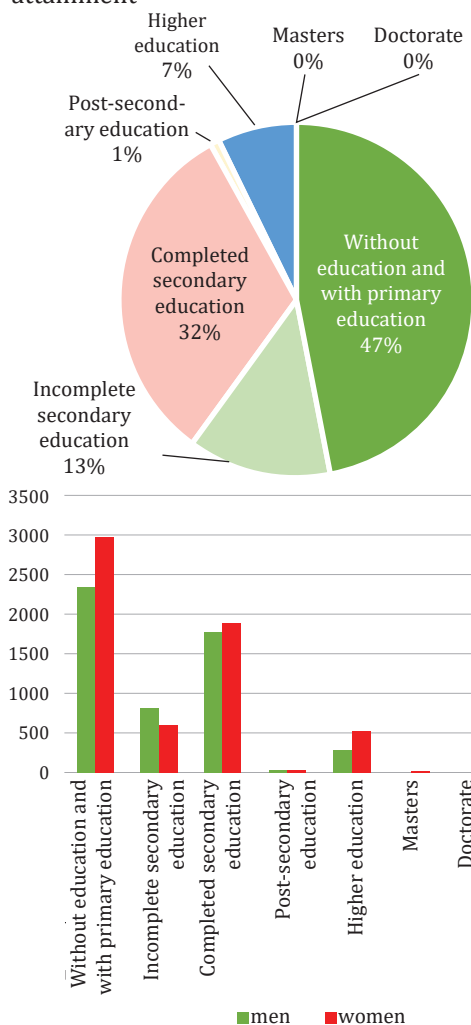
²After the Polog region (51.9%) and the Skopje region (53.5%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Kumanovo in 2020, 53% were women and 47% were men. In terms of education, persons with lower educational attainment are predominant. More than one half (60%) of the unemployed were persons with primary or no education (47%) and incomplete secondary education (47%) and incomplete secondary education (Figure 1).

Figure 1: Unemployed persons in the municipality of Kumanovo, by educational attainment

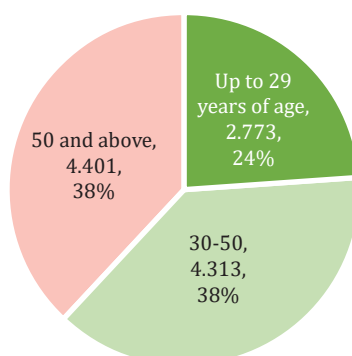


Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are over 30 years of age, and these persons and the group aged 50 or more are equally represented (38%) (Figure 2). The relatively low share of young people in the total structure (24%) is probably

owing to the late activation on the labour market due to education, as well as to the proportionally lower share of young people in the population.

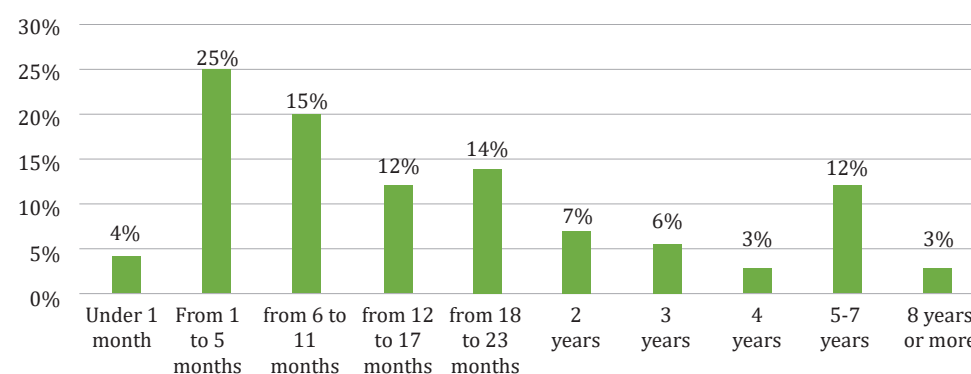
Figure 2: Structure of unemployed by age



Source: Employment Service Agency of the Republic of North Macedonia

44% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc. Although such structure may appear encouraging, one third of the unemployed are waiting for employment for more than two years, which

Figure 3: Unemployed in the municipality of Kumanovo, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, the persons registered as passive job seekers also have a significant share in the unemployed in the municipality of Kumanovo.

According to the Employment Service Agency, this category includes 6,187 persons, which represents a share of approximately one half of the total number of active job seekers.

The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

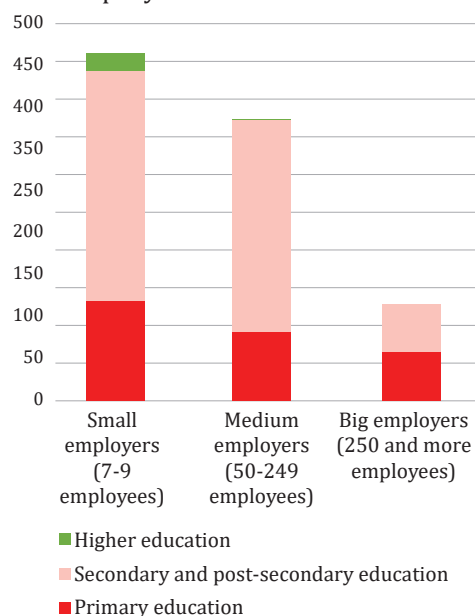
Demand

According to the regional labour demand survey in 2020, the total demand for the Southeast region is 972 jobs, which accounts for 8.5% of the unemployed labour force in the municipality of Kumanovo. This rate is very low and it indicates a significantly unfavourable labour market situation in the municipality of Kumanovo. The low rate is a result of the insufficient number of newly created jobs. It may be a result of the low potential for job creation of

the business entities; insufficient number of businesses, in particular big companies with more than 250 employees (Regions in the Republic of North Macedonia, SSO, 2020)³; but also a potential greater presence of the informal economy.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly one half of the vacancies will be generated by small employers, additional 39% by medium to big employers and only 13% by big employers. In terms of the demand by education, the demand for workers who completed secondary education (67%) and primary education (37%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers, tobacco preparers and labourers in loading, unloading and

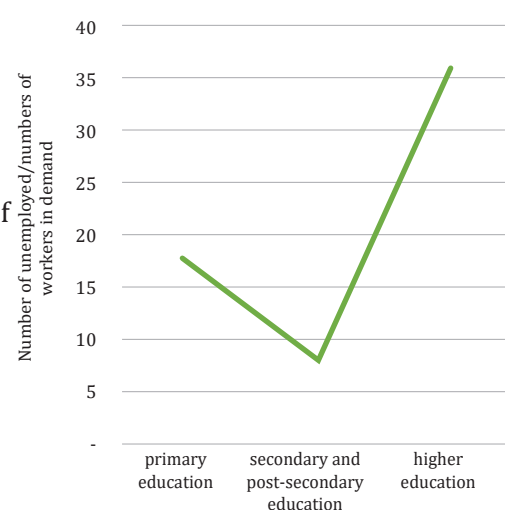
transport of cargo). The demand for workers with secondary education is more heterogeneous in terms of occupations. In absolute figures, the demand for occupations with secondary vocational school is greater than the one for those with general secondary education. 16% of the total demand for workers and 40% of the demand for workers with secondary and post-secondary education are for technicians and related occupations, with nearly 90% concerning technicians-operators. It is followed by occupations of craft and related trade workers, including: sewers, shopkeepers, heavy truck and lorry drivers, waiters, locksmiths, stock clerks, welders, cooks, and similar occupations. Next on the list of workers with secondary education are services and sales workers and plant and machine operators and assemblers. All workers with higher education in demand on the market are in the occupation of professionals and science professionals. One third of them are systems administrators and 17% are programmers.

