



Report No: AUS0001042

Finding Solutions to Youth Unemployment in North Macedonia

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Acronyms

ALMP – Active Labor Market Policies	MBDP – Development Bank of North Macedonia
CEFTA – Central European Free Trade Agreement	MKD – North Macedonia
CESEE-EU – Central, Eastern and Southeastern Europe	NATO – North Atlantic Treaty Organization
CIT – corporate income tax	NBRM – National Bank of the Republic of North Macedonia
CPC – Commission for the Protection of Competition	NEET – Not in employment, education, or training
CSOs – civil society organizations	OECD – Organization for Economic Cooperation and Development
DB – Doing Business	OFA – Ohrid Framework Agreement
DEA – data envelopment analyses	OLS – Ordinary Least Squares
EBRD – European Bank for Reconstruction and Development	PES – Public Employment Service
EC – European Commission	PISA – Programme for International Student Assessment
ECA – Europe and Central Asia	PIT – Personal Income Tax
ECD – Early Childhood Development	R&D – Research and Development
ECE – Early childhood education	SCD – Systematic Country Diagnostic
ESA – Employment Service Agency	SEE – South East Europe
EU – European Union	SEZ – Special Economic Zones
EU28 – European Union	SFA – Social Financial Assistance
Eurostat – European Statistics Office	SILC – Survey on Income and Living Conditions
FAO – Food and Agriculture Organization	SME – Small Medium Enterprise
FDI – Foreign Direct Investment	SOE – State Owned Enterprise
GCI – Global Competitiveness Index	SSO – State Statistical Office
GDP – Gross Domestic Product	STEM – Science, Technology, Engineering and Mathematics
GIZ – German Corporation for International Cooperation	STEPS - Skills Towards Employment and Productivity Survey
GNI – Gross National Income	TFP – Total Factor Productivity
GMI – guaranteed minimum income	TIDZ – Technological Industrial Development Zones
GVC – Global Value Chains	TIMSS – Trends in International Mathematics and Science Studies
HBS – Household Budget Survey	UN – United Nations
HHI – Herfindahl-Hirschman Index	UNICEF – United Nations Children’s Fund
ICT – Information and Communication Technology	UNDP – United Nations Development Programme
ILO – International Labor Organization	UNESCO – United Nations Educational, Scientific and Cultural Organization
IMF – International Monetary Fund	USAID – United States Agency for International Development
IPA – Instrument for Pre-accession Assistance	VET – Vocational Education and Training
IPARD – Instrument for Pre-Accession Assistance for Rural Development	WBG – World Bank Group
IT – Information Technology	WDI – World Development Indicators
LFS – Labor Force Survey	WHO – World Health Organization
LGBTI – lesbian, gay, bisexual, transgender and intersex	WiiW –Vienna Institute for International Economic Studies
LITS – Life in Transition Survey	
LMIS – labor market information systems	

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1. Introduction

North Macedonia is today in a strong position to become a member of the European Union (EU) and to seize the new opportunities that the EU accession process will bring. The country's early market-oriented reforms, openness to trade, and prudent macroeconomic management created an environment of economic stability that helped to attract private investment and boost exports, particularly in manufacturing. In the last two decades, economic growth was the most stable in the Western Balkans, income per capita doubled, and the country moved from low-middle-income to upper-middle-income status. In addition, its strategic geographical location presents considerable opportunity, given the largely untapped export potential of its agriculture and services sectors. Finally, the recent agreement with Greece to solve the long-standing name dispute provides a new impetus to the integration process and the required reforms to make of the country a middle-income society.

Seizing the new opportunities requires tackling the country's most important challenges. Despite reforms, economic growth in North Macedonia has been lower than in peer countries, and close to one-fourth of the population lives in poverty. Jobs, the main way to prosperity for citizens of North Macedonia, remain scarce. Only 1 in 2 working-age people in North Macedonia are employed. Moreover, low birth rates and emigration are shrinking the size of the workforce. In terms of governance, the country trails peers in such categories as political stability, voice and accountability, rule of law, and control of corruption—the 2015-17 political crisis is a reminder of the importance of ensuring transparent and effective rule of law. Finally, key elements of the current economic model undermine its sustainability. Countercyclical fiscal policies helped to stimulate growth and employment, but fiscal buffers are dwindling and thus maintaining current public support to growth is neither desirable nor feasible. Meanwhile, the passive management of growing environmental threats like air pollution and natural hazards are significantly affecting the well-being of the population. Hence, taking full advantage of the new opportunities of joining the EU will only be possible if North Macedonia shifts gears towards becoming a more competitive, inclusive, and sustainable economy. Otherwise it risks losing even more of its workforce to emigration.

Among these challenges, the issue of youth unemployment remains paramount. Despite recent progress, North Macedonia continues to show very poor labor market outcomes, especially for the youth. Youth unemployment in North Macedonia is among the highest in the world (44 percent in North Macedonia in the first quarter (Q1) of 2018, compared to 15 percent in May 2018 in the EU), reflecting the challenges youth face to gain a foothold in the labor market. The poor labor market situation of young people is also reflected in high rates of the youth population not in education, employment or training (NEET). In 2017, the NEET rate was 24.9 percent in North Macedonia. The grim prospects for youth represent a challenge for inclusive growth and poverty reduction, as prolonged spells of unemployment and inactivity in these early years negatively affect subsequent labor market outcomes.

This results in human capital and GDP losses both in the short-run (unemployment) and longer run (lower levels of human capital). Pastore (2018) highlights that the main driver of higher unemployment rates among youth worldwide, despite higher levels of education compared to older generations, is their lack of the other two components of human capital: general and job-specific work experience. Pastore (2018) calls this phenomenon the “youth experience gap” and Bell and Blanchflower (2015) note that this lack of work experience may generate an experience trap. Firms are in search for experienced workers, which prevents young people from gaining the work experience that firms require. Unemployment

therefore causes a process of deskilling from the supply side (Blanchard and Diamond, 1994). As the unemployed cannot use their skills because they are unemployed, their human capital depreciates and their productivity declines, which further decreases their likelihood to be employed and accumulate skills. On the demand side, employers see unemployment as a negative signal (a lack of motivation and low productivity) and are reluctant hire workers that have been unemployed for some time.

In this context, this report aims at providing concrete proposals as solutions to youth unemployment, with a special emphasis on the education-to-work transition. This activity builds on existing analytical products and on original analytics to provide an overview of youth labor markets in North Macedonia. The activity also seeks to identify key policy instruments in North Macedonia that may positively impact the education-to-work transition of youth, the importance of each have been consulted with policy makers and relevant actors. The findings of these analyses and consultations are summarized in recommendations on a subset of policy instruments with potential to improve the education-to-work transition of youth. This activity is part of a regional activity on Growth and Jobs in the Western Balkans and is closely related to the activity on Growth and Jobs Action Plan in North Macedonia. The focus of this report is mainly on barriers on the supply side, as the Growth and Jobs Action Plan in North Macedonia covers issues related to job demand.

2. Stylized facts about Youth Unemployment in North Macedonia

a. Youth Unemployment Remains Persistently High

Youth unemployment and inactivity levels have remained stubbornly high in North Macedonia in recent years, despite recent improvements in labor markets indicators. The youth unemployment rate (15-29 years), altogether with other labor market indicators, has improved considerably during the past decade. Youth unemployment averaged 39.2 percent in 2017, compared with 17.7 percent among 30-64 years old. In 2017, the youth unemployment rate was 13.0 percentage points lower than in 2006 (Figure 1). Similarly, the non-youth unemployment rate (30-64 years) fell by 12.8 percentage points over the same time period. This drop was driven by a rise in employment among participants in the labor force, while the overall labor force participation remained constant. Inactivity, as measured by the share of youth not in employment, education or training, has remained high at about 32 percent in 2017.