Labour market gap by education and occupation

The labour market gap in the municipality of Kumanovo is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure

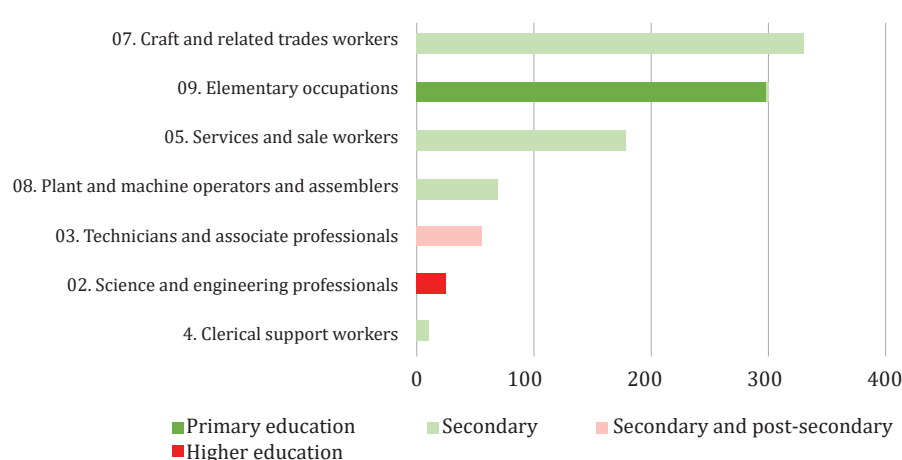
6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have shown that overall the supply is greater than the demand concerning nearly all education levels. For every worker required by the companies in the Northeast region, there are 12 unemployed persons in the municipality of Kumanovo. The gap is the greatest for higher education, where this ratio is 36, followed by primary education with a ratio of 18, while the gap is the narrowest for the secondary education with eight unemployed persons for each job created.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

Figure 5: Labour demand by occupation and education for the Northeast region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020⁴

³ The Northeast region had the least number of big businesses, five, in 2019

⁴ The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. However, under such circumstances of significant labour market disruption, with labour supply exceeding the demand by far in nearly all occupations, it is difficult to carry out a more in-depth analysis of the gaps by occupation and it takes a cautionary approach. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand and the profiles of the unemployed active job seekers in the municipality of Kumanovo. Since overall the supply is greater than the demand, the analysis will focus on the severe gaps where the supply is drastically greater than the demand, marked in red, and severe deficiency gaps, where the labour demand is greater than the supply, marked in green.

The results show that for high level skills there is a gap for five occupations. For two higher education occupations (teaching professionals; and legal, social and cultural professionals) the gaps are broadened with the increase of the educational attainment and there is a potentially higher overqualification. There is a severe surplus gap also

for the occupations of science and engineering associate professionals; health associate professionals; and business and administration associate professionals with secondary education. It is specific that the positive gap for these occupations disappears as the educational attainment progresses from secondary to post-secondary education. This indicates that the persons with secondary education require upskilling.

For the medium skill level occupations, severe gaps have been identified for five out of seventeen occupations. There is a severe surplus gap for the occupations of general office clerks and secretaries; and other office clerks. On the other hand, for the occupation metal workers, machine assemblers and related occupations, the severe surplus gap disappears with the increase of the educational attainment from primary to secondary education. This indicates potential underqualification. There is a severe deficiency gap for the occupations of building construction workers and related construction workers; operators of motor vehicles, mobile plants and deck crew, for persons who completed secondary education. Moderate surplus or deficiency gaps have been identified for six occupations. For two occupations – personal services workers; and food preservers, wood, textile and leather workers and related occupations, the positive

gap disappears with the increase of the educational attainment from primary to secondary education. In occupations at low skill level there is a deficit of labourers in mining, construction, manufacturing, and transport; and for elementary workers, refuse collectors and related occupations with primary education. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education.

The overall conclusion is that the municipality of Kumanovo has a significant job creation deficit. Surplus gaps (where the supply is greater than the demand) are predominant, in particular for high skill level occupations. There are severe deficiency gaps for elementary workers with primary education and, for two medium skill level occupations with secondary education. Nevertheless, for occupations at medium skill, educational gaps are more dominant. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁵.

⁵World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#)

Table 1: Labour market gaps by occupation - educational profile

skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	21	Science and engineering professionals				
	22	Health Professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	35	Information and communications technicians				
	33	Business and administration associate professionals				
Medium skill level	41	General office clerks and secretaries				
	42	Customer services clerks				
	43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	44	Other office clerks				
	51	Personal services workers				
	52	Sales workers				
	53	Personal care workers and related occupations				
	54	Security guards				
	61	Market-oriented skilled agricultural workers				
	71	Building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	Food preservers, wood, textile and leather workers and related occupations				
	81	Machine and plant operators				
	82	Machinery and equipment assemblers				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery labourers				
	93	Labourers in mining, construction, manufacturing and transport				
	94	Food preparation assistants				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are four secondary schools, one higher education institution, and one Adult Education Centre in the municipality of Kumanovo⁶. In the forthcoming two years these institutions are expected to produce 1,496 profiled professionals for the labour market⁷. 75% of the total supply of educational profiles fall within three occupations: accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks; health technicians and assistants; and science and engineering associate professionals. These results imply that the municipality of Kumanovo has a relatively well-established educational infrastructure to produce profiled labour force. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching

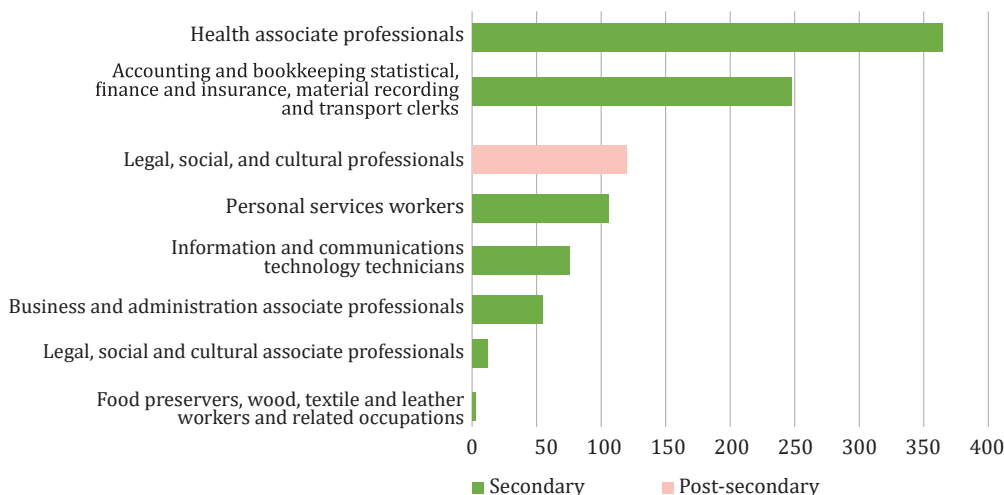
the identified gap with the expected profiles to be produced in the next two years.

Due to the lack of job creation, it appears the most of the newly produced profiles would broaden the surplus gaps. Such conclusion may be too strong, but still, caution should be taken with the further production of the following educational profiles: legal, social, and cultural professionals; business and administration associate professionals; and accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks. The surplus gap for those profiles in the municipality of Kumanovo is currently severe. Furthermore, these are profiles that are classified in general as surplus profiles in other municipalities, too, which may indicate potential surplus profiles at national level. For two occupations, science and engineering associate professionals and health associate professionals,

despite the surplus gap for the persons with secondary education, it is estimated that the gap arises from the educational attainment, and there is a greater mobility of these workers. Therefore, producing new profiles in these occupations, in spite of the surplus gap, is not a point of concern. On the other hand, no new profiles are produced for the identified deficient occupations of operators of motor vehicles, mobile plants and deck crew; building construction workers and related construction workers; labourers in manufacturing and transport; and refuse collectors and related occupations.

There is a potential to bridge the gap for the operators of motor vehicles with the profiles produced by the municipal technical secondary school “Nace Bugjoni” - Kumanovo. The deficiency gap for the occupations at low skill level and requiring primary education could be bridge by upskilling through the Adult Education Centre.

Figure 7: Supply of profiled labour force by educational institutions in the next two years



Source: Educational institutions within the territory of the municipality of Kumanovo, data collected by the municipality of Kumanovo

⁶<http://komspi.mk/category/imateliinfo/obrazovniinstitucii/>

⁷This figure does not include the profiles produced by the general secondary school “Goce Delchev” – Kumanovo and by the Adult Education Centre, for which no data have been available.