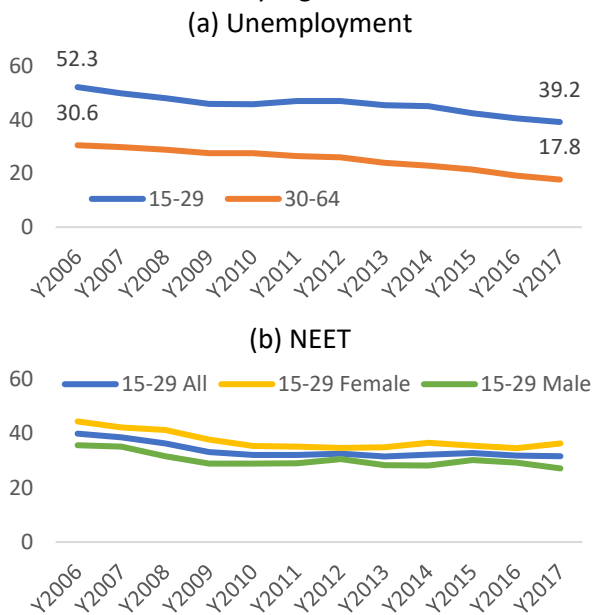
The observed levels of youth unemployment situate North Macedonia as one of the worst labor market performers in Europe. Compared to other countries in the Euro-zone and the Western Balkans, North Macedonia shows one of the worst performances in labor market indicators (Figure 2). Countries in the EU15 group¹, as well as the EU new member states² (EU-NMS) show considerably lower unemployment rates than those observed in the Western Balkans economies, in general, with the only exception of the southern economies in Europe (Spain, Greece and Italy), where unemployment rates above 10 percent for the adult population are also observed. Among the Western Balkans economies, North Macedonia only performs better than Kosovo and Bosnia and Herzegovina. These results highlight that the issue of high youth unemployment cannot be disconnected from the overall performance of labor markets and suggest that issues that affect the unemployment of the whole population are also at play to explain the high unemployment rates for the youth. Those issues are explored at more detail in the Growth and Jobs Action Plan activity, and the results obtained from that analysis are also pertinent for finding solutions to

¹ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

² Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

youth unemployment. However, for this note, we will focus on the issues related to the transition from school to work, a topic that affects mainly youth and that can help to narrow the distance between the youth unemployment rates and those observed for the rest of the labor force.

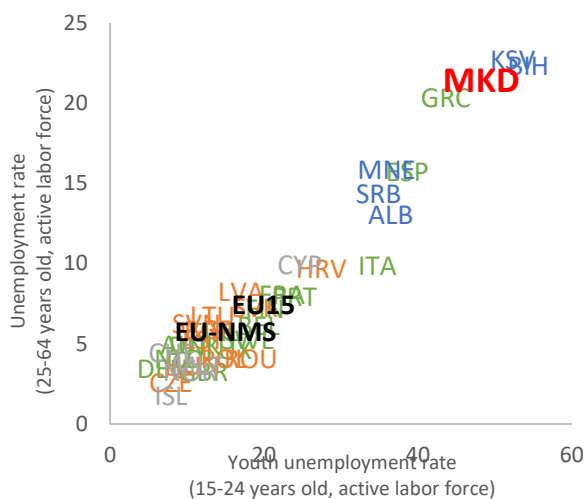
Figure 1: Youth unemployment and inactivity have remained at very high levels since 2006...



Source: WB calculations based on Labor Force Survey 2006-2017

Figure 2: ... placing North Macedonia as one of the worst performers in Europe

Youth and adult unemployment rates (as percentage of labor force)



Source: Eurostat and SEE Jobs Gateway Western Balkans Labor Market database

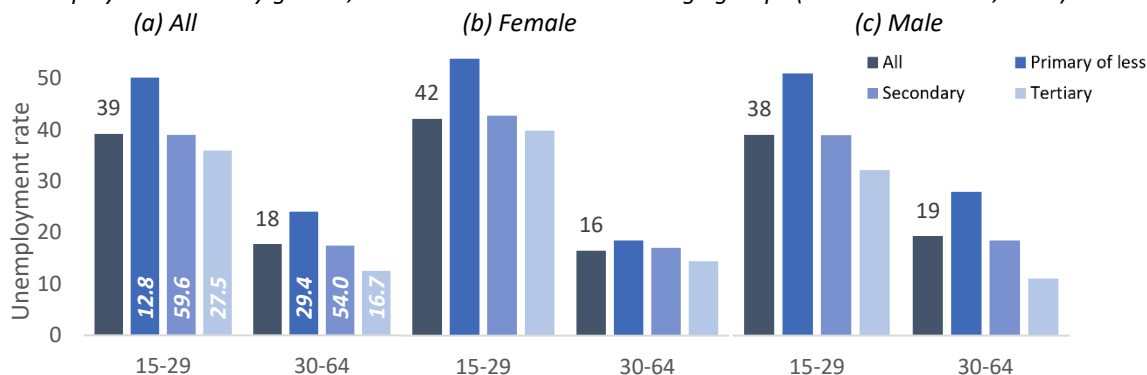
The high levels of youth unemployment can be both the cause and consequence of massive emigration by skilled youth. Based on census data from destination countries, current emigrants from North Macedonia already constitute 25 percent of the population, and the number has been rising over the past 10 years (North Macedonia Systematic Country Diagnostic), constituting an estimated 32 percent of the country's high-skilled workers. Analysis of data from LinkedIn (North Macedonia SCD) shows that the most frequent emigrants are workers with managerial, research, and leadership—mostly cognitive and interpersonal—skills, thus their departure is a severe loss to prospects of productivity growth. Massive immigration also has implication on the interpretation of the findings regarding the unemployment of youth that remain in the country. As youth that migrate abroad tend to be positively selected in terms of skills, those remaining in the country tend to be more the more disadvantaged, and the most prone to unemployment. Massive emigration therefore leads to compositional change of the youth workforce in North Macedonia, which can drive up the unemployment rate. There is need for further analyses in the respect, potentially using data from the planned 2020 population census, to understand better the magnitude of youth emigration and the profile of those leaving.

b. Not All Youth Are Equally Affected by Unemployment

Low-educated women are the most affected by youth unemployment, albeit in absolute numbers they are a small share. Youth unemployment (15-29 years) is higher among women than among men (42 vs. 38 percent of active young population). In contrast, among the older population (30-64 years) there inverse is true, with female unemployment lower than male unemployment (16 percent vs. 19 percent).

With respect to educational attainment, both youth and non-youth unemployment rates are higher among the low educated (primary education or less). In fact, half of the active young with primary education are unemployed. For other levels of education, while the rates are also high, they are still lower—39 percent for those with secondary education and 36 percent for those with tertiary education. The low educated (primary education or less) are however, in absolute numbers, a small share of the unemployed. Among the 15-29 years old, the low educated are less than 13 percent of the total unemployed.

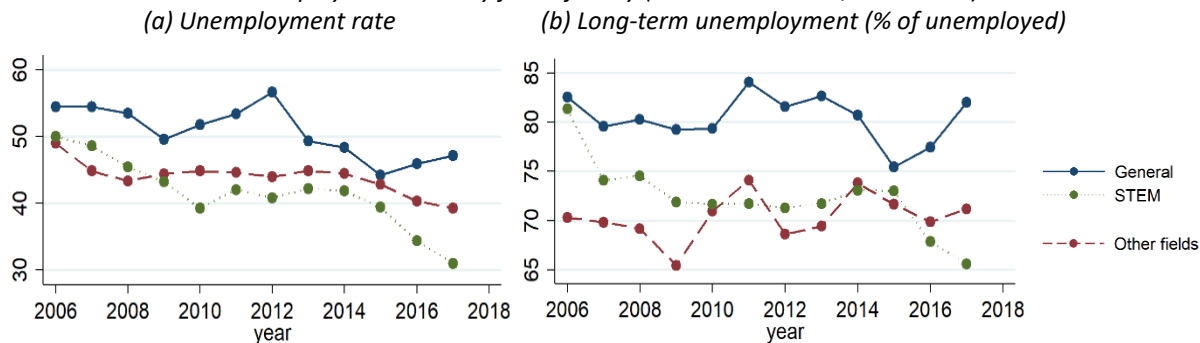
Figure 3: Women and those with low education show the highest rates of youth unemployment
Unemployment rates by gender, educational attainment and age groups (North Macedonia, 2017)



Source: WB calculations based on Labor Force Survey 2017. White numbers in bars indicate share of the unemployed.

Graduates from Science, Technology, Engineering and Mathematics (STEM) have seen significant improvements in unemployment in recent years, despite the general high levels of youth unemployment. Youth unemployment rate is also related to the field of education, with lower unemployment among young people with STEM education (31 percent) and higher unemployment among young with general education (47 percent). The youth unemployment rate decreased between 2006 and 2017 by 11.3 and 7.3 percentage points among STEM educated and those with general education, respectively, which suggests that STEM educated have especially benefited from recent employment growth. A similar pattern is observed for other age groups.

Figure 4: STEM educated have particularly benefited from recent employment growth
Unemployment rates by field of study (North Macedonia, 2006-2017)

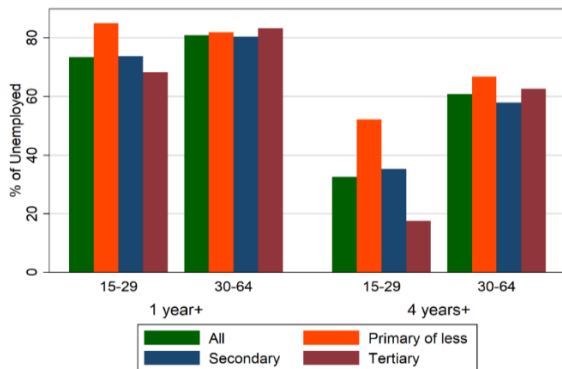


Source: WB calculations based on Labor Force Survey 2006-2017. Age 15-29 years old.

Youth unemployment spells are long. Landing a stable job for the youth takes considerable time--it takes a young person on average 31 months (2.5 years) from the time of graduation to attainment of a job either that is considered as stable or satisfactory. The share of long term unemployed among the youth, as defined by being actively looking for a job for more than 12 months, ranges between 65 and 85 percent of the unemployed, depending of educational attainment (Figure 5). These rates are close to those reported for the 30-64 age group, signaling that the issues that determine the long search spells for the older group also permeate into the younger age group. In term of dynamics in time (2006-2016), the share of long term unemployed (with respect to the unemployed) has declined slightly for the low-educated (primary and secondary education), while for workers with tertiary education it has increased and is showing an upward trend (Figure 6). The declining trend in youth unemployment in the same period (Figure 1) seems to have benefited more the short-term unemployed with tertiary education.

Figure 5: Close to 3 out of every 4 youth unemployed have been looking for a job for more than a year

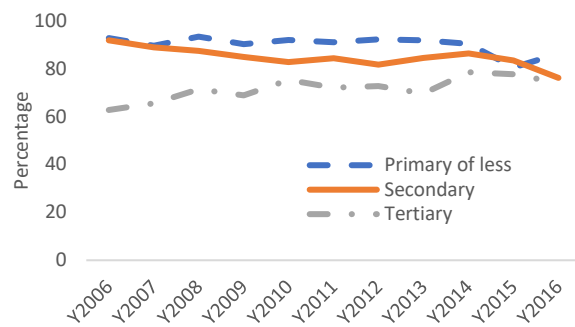
Long-term unemployment by educational attainment and age group (share of the unemployed)



Source: WB calculations based on 2017 LFS

Figure 6: Long-term unemployment has remained the most prevalent form of unemployment since 2006

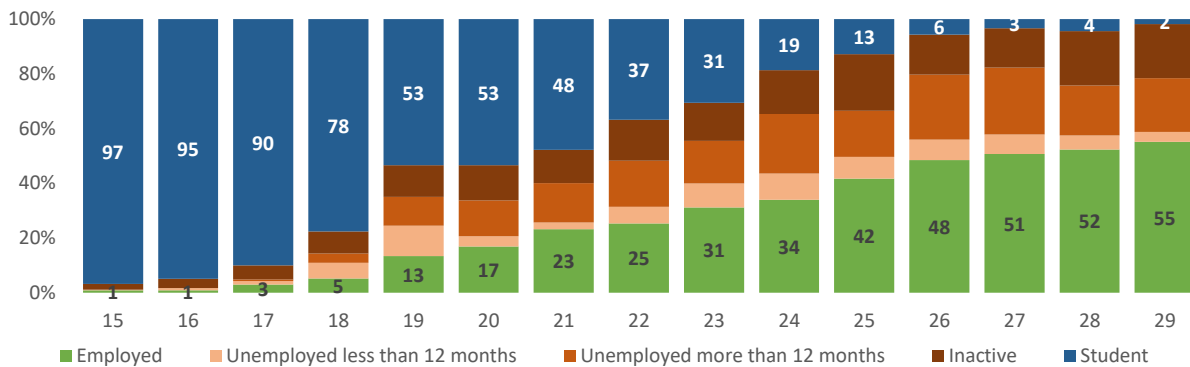
Unemployed more than 12 months (As a percentage of the unemployed, age 25-29)



Source: WB calculations based on 2006-2016 LFS

Figure 7: Only in late-20s are chances of young workers to find a job higher than staying unemployed or inactive after school

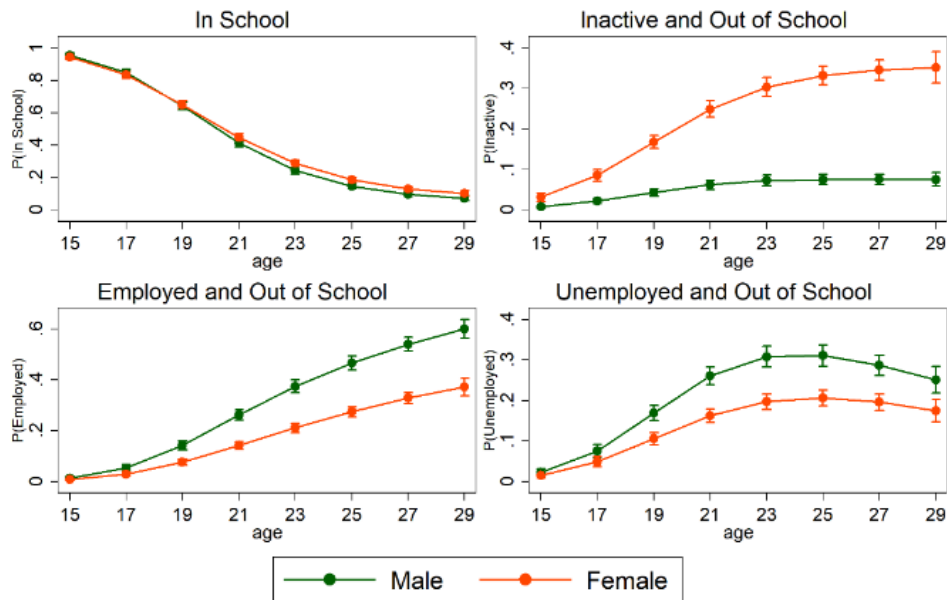
Transition from Education to Employment (2016)



Source: WB calculations based on 2016 LFS

While chances of being employed increase with age, only after age 26 are out of school youth more likely to be employed than unemployed or inactive. At age 18, the share of students is 18.5 percentage points lower than at age 17, while the shares of employed, unemployed and inactive are 4.2, 5.7 and 8.3 percentage points higher, respectively, than at age 17 (Figure 7). This may suggest that young people who complete education early (at age 18) are most likely to move into inactivity. Those who complete education at 19 years old are most likely to move into unemployment (at age 20 the share of students is 20.1 percentage points lower than at age 19 and the share of unemployed is 13.3 percentage points higher). At age 23 the share of students is 20.2 percentage points lower than at age 22 (age of college graduation), while the shares of employed and unemployed both increase by 9.9 percentage points. This may suggest that high-educated are as likely to move into unemployment as into employment. The share of students is 21.8 percentage points lower among 29 years old than among 24 years old, while the share of employed is 21.1 percentage points higher, this suggest that the young with high educational level are most likely to move into employment even if the transition is slow. The tipping point in which out of school youth are more likely to be employed than not is when reaching 26 years. From that point on, chances of being employed increase, peaking at 55 percent employment.