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

Code	Occupation/Educational profile	Gaps				Supply from educational institutions		
		Primary	Secondary	Post-secondary	Higher	Secondary	Post-secondary	Higher
21	Science and engineering professionals							
22	Health Professionals							
23	Teaching professionals							
24	Business and administration professionals							
25	Information and communications technology professionals							
26	Legal, social and cultural professionals							120
31	Science and engineering associate professionals					514		
32	Health associate professionals					365		
34	Legal, social and cultural associate professionals					11		
35	Information and communications technicians					106		
33	Business and administration associate professionals					54		
41	General office clerks and secretaries							
42	Customer services clerks							
43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					247		
44	Other office clerks							
51	Personal services workers					76		
52	Sales workers							
53	Personal care workers and related occupations							
54	Security guards							
61	Market-oriented skilled agricultural workers							
71	Building construction workers and related construction workers							
72	Metal workers, machine assemblers and related occupations							
73	Precision mechanics, handicraft workers and printers							
74	Electrotechnology workers							
75	Food preservers, wood, textile and leather workers and related occupations					3		
81	Machine and plant operators							
82	Machinery and equipment assemblers							
83	Drivers of motor vehicles, mobile plant operators and deck crew							
91	Cleaners and helpers							
92	Agricultural, forestry and fishery labourers							
93	Labourers in mining, construction, manufacturing and transport							
94	Food preparation assistants							
96	Refuse workers and other elementary workers							
	No occupation							
	General secondary education							

Source: Employment Service Agency of the Republic of North Macedonia, Municipality of Kumanovo (for new profiles by educational institutions), calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

CONCLUSIONS AND RECOMMENDATIONS

The diagnostic analysis of the labour market in the municipality of Kumanovo has shown a significant deficit in job creation. For every worker required by the companies in the Northeast region, there are 12 unemployed persons in the municipality of Kumanovo. This gap is the widest for persons with higher education. Surplus gaps are predominant, in particular for high skill occupations. There are severe deficiency gaps for elementary workers with primary education and, for two medium skill level occupations with secondary education. Nevertheless, for occupations at medium skill, educational gaps are more dominant. This points out to the conclusion that the occupations are adequate, but there is a need for upskilling.

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Kumanovo, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The Adult Education Centre, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1
- Persons with primary education in the occupations of building construction workers and related construction workers; and operators of motor vehicles, mobile plants and deck crew should be upskilled.
- Active labour market measures for formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:

- o Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)

- o Work with high skill requirements for persons with high level skills in surplus occupations (learning support for students belonging to the vulnerable groups, support to schools and kindergartens, etc.)

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:
 - o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates
 - o Secondary vocational schools should improve their cooperation with the private sector. Such cooperation may be promoted through regular internship for students of secondary vocational schools in relevant companies
- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Kumanovo
 - o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the municipality of Kumanovo, regional chambers and the business sector

- The municipality's capacity to attract big business entities and create new jobs should be increased through:
 - o Attracting foreign investors
 - o Creating preferential conditions, local tax incentives, construction land planning and similar benefits for new investments and job creation
- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications
- To raise the awareness of the business sector and the unemployed persons about the benefits of formal employment
- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office (SSO), Public Revenue Office (PRO) and the Labour Inspectorate

- SSO should collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)
- The State Labour Inspectorate should conduct regular inspection supervisions on-site
- It should also conduct off-site inspections by matching the administrative data (PRO) with the survey data (SSO)

Polog Region

Labour market diagnostics in the municipality of Gostivar

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the shortage of jobs and reduction of the sufficiency gap on the labour market in the municipality of Gostivar, such as:

- Improving the municipality's capacity to attract big business entities and create new jobs
- Active labour market measures for formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Gostivar has a significant shortage of newly created jobs and prominent surplus gap in high skill occupations. For every worker required by the companies in the Polog region, there are 16 unemployed persons in the municipality of Gostivar. Still, the gap is greatest with primary education, where the value is extreme 285, if adjusted for the persons without occupation this gap is tenfold smaller.

This is followed by higher education, with ratio of 21, and the smallest in the education levels is the one for secondary education, with 2.6 unemployed for one demanded job. The municipality of Gostivar is facing a pressing shortage of newly created jobs. The Municipality has established educational infrastructure, which may contribute to the reduction of part of the extreme deficiency gaps.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Gostivar and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Gostivar is the second biggest municipality in the Polog region with population of 83.557¹, thus accounting for 26% of the total population in the Polog region. Currently, the labour market in the Polog region is unfavourable; it is ranked second² in

terms of the unemployment rate and lowest in terms of the employment and activity rates as compared to the other seven regions. In 2020, the unemployment rate of the population aged 15 and above was 24.8% (27.2% for women and 23.7% for men), the employment rate was 36%, while the activity rate was 47.9%. However, such unfavourable trend is not reflected in the average gross salary: with MKD 38.134 the Polog region is in the middle, ranked third (Regions in the Republic of North Macedonia, SSO, 2021). The region is characteristic for the mountainous areas, favourable for the development of winter tourism and animal husbandry. The region also has a rich hydrographic network with a great hydropower potential, which has been used only partially.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

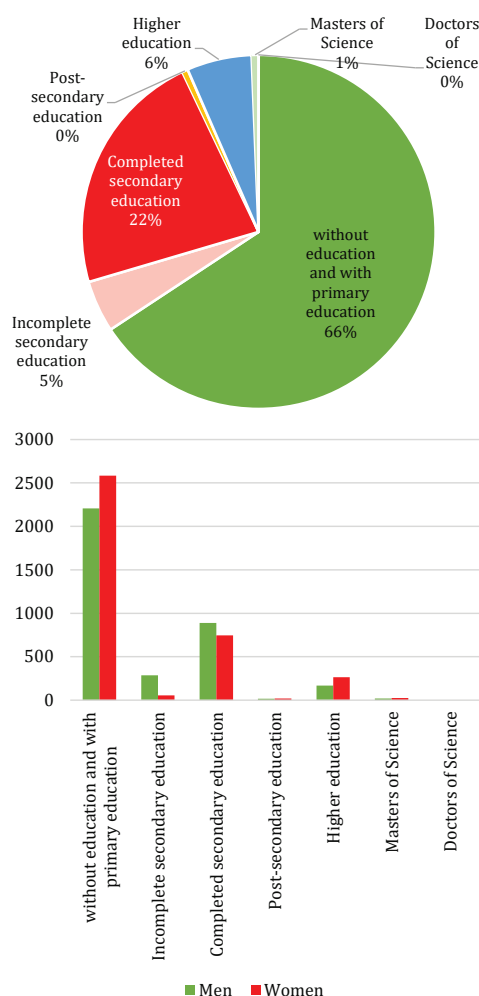
²After the Northeast region (32.4%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Gostivar in 2021, 51% were women and 49 were men. In terms of education, persons with lower educational attainment are predominant. Two thirds (71%) of the unemployed were persons with primary or no education (66%) and incomplete secondary education (Figure 1).

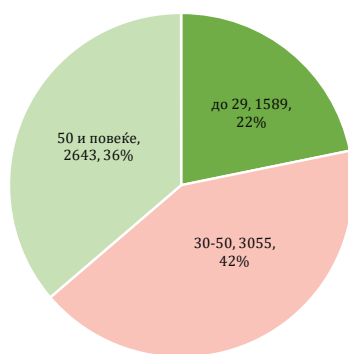
Figure 1: Unemployed persons in the municipality of Gostivar, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed range between 30 to 50 years of age (42%), similarly to the unemployed aged 50 or more (36%) (Figure 2).

Figure 2: Structure of unemployed by age

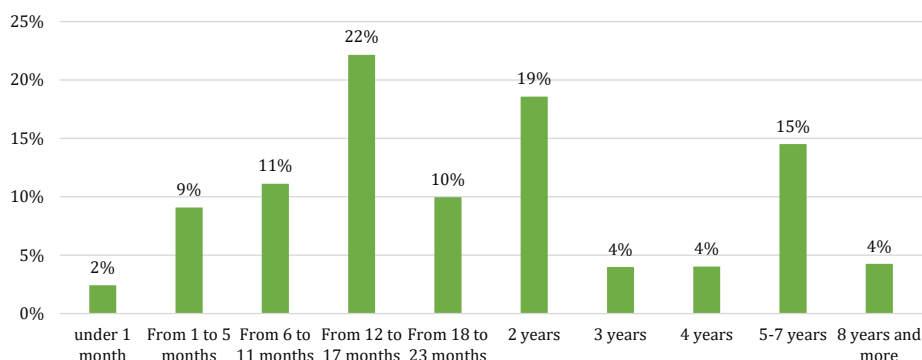


Source: Employment Service Agency of the Republic of North Macedonia

The relatively low share of young people in the overall structure (22%) is probably due to the delayed activation on the labour market, as a result of education, also the lower coverage of young population.

Yet, most of the unemployed, (41%), wait for employment from one to three years (Figure 3). Additional 36% wait for employment more than three years. This indicates structural unemployment and significant mismatch of supply and demand on the labour market. Only 23% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of six to 11 months. The individual characteristics (educational attainment, educational profile, Age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one

Figure 3: Unemployed in the Municipality of Gostivar according to unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

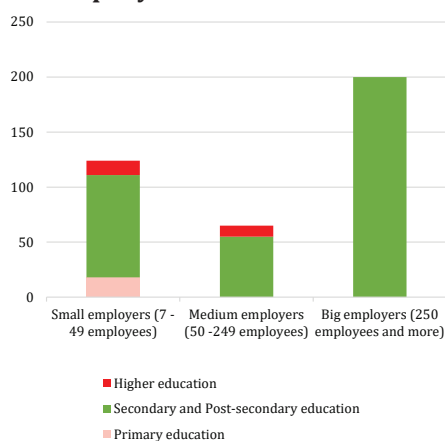
year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage, the time required to apply for a job and the process of recruitment to employment, etc.

In addition to the unemployed active job seekers, there are also persons registered as passive job seekers in the municipality of Gostivar. According to the Employment Service Agency, this category includes 1.145 persons, which represents a share of 16% in the total number of active job seekers. Compared to other municipalities, this rate is relatively low. Most likely it is a result of the high rate of social welfare recipients, who are obliged to be registered as active job seekers. The Polog region is ranked third by the rate of household members who are social welfare recipients and are above 18 years of age (18.1%) (Regions in the Republic of North Macedonia, SSO, 2020). The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Demand

According to the regional labour demand survey in 2021, the total demand for the Polog region is 389 jobs, which accounts for 5% of the unemployed labour force in the municipality of Gostivar. This rate is extremely low and it indicates an exceptionally unfavourable labour market situation in the municipality of Gostivar. The low rate is a result of the insufficient number of newly created jobs. It may be a result of the low potential for job creation of the business entities; insufficient number of businesses, in particular big companies with more than 250 employees³, but also a potential greater presence of the informal economy. In terms of methodology, there is a probability for underestimating the real situation, first, as a result of pessimistic expectations, due to the Covid-19 pandemic, and also, due to the methodological approach which lacks weighting the results.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly one half of the vacancies will be generated by small employers, additional 32% by medium employers and only 17% by medium to big employers. In

terms of the demand by education, predominant is the demand for workers who completed secondary education (89%) and less with higher secondary education (6%) and with primary education (5%).

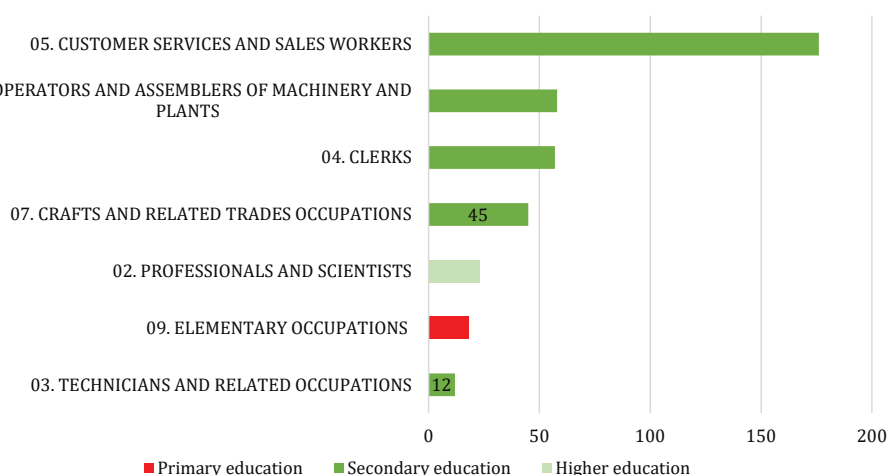
Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education is relatively small and concerns the group of elementary occupations (predominantly for elementary workers). The demand for workers with secondary education is more heterogeneous in terms of occupations. The service and sales sector occupations have a share of 45% in the total demand and 50% of the demand with secondary education, out of which, the demand is mainly for sales workers, and less for cooks and security guards (protection of property and person). 15% share in the demand have the following occupations: Operators and assemblers of machinery (bus and truck drivers; operators of construction machinery, packing machinery and similar) and warehouse workers, classified in the occupation clerks. These are followed by occupations related to craft and related trades workers and involve a more heterogeneous

group of occupations: Locksmith, construction worker, auto-mechanics, confectionary makers, technical controller of vehicles, etc. All workers with higher education in demand are professionals and science professions, and they have a share of only six per cent in the total demand.

Labour market gap by education and occupation

The labour market gap in the municipality of Gostivar is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply (willing to work) at each job in demand, according to the educational attainment. The results have shown that overall the supply is greater than the demand concerning nearly all education levels, which is alarming for the persons with primary education. For every worker required by the companies in the Polog region, there are 47 unemployed persons in the municipality of Gostivar. Yet, the gap is biggest with primary education and the value is extreme 285. This is followed by higher education, with ratio of 21, and the smallest in the education levels is the one

Figure 5: Labour demand by occupation and education for the Polog region

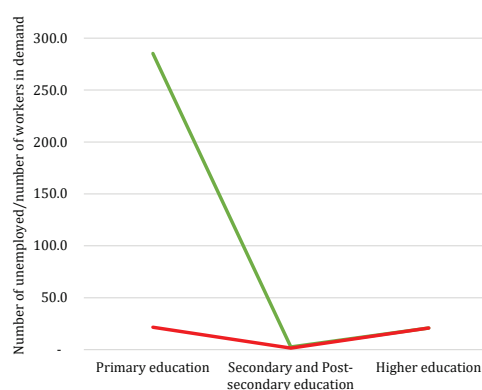


Source: – ESARNM, Regional survey for the need of skills on the labour market in RNM for 2021

³ After the Northeast region, the Polog region is second-to-last with big business entities, 8, in 2019

for secondary education, with 2.6 unemployed for one demanded job. Still, if we make the adjustment for the persons without occupation, the results are significantly adjusted, mainly for persons with primary education, thus, the gap for persons with primary education is reduced to 21, and for persons with secondary education almost disappears (1.4).

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. The gap may be analysed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. However, under such circumstances of significant labour market disruption, with labour supply exceeding the demand by far in nearly all occupations, it is difficult to carry out a more in-depth analysis of the gaps by occupation and it takes a cautionary approach. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Gostivar. Since overall the labour market supply is greater than the demand, the analysis identifies the severe gaps, marked in red. It also makes an approximation

for the potential deficiency gap, where the labour demand is greater than the supply, marked in green.

The results show that for higher level skills there is a positive gap for seven out of ten occupations. In two occupations (professionals and associates in legal and social sciences in the field of culture) the gap is moderate. For five occupations, there is a severe surplus gap, out of which in three occupations (science and engineering associate professionals; health associate professionals; and legal, social sciences and cultural associate professionals, business and administrative associate professionals) the gap is only for persons with secondary education, and disappears with the increase of educational attainment at higher levels. This indicates potential underqualification. There is a severe surplus gap with the occupations teaching professionals; business and administration professionals. In the occupations with medium skills, there is diversification, out of eight occupations, there is surplus gap in four, and deficiency gap in three occupations.

There is surplus gap for food preservers, wood, textile and leather workers and related occupations (severe surplus gap) and for operators of motor vehicles, mobile plants and deck crew (moderate deficiency gap). Nevertheless, the positive gap disappears with the increase of educational attainment from primary to secondary education. This indicates that the persons with primary education require upskilling. Despite the fact that the municipality of Gostivar is characterized by a supply greater than the demand at each level of education and for nearly all occupations, In occupations at low skill level there is a deficit of labourers in mining, construction, manufacturing, and transport; and for elementary workers, refuse collectors and related occupations with primary education. On the

other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education. Although, here too, there are predominant surplus gaps, their intensity is decreasing. Thus, there is a surplus gap in only one occupation, electrotechnology workers. In three occupations the gap is moderately sufficient, out of which, in two occupations (metal workers, machine assemblers and related occupations; and food preservers, wood workers, textile, leather and related occupations), the gap is only with the persons with secondary education, and not persons with primary education. Nevertheless, on the supply side, persons with these occupations, with primary education, are relatively few, so, for the gap in primary education in these occupations, the findings are only indicative. At the same time, there is a deficiency gap in three occupations with secondary education, out of which, for two occupations it is severe (accounting, finance, statistics, material records and transport clerks and sales workers) and for one occupation the gap is moderate (building construction workers and related construction workers).

In the occupations with low skills, if we exclude persons without occupation, there is a surplus gap only for the occupation operators of machinery and plants, and it is only moderate gap. In addition, there are severe gaps for elementary workers and drivers, which indicates that there is a shortage for the occupations with low skills. This gives us a clear picture and provides for an important adjustment of the finding that the gap in primary education is the biggest. The gap generated by persons without occupation requires immediate attention.

The overall conclusion is that the surplus gap (when the supply exceeds the demand) is prevailing, in particular for high skill level

occupations. There is a deficiency gap for workers with low skills and in certain occupations with medium skills and secondary education. This indicates that the municipality of Gostivar is facing a significant lack of

job creation. Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system

does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas⁴.