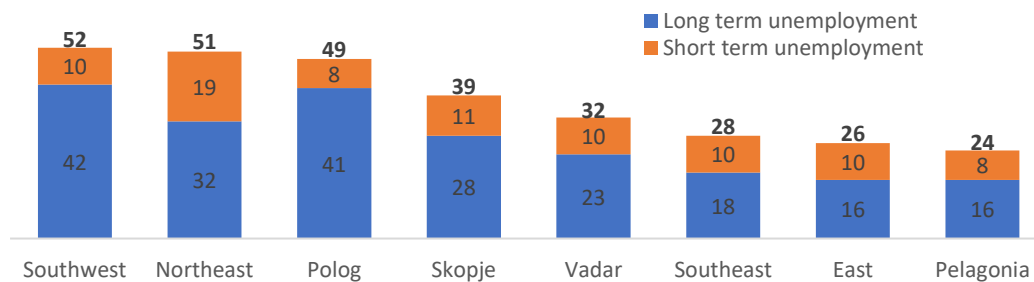
Figure 8: Finding a stable job can take more than two years after graduation
Expected Probabilities of Labor Market Status for the Youth, by age and gender (2017)



Source: WB calculations based on 2017 LFS. Predicted probabilities based on multinomial logistic model.

Women are more likely to transition into inactivity after leaving school. After controlling for other characteristics, the expected probabilities of women entering inactivity after leaving school are considerably higher than for men (Figure 8). The distances of these probabilities between men and women expand especially between 17 and 23 years of age, after the statutory ages for secondary education. Men show an almost flat probability of becoming inactive, regardless of age, and higher probabilities of becoming employed or unemployed after leaving school.

Figure 9: Youth unemployment rates vary considerably by regions
Youth unemployment rates, by region and length of unemployment



Source: WB calculations based on 2017 LFS. Number above bars represent total youth unemployment by region.

Table 1: Differences in youth unemployment rates by gender and education persist even after controlling by differences in other characteristics.

Unemployment Incidence: Logistic Regression Results (Marginal Effects)

Dependent variable: Unemployed (vs. Employed)	Marginal Effect
Age	-0.0254***
Female vs. Male	0.0613***
Rural vs. Urban	-0.0546***
Educational Level	
Secondary Education vs. Primary	-0.0724**
Tertiary Education vs. Primary	-0.0769*
Field of Education	
Other Fields (not STEM) vs. General	-0.0291
STEM vs. General	-0.0770***
Region	
Vardar vs. Skopje	-0.0548*
East Region vs. Skopje	-0.111***
Southwest Region vs. Skopje	0.146***
Southeast Region vs. Skopje	-0.115***
Pelagonia Region vs. Skopje	-0.139***
Polog Region vs. Skopje	0.126***
Northeast Region vs. Skopje	0.126***
Observations	4,836

Note: only active individuals with age 15-29 years old included. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Regional disparities in youth employment are striking, with some regions showing youth employment rates considerably lower than the national average. Albeit youth unemployment is high across all regions in North Macedonia, the spatial distribution of unemployment rates is not uniform. Comparing urban and rural areas, the youth unemployment rate was 9.8 percentage points higher in urban areas than in rural areas in 2006. Since 2017 this gap has narrowed and averages 1.1 percentage points. In terms of regional distribution, the Southwest, Northeast and Polog regions show the highest incidence

of youth unemployment, with the majority of these unemployed looking for a job for more than one year (Figure 9). The Southeast, East and Pelagonia, in contrast, show youth unemployment rates considerably lower than the rest of the country. This suggests some potential gains for youth to migrating from areas with high unemployment to areas where more jobs are available.

Differences in youth unemployment rates by gender, educational level and field of specialization persist even after controlling for differences in other characteristics. We analyze the probability of youth unemployment conditional on being active by estimating binomial logistic regression (Table 1). The results suggest that active women are 6.1 percentage points more likely to be unemployed than active men with similar characteristics. In terms of location, economically active rural inhabitants are, on average, 5.5 percentage points more likely to be employed than urban inhabitants with similar characteristics. Young people with medium and high education are, on average, 7.2 and 7.7 percentage points, respectively, less likely to be unemployed than the low-educated young; the effect of education does not vary significantly by gender.

STEM graduates are relatively protected against unemployment compared to graduates in other fields. The field of specialization has a significant effect on the probability of being unemployed; having STEM (instead of general education) education reduces the probability of being unemployed by 7.7 percentage points. More detailed analysis of education suggests that the fields of education related to the social sciences (e.g., teacher education, humanities) are associated with the highest incidence of unemployment, while the fields related to science, math, and computing are associated with the lowest unemployment probability, see Figure 13.

Table 2: Differences in youth unemployment rates by gender and education persist even after controlling by differences in other characteristics.

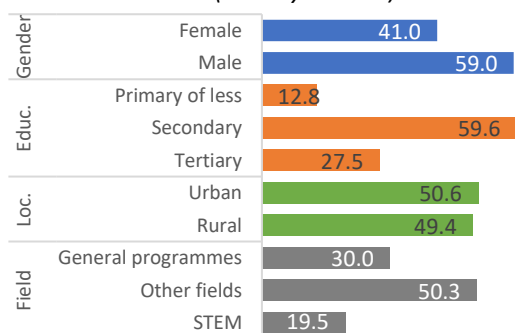
<i>Unemployment Duration: OLS estimates</i>		
Dependent variable: Months in unemployment	15-29 years old	30-64 years old
Female vs. Male	-6.207*** (1.780)	14.68*** (4.489)
Rural vs. Urban	1.618 (1.911)	6.052 (4.649)
Educational Level		
Secondary Education vs. Primary	-11.53*** (3.666)	-24.78*** (6.919)
Tertiary Education vs. Primary	-38.41*** (4.261)	-41.74*** (8.920)
Field of Education		
Other Fields (not STEM) vs. General	-0.242 (2.490)	4.670 (6.839)
STEM vs. General	-8.392*** (2.821)	8.446 (6.976)
Observations	1,858	3,108
R-squared	0.307	0.085

*Note: Only unemployed individuals are included. Regressions includes age, age squared and region fixed effects in addition to variables presented. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*

Educational level and field of education play an important role for the length of unemployment, even after controlling for other factors. We analyze the unemployment duration (months in unemployment) of the young using linear regression of unemployment duration (in months) on educational level and field, gender and location (Table 2). The results suggest that the educational level and field have a large effect on unemployment duration. In particular, the young with secondary education, on average, stay one year less in unemployment than those with primary education with similar characteristics; the young with tertiary education stay in unemployment, on average, 3.2 years less than those with primary education. The magnitude of the effect of educational level on unemployment duration is similar when we control for the time individual was out of school proxied by age-6-years of education. In terms of the educational field, the young with STEM education stay, on average, 8.4 months less in unemployment than those with general education. Young women stay unemployed, on average, 6.2 months less than men with similar characteristics. There are no significant differences in average unemployment duration by geographical location. In terms of regions, in Skopje, Polog, and Vardar the unemployment duration is longer than in other regions.

Figure 10: Youth unemployed are more likely to be males with secondary education and specialization in non-STEM fields

Distribution of the Youth Unemployed (15-29 years old)



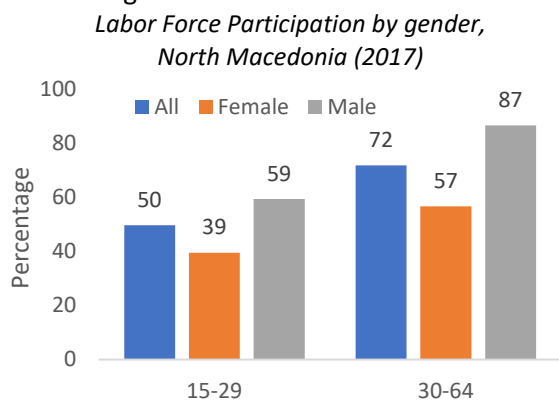
Source: WB calculations based on 2017 LFS.

In terms of the composition of the youth unemployed as a group, they are more likely to be males with secondary education and specialization in non-STEM fields. The majority of the unemployed youth has secondary levels of education (60 percent). Among the young unemployed, 13 percent were low-educated and 28 percent were high-educated. While the majority of unemployed were men (60 percent), the great majority of inactive were women (79 percent). In terms of location, 49 percent of unemployed inhabited in rural areas.

c. Youth attachment to labor markets is weak

Youth in North Macedonia does not only find it difficult to obtain employment but is also largely detached from labor markets. Youth in North Macedonia does not only find it difficult to obtain a job, but their participation indicators are also low. Only half of those between 15 and 29 years old are active in the labor market. Among those in that same age group, over 30 percent are not in employment, education or training (NEET), a worrisome indicator that indicates that a large share of these workers may face difficulties later in their work life to integrate and sustain incomes.