Table 1: Labour market gaps by occupation – educational profile

skill level	Code	Occupation/profile	Primary	Secondary	Post-secondary	higher
High skill level	21	Science and engineering professionals				
	22	Health professionals				
	23	Teaching professionals				
	24	Business and administration professionals				
	25	Information and communications technology professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	34	Legal, social and cultural associate professionals				
	33	Business and Administration associate professionals				
Medium skill level	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks				
	51	Personal services workers				
	52	Sales workers				
	71	building construction workers and related construction workers				
	72	Metal workers, machine assemblers and related occupations				
	73	Precision mechanics, handicraft workers and printers				
	74	Electrotechnology workers				
	75	food preservers, wood, textile and leather workers and related occupations				
Low skill level	81	Machine and Plant operators				
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew				
	91	Cleaners and helpers				
	92	Agricultural, forestry and fishery elementary workers				
	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, author's estimates

Caption:

Significant surplus
Surplus

Adequately matched
Deficit
Significant deficit

⁴World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Educational profiling as a factor in bridging or broadening the gaps

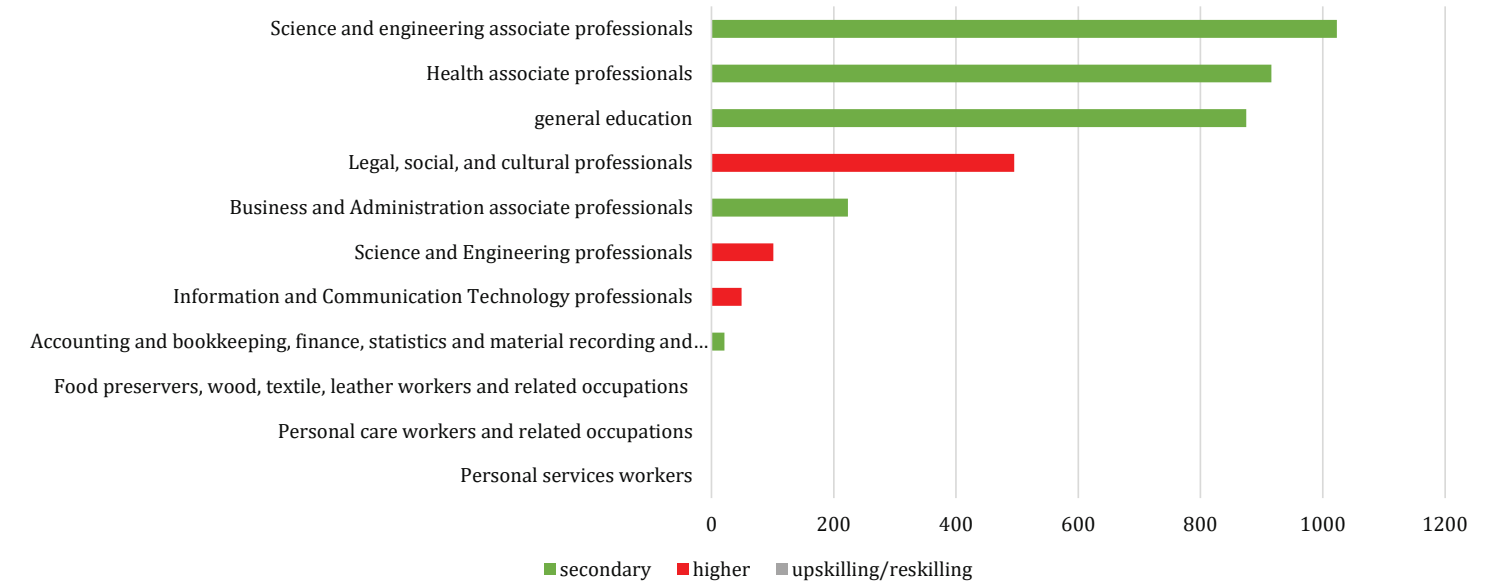
In the Municipality of Gostivar there are four secondary schools, one University with five higher education institutions and four programs for verification of adult learning. In the forthcoming four years these institutions are expected to produce 3.705 profiled professionals for the labour market. 66% of the total supply of educational profiles fall within three occupations: Legal and social science professionals and professionals in the field of culture; science and engineering associate professionals; health professionals, and additional 24% are profiles with general secondary education.

These results imply that the municipality of Gostivar has established an educational infrastructure to produce profiled labour force in several areas. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years. Due to the lack of job creation, it appears the most of the newly produced profiles would broaden the surplus gap. This conclusion would

be far too strong, and for at least three occupations with secondary education, where there is potentially lower qualification, generating profiles in these occupations is not problematic. Yet, one should be careful with further generation of educational profiles with general secondary education and legal and social and cultural professionals. Currently there is a surplus gap for these profiles in the municipality of Gostivar. Furthermore, these are profiles that are classified in general as surplus profiles in other municipalities too, which may indicate potential surplus profiles at national level. One department of the secondary economics school “Gostivar” generates profiles for the occupation accounting, finance, statistics and material recording and transport clerks, which has been identified as deficient occupation. Yet, new profiles are not generated for the other occupations with deficiency gap. This provides for room part of the departments in secondary schools to comply with the demand. However, also for the occupations with low skills to increase activity of the adult learning verification programs and the upskilling and re-skilling programs.



Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Ministry of Education and Science of the Republic of North Macedonia

Table 2: Matching the gap with the supply of profiles from the educational institutions in the next four years

skill level	Code	Occupation/profile	Pri- mary	Sec- ond- ary	Post-sec- ondary	higher	Sec- ond- ary	higher	Upskill- ing/ re-skill- ing
High skill level	21	Science and engineering professionals						101	
	22	Health professionals							
	23	Teaching professionals							
	24	Business and administration professionals							
	25	Information and communications technology professionals						49	
	26	Legal, social and cultural professionals						495	
	31	Science and engineering associate professionals					1023		
	32	Health associate professionals					916		
	34	Legal, social and cultural associate professionals							
	33	Business and Administration associate professionals					223		
Medium skill level	43	accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					21		
	51	Personal services workers							
	52	Sales workers							
	53								
	71	building construction workers and related construction workers							
	72	Metal workers, machine assemblers and related occupations							
	73	Precision mechanics, handicraft workers and printers							
	74	Electrotechnology workers							
	75	food preservers, wood, textile and leather workers and related occupations							
Low skill level	81	Machine and Plant operators							
	83	Drivers of motor vehicles, mobile plant operators and ship deck crew							
	91	Cleaners and helpers							
	92	Agricultural, forestry and fishery elementary workers							
	93	Labourers in mining, construction, manufacturing and transport							
	96	Refuse workers and other elementary workers							
		No occupation							
		General secondary education					875		

Source: Employment Service Agency of the Republic of North Macedonia, Ministry of Education and Science of the Republic of North Macedonia, estimates by the author

Caption:

■ Significant surplus
 ■ Deficit
 ■ Adequately matched
 ■ Significant deficit
 ■ Surplus

CONCLUSIONS AND RECOMMENDATIONS

The labour market diagnostics in the municipality of Gostivar has shown that there is a huge gap where the supply is greater than the demand concerning all education levels. This indicates that the municipality of Gostivar is facing a significant lack of job creation. For every worker required by the companies in the Polog region, there are 16.7 unemployed persons in the municipality of Gostivar. The gap is the greatest for primary education, with extreme value of 285, followed by higher education with a ratio of 21, while the gap is the narrowest for the secondary education with 2.6 unemployed persons for each job in demand. Still, if we make the adjustment for the persons without occupation, the results are significantly adjusted, mainly for persons with primary education, thus, the gap for persons with primary education is reduced to 21, and for persons with secondary education almost disappears (1,4). The sufficiency gap (when the supply is greater than the demand) is predominant for the occupations with high skill level. There is a deficiency gap for workers with low skills and in certain occupations with medium skills and secondary education.

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Gostivar, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide

them with qualifications suitable for occupations at skill level 1

- Re-skilling of the persons with secondary education, from the sufficient occupations into the deficient ones: Sellers and drivers
- Active labour market measures for formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:
 - Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)
 - Work with advanced skills for persons with advanced skills in sufficient occupations (learning support for students from vulnerable categories, support in the schools and kindergartens, etc.).