Figure 11: Activity rates are lower among women than among men

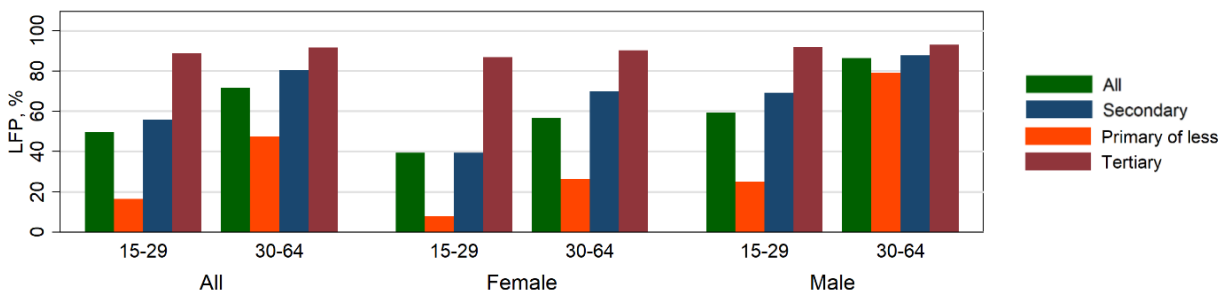


Source: WB calculations based on 2017 LFS

Activity rates are lower among women than among men, albeit gender gaps in activity rates (difference between male and female labor market participation) is still larger among the 30-64 years old. The gender gap in activity rates in 2017 was 19.9 and 29.9 percentage points for those 15-29 and 30-64 years old respectively. Among those in the 15-29 years old group, only 23.4 percent of women participated in the labor market. This gender gap has been widening since 2012 for the young (15-29 years), but it has been narrowing for the older population (30-64 years).

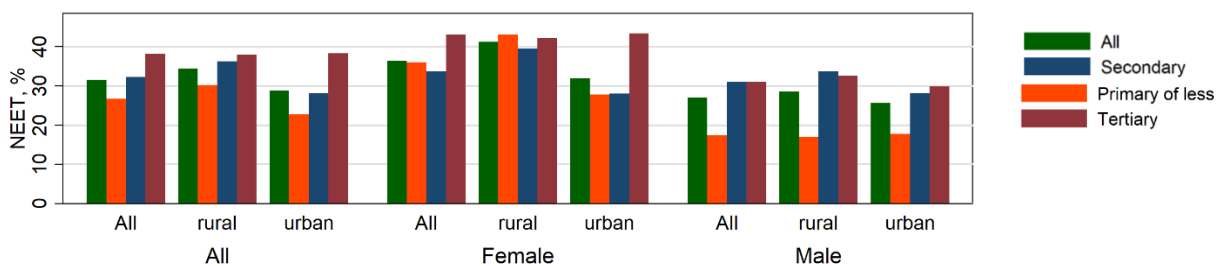
The youth labor force participation rate in North Macedonia is strongly related to the level of education, where 88.9 percent, 56.0 percent, and 16.5 percent of the young with completed post-secondary, secondary, and primary education, respectively, participated in the labor market (Figure 12). The activity rates of the low educated young people (15-29 years) decreased during the past decade from 34.4 percent in 2006 to 16.5 percent in 2017, while the activity of high educated young remained almost constant. Non-youth labor force participation rates (30-64 years) remained almost constant for all educational levels, at about 47.5 percent of those with primary education, 80.5 percent of those with secondary education, and 91.6 percent of those with tertiary education participating in the labor market. Activity rates for the young are more related to the educational level than activity rates for older population, especially for men.

Figure 12: Youth labor force participation is strongly associated with educational attainment



Source: WB calculations based on 2017 LFS

Figure 13: North Macedonia shows high rates of youth population not in education, employment or training (NEET)



Source: WB calculations based on 2017 LFS

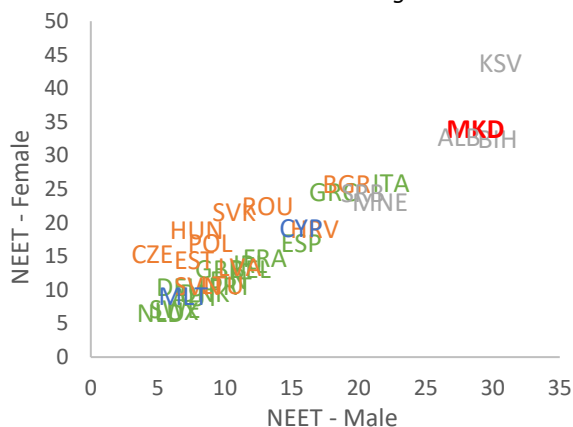
The poor labor market situation of young people in North Macedonia also reflects in high rates of youth population not in education, employment or training (NEET). NEET rate (15-29 years) decreased by 8.3 percentage points since 2006 and averaged 31.6 percent in 2017; yet it is far above the level of EU peer countries. The NEET rate was higher among women (36.6 percent in 2017), young with completed post-secondary education (38.2 percent in 2017), and those living in the rural areas (34.4 percent in 2017).

In fact, North Macedonia has the second highest share of idle youth in Europe—especially female youth. The share of youth not in employment, education or training is substantially higher in North Macedonia than countries in the EU15 area and the new member states of the European Union. Only Albania and Bosnia and Herzegovina show comparable rates, and Kosovo is the only country with higher NEET rates for female youth.

In terms of the composition of the youth NEET as a group, compared to the youth employed population, they are more likely to be females with lower educational attainment. In 2017, 26 percent of young people (15-29) not in employment, education or training (NEET) had primary education or less, about 20 percent had post-secondary education completed and the majority (54 percent) had only secondary education completed. Employed young people had, on average, higher level of education than NEETs: 33 percent of the employed young had tertiary education completed, 59 percent had only secondary education completed, and 9 percent had only primary education or less. As for field of education, the share of those who had general education instead of some specific field of education was considerably higher among NEETs with secondary education than among employed young with secondary education (31.4 percent vs. 20.2 percent). On the other hand, the share of STEM educated was lower among young NEETs with secondary education than employed young with secondary education (24.1 percent vs. 37.8 percent). The share of STEM educated (versus other background) was also lower among NEETs with tertiary education than among employed with tertiary education (12.5 percent vs. 21.3 percent), see Figure 15. While the majority of NEETs had general education, the most frequent background among those employed young people was engineering (23 percent). Among the employed youth (15-29 years) there are less women than men (37 percent vs. 63 percent). In terms of location, in 2017, 46 percent of NEETs and 49 percent of employed young people lived in urban areas.