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations in the short-term through:
 - Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrolment quotas so as to produce more graduates.
 - Adult education verification programs, in cooperation with ESARNM and the Employment centre should be stimulated to intensify their work
 - Secondary vocational schools should improve their cooperation with the private sector. Such cooperation may be promoted through regular internship for students of secondary vocational schools in relevant companies

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:
 - The programs and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Gostivar
 - The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)
 - Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the municipality of Gostivar, regional chambers of commerce and the business sector

- The municipality's capacity to attract big business entities and create new jobs should be increased through:
 - Attracting foreign investors
 - Creating preferential conditions, local tax incentives, construction land planning and similar benefits for new investments and job creation
- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations
- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications
- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies
- To raise the awareness of the business sector and the unemployed persons about the benefits of formal employment

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office (SSO), Public Revenue Office (PRO) and the Labour Inspectorate

- SSO should collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)
- The State Labour Inspectorate should conduct regular inspection supervisions on-site
- It should also conduct off-site inspections by matching the administrative data (PRO) with the survey data (SSO)



Labour market diagnostics in the municipality of Tetovo

Policy brief

The present policy brief recommends undertaking concrete actions to reduce the shortage of jobs and the labour surplus gap in the municipality of Tetovo, such as:

- Improving the municipality's capacity to attract big business entities and create new jobs
- Active labour market measures for formalization of informal work
- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap
- Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

The municipality of Tetovo has a significant shortage of newly created jobs and prominent surplus gaps in high skill occupations. For every worker required by the companies in the Polog region, there are 47 unemployed persons in the municipality of Tetovo. The gap is the greatest for primary education, where this ratio is 93, followed by higher education with a ratio of 72, while the gap is the narrowest for the secondary education with 26 unemployed persons for each job created. The municipality of Tetovo is facing a pressing shortage of newly created jobs.

OBJECTIVE

The objective of the present policy brief is to provide a diagnostic analysis of the labour market in the municipality of Tetovo and to offer specific recommendations on how to improve the labour market outcomes of the local population and reduce the horizontal and vertical skills mismatches.

INTRODUCTION

The municipality of Tetovo is the biggest municipality in the Polog region with population of 91,431¹, thus accounting for 28% of the total population in the Polog region. Currently, the labour market in the Polog region is unfavourable; it is ranked second² in terms of the unemployment rate and second-to-last³ in terms of

the employment and activity rates as compared to the other seven regions. In 2019, the unemployment rate of the population aged 15 and above was 28.5% (35.8% for women and 24.7% for men), the employment rate was 37.1%, while the activity rate was 51.9%. However, such unfavourable trend is not reflected in the average gross salary: with MKD 34,850 the Polog region is ranked fourth among the regions (Regions in the Republic of North Macedonia, SSO, 2020). The region is characteristic for the mountainous areas, favourable for the development of winter tourism and animal husbandry. The region also has a rich hydrographic network with a great hydropower potential, which has been used only partially.

¹Population estimates on 31.12.2015, (NTEC 3-2007), Skopje

²After the Southeast region (33%)

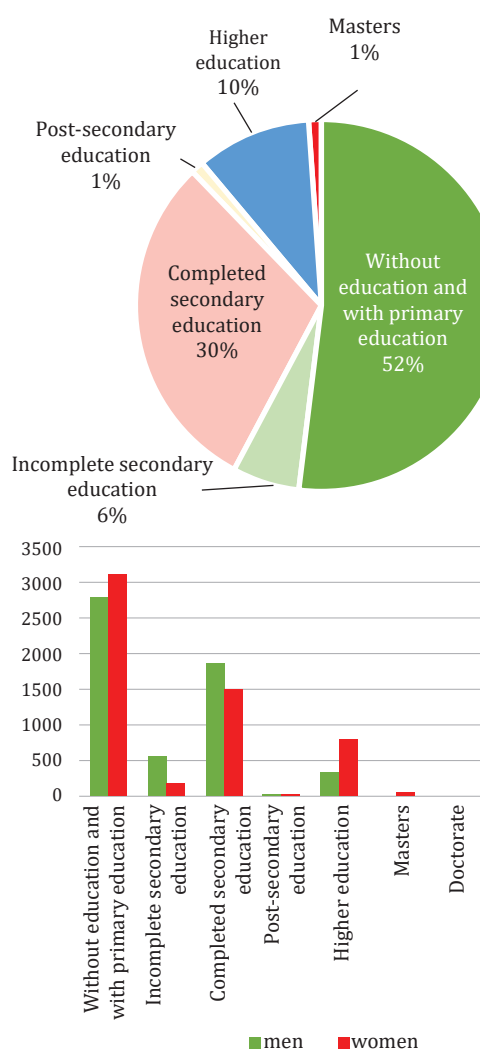
³After the Southeast region (37%)

STRUCTURE OF THE LABOUR MARKET

Supply

Out of the total registered unemployed who were active job seekers in the municipality of Tetovo in 2020, 50% were women and 50% were men. In terms of education, persons with lower educational attainment are predominant. More than one half (58%) of the unemployed were persons with primary or no education (52%) and incomplete secondary education (6%) and incomplete secondary education (Figure 1).

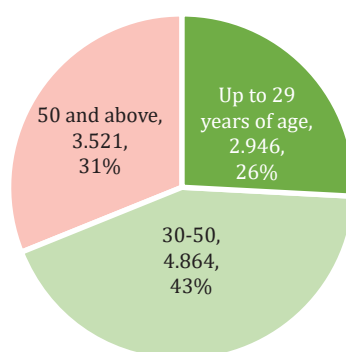
Figure 1: Unemployed persons in the municipality of Tetovo, by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia

Most of the unemployed are aged 30-50 (43%), followed by the unemployed aged 50 or more (31%) (Figure 2). The relatively low share of young people in the total structure (26%) is probably owing to the late activation on the labour market due to education, as well as to the proportionally lower share of young people in the population.

Figure 2: Structure of unemployed by age



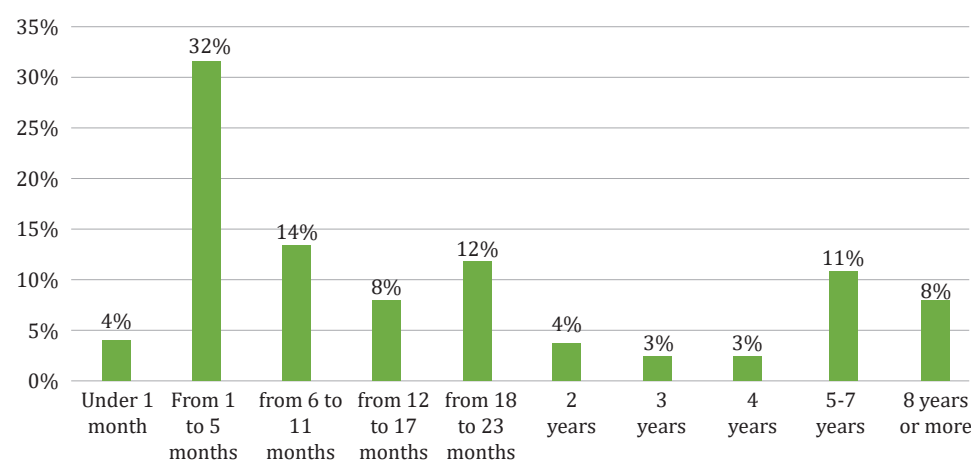
Source: Employment Service Agency of the Republic of North Macedonia

50% of the unemployed have been waiting for employment for a period up to one year, most of whom for a period of one to five months (Figure 3). The individual characteristics (educational attainment, educational profile, age) of the latter group of unemployed are probably better suited to the labour market demand when compared with those with unemployment spells exceeding one year. This group is likely a subject of frictional unemployment, which may be explained by the required school-to-work transition period, adjustment of the reservation wage,

the time required to apply for a job and the process of recruitment to employment, etc. Although such structure may appear encouraging, one third of the unemployed are waiting for employment for more than two years, which indicates a possibility of structural unemployment.

In addition to the unemployed active job seekers, there are also persons registered as passive job seekers in the municipality of Tetovo. According to the Employment Service Agency, this category includes 2,203 persons, which represents a share of 20% in the total number of active job seekers. Compared to other municipalities, this rate is relatively low. Most likely it is a result of the high rate of social welfare recipients, who are obliged to be registered as active job seekers. The Polog region is ranked third by the rate of household members who are social welfare recipients and are above 18 years of age (15.7%) (Regions in the Republic of North Macedonia, SSO, 2020). The reasons for the passive job seeking vary: the persons lost hope that ESARNM would be able to help them find a job, but remained willing to accept a job out of the state's job placement system; they had been engaging in occasional, temporary or freelance work and informal work; as well as persons who were out of the country; for these reasons such subgroups were neither found in registered employment, nor in the active job seekers records of the ESARNM.

Figure 3: Unemployed in the municipality of Tetovo, by length of unemployment spell



Source: Employment Service Agency of the Republic of North Macedonia

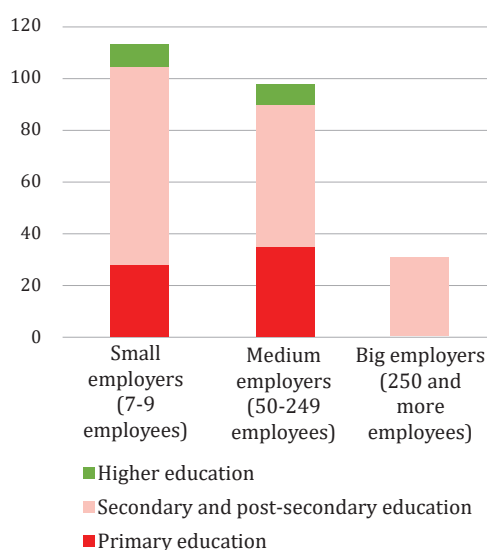
Demand

According to the regional labour demand survey in 2020, the total demand for the Polog region is 241 jobs, which accounts for two per cent of the unemployed labour force in the municipality of Tetovo. This rate is extremely low and it indicates an exceptionally unfavourable labour market situation in the municipality of Tetovo. The low rate is a result of the insufficient number of newly created jobs.

It may be a result of the low potential for job creation of the business entities; insufficient number of businesses, in particular big companies with more than 250 employees⁴, but also a potential greater presence of the informal economy.

Figure 4 provides an overview of the labour demand by education and company size. It is expected that nearly one half of the vacancies will be generated by small employers, additional 40% by medium employers and only 12% by big employers. In terms of the demand by education, the demand for workers who completed secondary (66%) and primary education (26%) is predominant.

Figure 4: Labour demand by education and company size



Source: Employment Service Agency of the Republic of North Macedonia

Cross-referencing the demand by education and occupation (NCO-ISCO 08) (Figure 5) shows that the entire demand for workers who completed primary education concerns the group of elementary occupations (predominantly for elementary workers; elementary workers in the manufacturing of bricks; hand packers; and manufacturing line labourers). 26 per cent of the total demand for workers and 100% of the demand for workers with primary education is for workers in elementary occupations. The demand for workers with secondary education is more heterogeneous in terms of occupations. The occupations of craft and related trades workers have a share of 20% in the total demand, and they include: sewers, carpenters, upholsterers, etc. Next on the list of workers with secondary education are services and sales workers; clerks; and plant and machine operators and assemblers. All workers with higher education in demand are professionals and science professions, and they have a share of only seven per cent in the total demand.

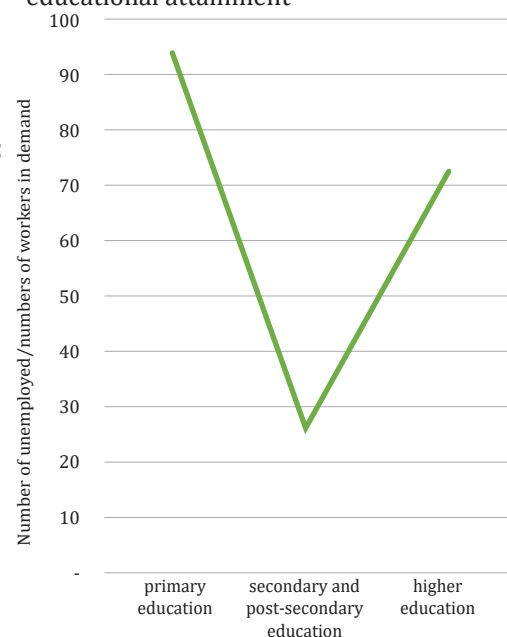
Labour market gap by education and occupation

The labour market gap in the municipality of Tetovo is identified by cross-referencing the labour supply and demand, taking into account the educational attainment and occupation. Figure 6 shows the number of workers on supply

(willing to work) at each job in demand, according to the educational attainment. The results have shown that overall the supply is greater than the demand concerning nearly all education levels.

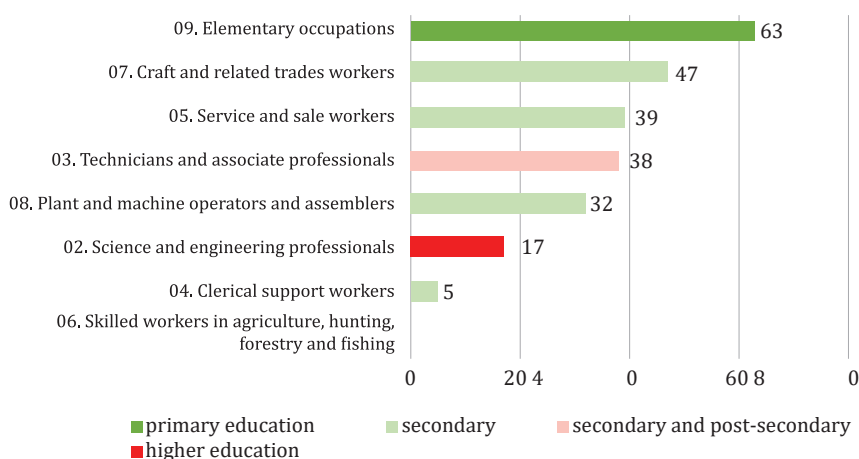
For every worker required by the companies in the Polog region, there are 47 unemployed persons in the municipality of Tetovo. The gap is the greatest for primary education, where this ratio is 93, followed by higher education with a ratio of 72, while the gap is the narrowest for the secondary education with 26 unemployed persons for each job created.

Figure 6: Supply and demand gap by educational attainment



Source: Employment Service Agency of the Republic of North Macedonia, 2020

Figure 5: Labour demand by occupation and education for the Polog region



Source: ESARNM, regional labour market skills needs survey in RNM in 2020⁵

⁴ After the Northeast region, the Polog region is ranked second with the least number of big business entities, 8 in 2019

A clearer picture of the labour market gap is obtained by cross-referencing the occupations in demand on the labour market with the profiles of unemployed active job seekers on supply. The gap may be analyzed according to the educational attainment within an occupation (horizontally) and vertically, for different occupations. However, under such circumstances of significant labour market disruption, with labour supply exceeding the demand by far in nearly all occupations, it is difficult to carry out a more in-depth analysis of the gaps by occupation and it takes a cautionary approach. Table 1 provides a diagnostic analysis of the labour market gap by the occupations in demand the profiles of the unemployed active job seekers in the municipality of Tetovo. Since overall the labour market supply is greater than the demand, the analysis identifies the severe gaps, marked in red. It also makes an approximation for the potential deficiency gap, where the labour demand is greater than the supply, marked in green.

The results show that for higher level skills there is a severe gap for six occupations. For three of the occupations with higher education there is a potential overqualification (teaching professionals; legal, social, and cultural professionals; and science and engineering professionals). There is a severe surplus gap also for the occupations of science and engineering associate professionals;

health associate professionals; and business and administration associate professionals with secondary education. For occupations at medium skill level, there is surplus gap for food preservers, wood, textile and leather workers and related occupations (severe surplus gap) and for operators of motor vehicles, mobile plants and deck crew (moderate deficiency gap). Nevertheless, the positive gap disappears with the increase of educational attainment from primary to secondary education. This indicates that the persons with primary education require upskilling.

Despite the fact that the municipality of Tetovo is characterized by a supply greater than the demand at each level of education and for nearly all occupations, in occupations at low skill level there is a deficit of labourers in mining, construction, manufacturing, and transport; and for elementary workers, refuse collectors and related occupations with primary education. On the other hand, there is a surplus of unemployed labour for persons without any occupation and the persons who have completed general secondary education.

The overall conclusion is that the surplus gap (when the supply exceeds the demand) is prevailing, in particular for high skill level occupations. There is a deficiency gap only for elementary workers with primary education and for two medium skill level occupations with secondary education. This indicates

that the municipality of Tetovo is facing a significant lack of job creation.

Besides the gap in terms of formal education, the quality of the education and the skills acquired are also important. A World Bank study (2020) has identified that the training offered by the educational system does not match the companies' needs. The same study has identified that the students lack adequate practical skills matching their diplomas ⁶.