Figure 14: Idleness among youth is one of the highest in Europe

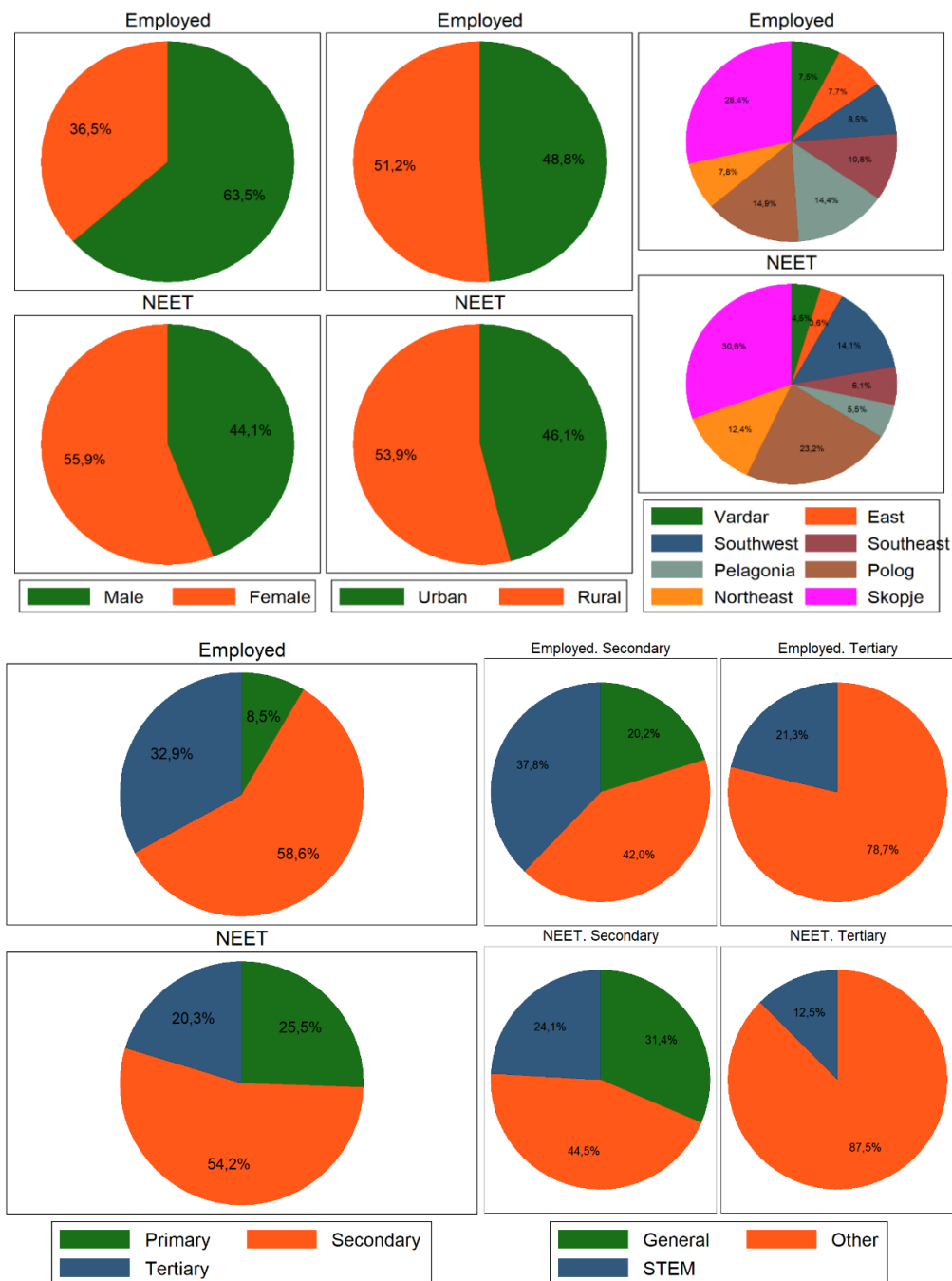
Percentage of Youth (15-29) Not in Employment, Education or Training



Source: Eurostat and SEE Jobs Gateway Western Balkans Labor Market database

Figure 15: Youth NEET are more likely to be females with lower educational attainment, compared to the employed youth population.

Distribution of the Youth Employed and NEET



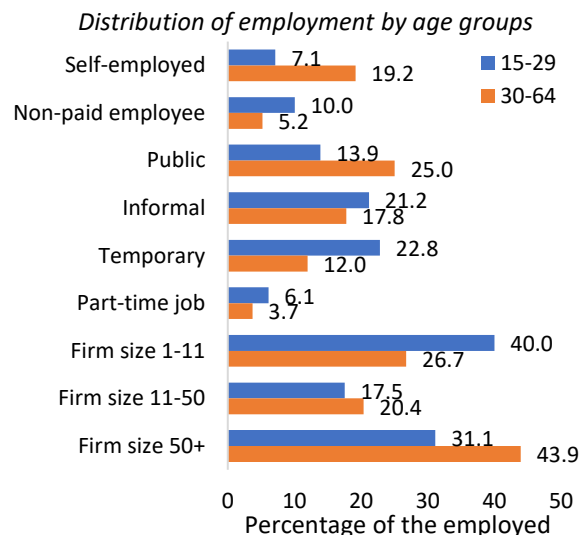
Source: WB calculations based on 2017 LFS

d. Employment quality for the working youth is lower than for older workers

While the share of self-employed among the youth is lower than among older workers, they have a larger share of unpaid workers. The share of self-employed young people in North Macedonia averaged 7.1 percent in 2017, while the share of self-employed among older population (30-64 years) was almost three times larger (19.2 percent) (Figure 16). Youth self-employment decreased during the past decade,

from 11.3 percent in 2006 to 7.2 percent in 2017, while the share of self-employed among the older employed population remained almost constant at about 19.5 percent. The share of self-employed young people is higher among men (9.9 percent of employed) than among women (2.4 percent of employed), and it is higher among low educated young people (23.9 percent) than among medium (6.3 percent) and high educated (4.4 percent), see Figure 15.

Figure 16: Employed youth tend to find jobs with worse characteristics than the older workers



Source: WB calculations based on 2017 LFS.

Young people were more likely to work in small firms than were older workers.

Most of young (40.0 percent) were employed in firms with less than 11 employees, 17.5 percent were employed in firms with 11-50 employees and 31.1 percent were employed in firms with more than 50 employees. In contrast, most of older workers (43.9 percent) were employed in big firms. The employment composition by firm size changed during the past decade, the share of young employed in small firms declined by 11.2 percentage points since 2006 and the share of young employed in big firms increased by 4.6 percentage points during the same period.

Young were less likely to be employed in the public sector than were older workers.

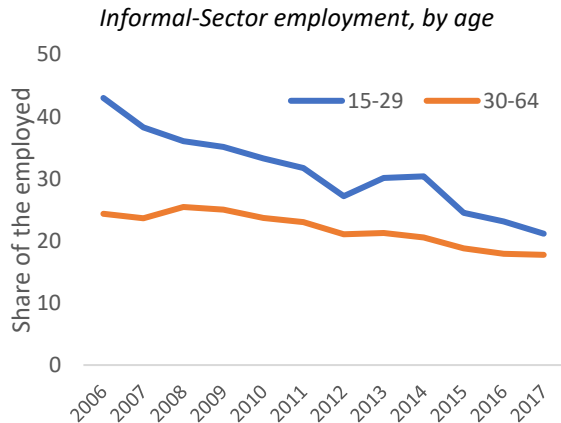
The share of employment in the public sector decreased during the past decade from 17.0 percent in 2006

to 13.9 percent in 2017 for young workers, and from 38.6 percent in 2006 to 25.0 percent in 2017 for older workers. The share of employment in the public sector among young people with high education experienced the sharpest reduction, it declined by 19.9 percentage points between 2006 and 2017, and yet high educated young people are considerably more likely to be employed in the public sector than those with low and medium education. A similar relationship between education and public sector employment is observed for older workers.

The share of temporary employed people is higher among the young than among older workers, and about half of the low educated young workers have a temporary contract.

In 2017, 22.8 percent of young workers had temporary contracts, while for older workers this figure is 12.0 percent. Youth temporary employment was slightly higher for men than for women (24.2 percent vs. 20.7 percent in 2017) and it was considerably higher among low educated young workers (52.1 percent) than among medium and high educated (21.7 percent and 20.0 percent, respectively). Only 6.1 percent of young workers and 3.7 percent of older workers had part-time contracts, with higher part-time employment for low educated young workers (15 percent).

Figure 17: Despite improvements, informal work is still considerable among youth



Source: WB calculations based on 2006-2017 LFS

Young people are more affected by informal employment than older workers, but this gap has narrowed significantly during the past decade.³

The share of informal-sector employment was on decline during recent years and it fell most for young workers, from 43.0 percent in 2006 to 21.2 percent in 2017 (Figure 17). In contrast, the decrease was moderate for older workers, from 24.4 percent in 2006 to 17.8 percent in 2017. In 2017, the incidence of informal employment among young people was 9.6 percentage points higher for males than for females, while among older population the gender difference (male – female) was 3.2 percentage points. Informal employment is substantially higher among low-educated workers and rural inhabitants of all age

groups. Most young people working in the informal sector were unpaid workers (55.2 percent), about 33.1 percent were paid employees, 11.6 percent were self-employed. In contrast, the majority of older informal-sector workers were self-employed (46.3 percent), about 32.8 percent were unpaid workers, and 20.8 percent were paid employees. In 2017, 10.1 percent of employed young people were unpaid family workers and 5.2 percent of older employed population. The share of unpaid family workers among young has decreased by 11.3 percentage points since 2006 and it decreased by 2.4 percentage point among older workers.

3. A framework to tackle slow school-to-work transitions

A simplified framework is proposed to help articulating the analysis about constraints to youth employment in North Macedonia. In standard models of labor markets, unemployment levels are determined by labor demand and supply and by the degree of efficiency of intermediation and information flows between the two sides of the labor market, as well as labor market institutions and regulations that encompass the entire labor market.