CONCLUSIONS AND RECOMMENDATIONS

The labour market diagnostics in the municipality of Tetovo has shown that there is a huge gap where the supply is greater than the demand concerning nearly all education levels. This indicates that the municipality of Tetovo is facing a significant lack of job creation. For every worker required by the companies in the Polog region, there are 47 unemployed persons in the municipality of Tetovo. This gap is the widest for persons with primary education. For the persons with high level skills, there is a severe surplus gap for the following occupations: teaching professionals; legal, social and cultural professionals; and science and engineering professionals. In occupations at low skill level there is a deficit of labourers in mining, construction, manufacturing, and transport; and for elementary workers, refuse collectors and related occupations with primary education.

⁵The survey has been conducted on a sample of 3,295 employers from the private sector with seven or more employees, stratified by region and by employer sectors. The sample includes all medium and large employers, while other employers have been selected randomly until the required sample size has been achieved.

⁶World Bank (2020), [Finding Solutions to Youth Unemployment in North Macedonia](#).

Table 1: Labour market gaps by occupation - educational profile

Skill level	Code	Occupation/Profile	Primary	Secondary	Post-secondary	Higher
High skill level	23	Teaching professionals				
	24	Business and administration professionals				
	26	Legal, social and cultural professionals				
	31	Science and engineering associate professionals				
	32	Health associate professionals				
	33	Business and administration associate professionals				
Medium skill level	75	Food preservers, wood, textile and leather workers and related occupations				
	83	Drivers of motor vehicles, mobile plant operators and deck crew				
Low skill level	93	Labourers in mining, construction, manufacturing and transport				
	96	Refuse workers and other elementary workers				
		No occupation				
		General secondary education				

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

Educational profiling as a factor in bridging or broadening the gaps

There are five secondary schools, two higher education institutions and one upskilling and re-skilling centre in the municipality of Tetovo⁷. In the forthcoming four years these institutions are expected to produce 14,565 profiled professionals for the labour market⁸. 71% of the total supply of educational profiles fall within five occupations: health professionals; legal, social and cultural professionals; science and engineering associate professionals; teaching professionals; and health associate professionals.

These results indicate that the municipality of Tetovo has established an educational infrastructure to produce profiled labour force, in particular higher education and vocational profiles in several areas. In order to identify to which extent are those profiles matching the demand on the labour marker, in Table 2 we are matching the identified gap with the expected profiles to be produced in the next four years.

Due to the lack of job creation, it appears the most of the newly produced profiles would broaden the surplus gap. Such conclusion may be too strong, but still, caution should be taken with the further production of the following educational profiles: teaching professionals; legal, social, and cultural professionals; business and administration associate professionals; and accounting and bookkeeping, statistical, finance and insurance, material recording and transport clerks. Currently the surplus gap for those profiles in the municipality of Tetovo is severe. Furthermore, these are profiles that are classified in general as surplus profiles in other municipalities, too, which may indicate potential surplus profiles at national level. On the other hand, no new profiles are produced for the identified deficient occupations of operators of motor vehicles, mobile plants and deck crew; labourers in manufacturing and transport (elementary workers in the manufacturing of bricks; hand packers; and manufacturing line labourers) and refuse collectors and related occupations.

There is a potential to bridge the gap for the operators of motor vehicles with the profiles produced by the municipal secondary vocational school "Mosha Pijade". The deficiency gap for the occupations at low skill level and requiring primary education could be bridged by upskilling through the Open Civil University for Lifelong Learning - Tetovo.

⁷ <http://komspi.mk/category/imateliinfo/obrazovniinstitucii/>

⁸ There is no available data as to how many would be produced in the next two years. Furthermore, this figure does not include the profiles produced by the University of Southeast Europe – Tetovo and the general secondary school "Kiril Pejčinovich" – Tetovo, which failed to deliver any data.

Figure 7: Supply of profiled labour force by educational institutions in the next four years



Source: Educational institutions within the territory of the municipality of Tetovo, data collected by the municipality of Tetovo



Table 2: Matching the gap with the supply of profiles from the educational institutions in the next two years

Code	Occupation/Educational profile	Primary	Secondary	Post-secondary	Higher	Secondary	Upskilling	Higher
21	Science and engineering professionals							1131
22	Health Professionals							3042
23	Teaching professionals							1683
24	Business and administration professionals							254
25	Information and communications technology professionals							233
26	Legal, social and cultural professionals							2376
31	Science and engineering associate professionals					1189		
32	Health associate professionals					1693		
34	Legal, social and cultural associate professionals							260
35	Information and communications technology technicians						70	
33	Business and administration associate professionals					377		159
41	General office clerks and secretaries							
42	Customer services clerks							
43	Accounting and bookkeeping statistical, finance and insurance, material recording and transport clerks					931		
44	Other office clerks							
51	Personal services workers					246	163	
52	Sales workers							
53	Personal care workers and related occupations						48	
54	Security guards							
61	Market-oriented skilled agricultural workers							
71	Building construction workers and related construction workers						16	
72	Metal workers, machine assemblers and related occupations					59	53	
73	Precision mechanics, handicraft workers and printers							
74	Electrotechnology workers					48	1	
75	Food preservers, wood, textile and leather workers and related occupations					406	118	
81	Machine and plant operators						9	
82	Machinery and equipment assemblers							
83	Drivers of motor vehicles, mobile plant operators and deck crew							
91	Cleaners and helpers							
92	Agricultural, forestry and fishery labourers							
93	Labourers in mining, construction, manufacturing and transport							
94	Food preparation assistants							
95	Street vendors and other service workers							
96	Refuse workers and other elementary workers							
	No occupation							
	General secondary education							

Source: Employment Service Agency of the Republic of North Macedonia, calculations by the author

Caption:

■ Significant surplus
 ■ Surplus
 ■ Adequately matched
 ■ Deficit
 ■ Significant deficit

RECOMMENDATIONS

Recommendations for the Employment Centres and ESARNM

To design active labour market measures for the unemployed active job seekers in the municipality of Tetovo, in particular:

- Skilling of persons with primary education and no occupation into elementary workers. The upskilling and re-skilling centres, in cooperation with ESARNM, should design and deliver training courses and modules for persons without occupation so as to provide them with qualifications suitable for occupations at skill level 1

- Upskilling of persons with primary education in the occupations of food preservers, wood, textile and leather workers and related occupations; and drivers of motor vehicles, mobile plants and deck crew

- Active labour market measures for formalization of informal work

- Community work with different skill requirements for the persons classified in occupations/education profiles with significant surplus gap:

- o Work with low skill requirement for persons without occupation (cleaning the community, refuse collection, collection of bulk waste for recycling, etc.)

- o Work with high skill requirements for persons with high level skills in surplus occupations (learning support for students belonging to the vulnerable groups, support to schools and kindergartens, etc.)

For the educational institutions and the Ministry of Education and Science

- To bridge the gap in deficient occupations short-term through:

- o Educational institutions which have established programmes in the deficient occupations should increase the attractiveness and enrollment quotas so as to produce more graduates

- o The upskilling and re-skilling centres, in cooperation with ESARNM and the Employment Centre, should be stimulated to intensify their work

- o Secondary vocational schools should improve their cooperation with the private sector. Such cooperation may be promoted through regular internship for students of secondary vocational schools in relevant companies

- In the medium term, it is necessary to redesign the programmes / profiles and skills acquired with the diploma:

- o The programmes and profiles of the educational institutions should be designed in line with the occupations in demand on the labour market in the municipality of Tetovo

- o The curricula should reflect the demanded skills of the XXI century (e.g., skills relating to the STEM sciences, analytical skills, critical thinking, etc.)

- o Career counselling and guidance of the youth in view of selecting an occupation matching the labour market demand

For the municipality of Tetovo, regional chambers, and the business sector

- The municipality's capacity to attract big business entities and create new jobs should be increased through:

- o Attracting foreign investors

- o Creating preferential conditions, local tax incentives, construction land planning and similar benefits for new investments and job creation

- To intensify the cooperation with the secondary vocational schools and take active participation in the potential establishment of dual education or pilot-occupations

- In cooperation with ESARNM, to provide on-the-job training for elementary workers without occupation, until they obtain minimum qualifications

- To improve the quality of the jobs and the quality of the practical training for pupils and students in the companies

- To raise the awareness of the business sector and the unemployed persons about the benefits of formal employment

- To raise the awareness of young people about which educational profiles are in demand, and which are redundant, so as to help them make an informed decision when they are selecting their educational pathways

For the State Statistical Office (SSO), Public Revenue Office (PRO) and the Labour Inspectorate

- SSO should collect and publish labour market statistics at municipal level (employment, unemployment, and activity rates)

- The State Labour Inspectorate should conduct regular inspection supervisions on site

- It should also conduct off-site inspections by matching the administrative data (PRO) with the survey data (SSO)