On the labor supply side, human capital can be classified in three components: education, general work experience and job-specific work experience. General work experience includes the ability to cope with the functional distribution of tasks within an organization, to respect deadlines and the internal hierarchy of an organization. All these skills can be learned in any type of job and are easily transferred from one job to another. Job specific work experience comprises specific skills that can only be gained and used in a given type of job. They include the ability to carry out specific types of task, such as, say in rural areas, harvesting, feeding livestock and so on.

On the demand-side, enough jobs need to be created to absorb new labor market entries by youth. The dynamism of job creation is influenced by a multiplicity of factors that are not necessarily specific to youth job creation. Those include the ease of doing business, the dynamics of entrepreneurship in the country,

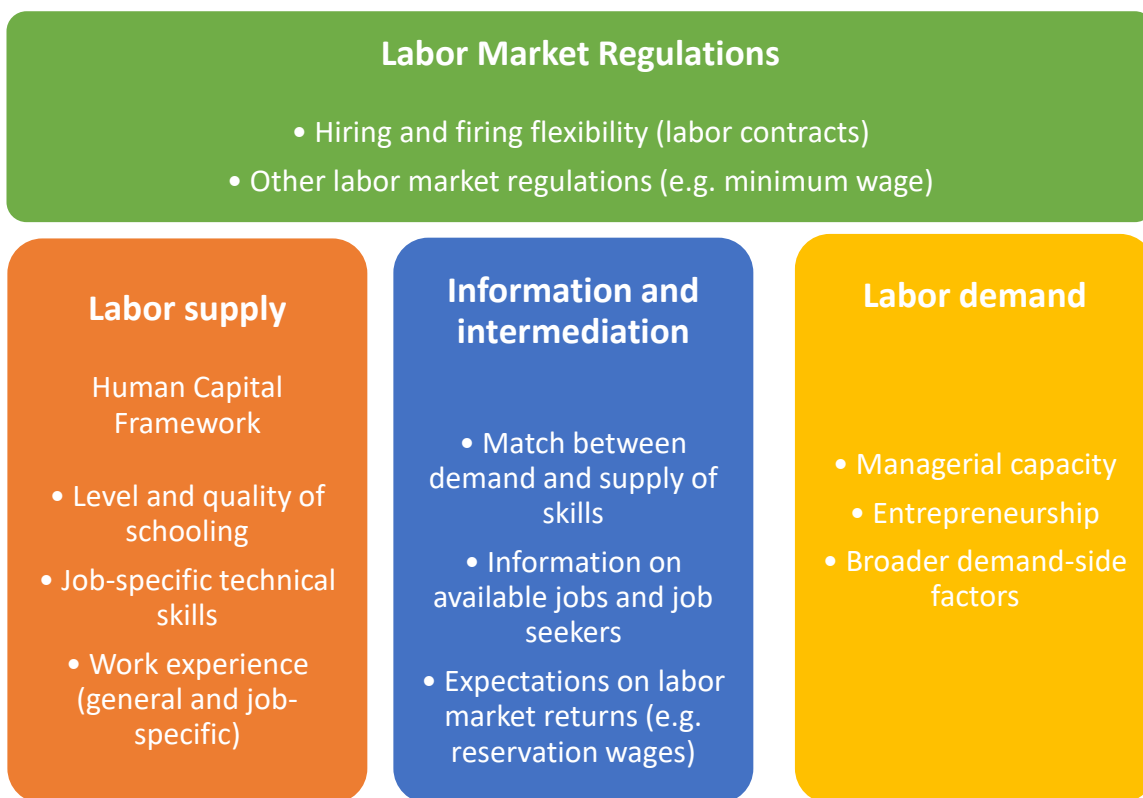
³ We use the International Labor Organization (ILO) definition for informal employment. Accordingly, informal employment covers (1) Self-employed in unregistered businesses, (2) Wage workers without written contract and, (3) Unpaid family workers.

firm managerial capacity and the human capital of entrepreneurs as well as broader demand-side factors such as the broader macroeconomic environment and the investment climate.

Adequate labor market information and intermediation are also critical. Efficient matching mechanisms need to be in place for the demand and supply to adequately meet. In the presence of asymmetries of information between labor demand and supply, a firm and jobs seeker that would potentially be a productive match may not meet. More generally, if flows of information are not circulating well in the labor market and in the economy overall, this could lead to frictions and sub-optimal decisions from both workers and firms. For example, youth may have unrealistic expectations on wages that prevail in the market after graduations, and therefore not be able to find employment at their reservation wages. Similarly, they may also choose fields of study that are in demand by employers, resulting in an oversupply of graduates in certain fields and in an undersupply in other fields.

Finally, conducive regulations can help grease the wheels of the labor market. Conducive labor market regulations are particularly important for youth employment, as information asymmetries about workers' productivity are particularly strong for young workers, and employers may therefore more cautious about hiring youth. As a result, labor policies such as an adequate level of the minimum wage and flexibility in hiring and firing workers can help facilitate the hiring of youth by employers, and need to be designed with particular caution.

Diagram 1: Proposed organizational framework to address constrains to increase youth employment



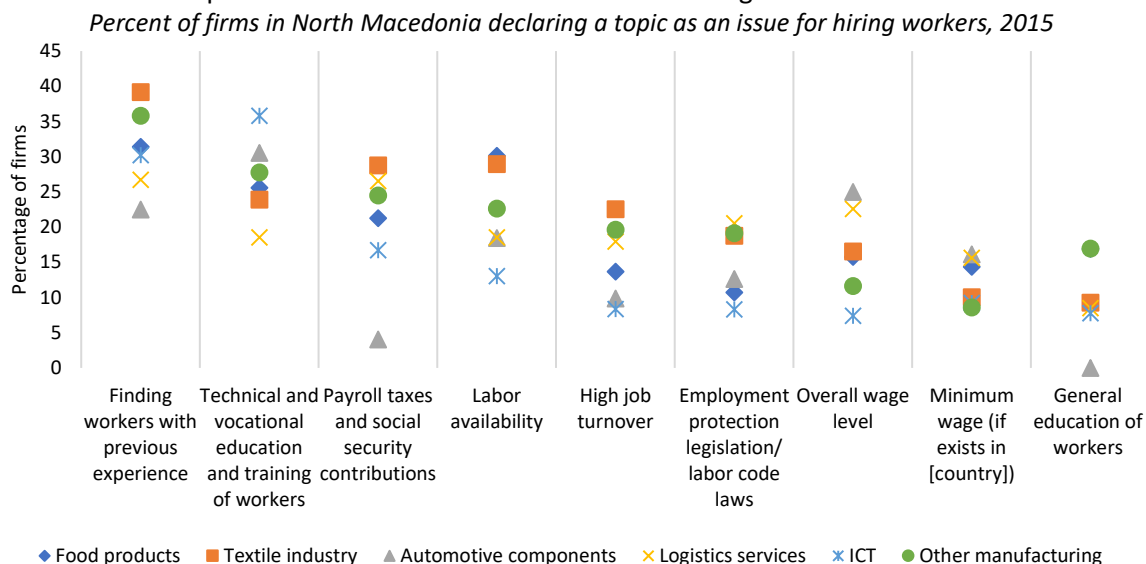
This report focuses on labor supply, labor market intermediation and information, and labor market regulations. The fourth block - labor demand – is covered by an analysis for the Growth and Jobs Action Plan.

4. Identified priority areas

a. Priority Area 1. Youth labor market experience acquisition

Lack of experience among young workers is as a key constraint for firms intending to hire. Low employment levels in North Macedonia are an indication of issues in labor demand and supply, but even when firms are willing to hire new employees, they face severe constraints. According to the employer STEP survey, while only 25 percent of firms had recently tried to hire workers (most of these positions in the automotive industry), close to a third of those firms had difficulties finding workers with the relevant previous experience (Figure 18), and this represented the most important constraint faced among other nine relevant issues questioned. In fact, this view is also shared by the supply side of the market--youth in North Macedonia also attribute their low employment rates to a lack of work experience (World Bank, 2014)

Figure 18: Lack of experience of the labor force is a critical shortage for local firms



Source: Koettl et al. (2017), based on STEP survey.

Reviews of the literature on active labor market program (ALMP) evaluations have found that on-the-job training programs render positive outcomes in the mid-term. A meta-analysis of existing evaluations of ALMPs found that on-the-job training programs appear to be particularly likely to yield more favorable medium-term than short-term impact estimates (Card et al. 2010). Consistent with earlier summaries, the analysis suggests that subsidized public sector employment programs are relatively ineffective, whereas job search assistance (JSA) and related programs have generally favorable impacts, especially in the short run. Classroom and on-the-job training programs are not particularly effective in the short run but have more positive relative impacts after two years.

In recent years, several ALMPs were implemented to address the issue of lack of work experience of graduates. This mainly involves the Internship Programme which aims at helping young people gain work experience with the private sector employers. It is expected to improve their employment prospects and is similar to the traineeship programme implemented in the EU. The target group are unemployed young people aged up to 29 years who have completed secondary or tertiary education and are registered as unemployed. Employers who are interested in receiving interns apply to the Employment Service Agency (ESA) and provide a programme of training for them.⁴ The evaluation study, which assessed the internship programme in 2010 and 2012 (Mojsoska-Blazevski and Petreski, 2015), showed that it improves the employment prospects of participants, increasing their employability by 25 to 31 percentage points (in 2010 and 2012, respectively) compared to non-participants (control group).

Despite this evidence and initiatives, the coverage of internships remains low. Since 2012, there is a mandatory requirement that each student in North Macedonia undertakes at least 1 month of internship, at each year of study, to accumulate 3-4 months of internship while studying (depending on the length of studies). However, and in spite of the evidence pointing at their potential to smooth school-to-work transition, programs that provide on-the-job training like internships and apprenticeships have only limited coverage. In fact, one third of VET students and higher education graduates do not participate in any internships while studying (Tracer study 2014/2015, ETF, 2017), although internships are compulsory. Furthermore, only 36 percent of TVET students currently have work-based learning in firms (North Macedonia VET center), leaving close to two thirds of TVET students without critical early experience that could facilitate landing a secure job. Currently, VET and university class schedules are not very well aligned with employers' needs for interns, which could partly contribute to the low intake and could be relatively easily adjusted. Additionally, there is currently limited cooperation between higher education institutions and employers which could both affect the intake of interns by employers, but also the quality of the internships and its usefulness in improving the youth labor market (Mojsoska-Blazevski and Bartlett, 2016).

In an economy dominated by small firms, the absorption of interns and the provision of work-based learning is however limited, and incentives are currently lacking. Small firms typically report lacking incentives to take-up up interns due to small perceived returns as well as the opportunity costs and fixed costs associated with training interns. Firms also report to have limited incentives in providing work-based training due to the risks associated with the use of equipment by untrained students and due to the limited soft skills and motivation of the students. Many firms reported they are not involved in providing practical work-based training to students due to the risks associated with the utilization of firm's equipment, but also due to the lack of motivation and soft skills among students. The introduction of a financial incentive for firms could support this approach in the short term. Another possibility would be to introduce a system where several employers can share an intern or work-based learner to jointly bear the costs. To sustain this type of programs in the long run, sustainable sources to support collaborations between schools and the private sectors beyond short-term subsidies should be devised.

Box 1: The Youth Guarantee (YG) program

The Youth Guarantee (YG) scheme is the most comprehensive and largest program targeted at young job seekers in North Macedonia. The process is led by the Ministry for Social Work and Policies (MLSP)

⁴In 2012, an obligation was introduced that employers employ at least 50% of the interns taken through this program, which had not been the case previously. In 2015, this program covered about 1,000 young people.

and implemented by the Employment Service Agency (ESA) and supported by the National Youth Council of North Macedonia. The first year of implementation was in 2018, when it was piloted on the territory of the city of Skopje (9 municipalities) and the municipality of Gostivar and Strumica, whereas since 2019 the program has expanded country-wide.

The program targets young persons under the age of 29, who are not in education, employment or training (NEETs) and are registered in EARM for the first time in the specific year (inflow, new entrants into the unemployment register). A special focus is placed on young people who face employment challenges due to social exclusion, poverty or discrimination. The planned number of participants in 2018 (pilot year) was 1,200, with planned expenditures of 1.6 million EUR. In 2019, 2020 and 2021, the planned coverage of participants in all employment centers is 9,500 per year, out of which it is estimated that one third will be included in active programs and measures for employment. The Youth Guarantee Scheme offers a set of services to young job seekers:

Youth Guarantee scheme			
SERVICES	EMPLOYMENT	TRAINING	INTERNSHIP
<ul style="list-style-type: none"> - Professional orientation and counselling - Motivational training - Individual and group counselling 	<ul style="list-style-type: none"> - Subsidized employment - Subsidized employment for youths with disabilities - Self-employment 	<ul style="list-style-type: none"> - Training for known employer - Training for specific skills that are deemed on the labor market - Training for specific skills that are deemed by employers labor market 	<ul style="list-style-type: none"> - Internship programs for youths under the age of 29

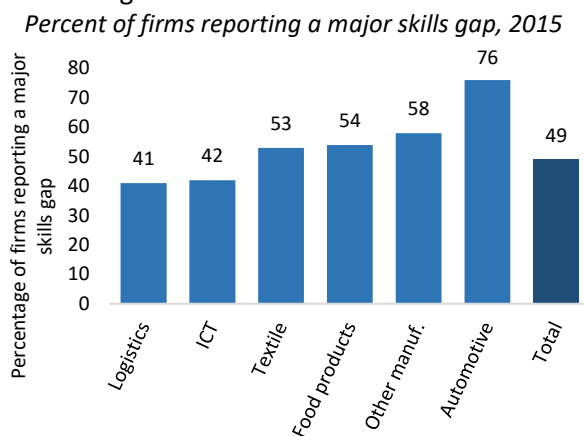
b. Priority Area 2. Addressing skills mismatches

Firms face difficulties finding workers with the right skills. In 2015, close to half of firms surveyed in North Macedonia reported a skills gap among their current employees (Figure 19 **Error! Reference source not found.**). Although all these firms were manufacturers, this suggests a general shortage of the skills a modern economy demands. In fact, the gap is most obvious in automotive components, one of the fastest-growing industries in the country, where three out of every four firms reported major skills gaps. Firms that had recently found it difficult to find qualified employees (because of availability, cost, and quality), singled out skills, based on the training and other experience workers have accumulated, as the most significant obstacle—outranking wage expectations, the cost of social security, and labor regulations (North Macedonia SCD).

Training provided in the educational system does not match adequately the needs of firms. Only half the firms surveyed thought the education system meets their skills needs (Figure 20). In addition to not having up-to-date practical skills, applicants also lack soft skills like good attitude and self-discipline. According to employers, most workers with major skills gaps have at least lower secondary education (Koettl et al., 2017). Although more students are enrolled in VET than in general secondary education, in

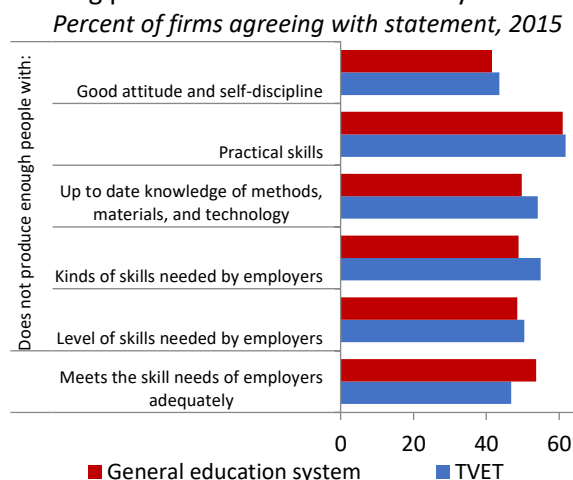
all economic sectors VET graduates are identified as having the worst skills gaps; they are not job-ready. Except for the ICT and automotive industries, fewer than 10 percent of firms communicate regularly with any educational institution. In a rapidly changing workplace where such new-economy skills as the ability to learn new things independently and to communicate, are gaining in value, the current VET system, characterized by narrowly defined occupational profiles and little flexibility, is not effective. (World Bank, 2014).

Figure 19: Firms face difficulties finding workers with the right skills...



Source: Koettl et al. (2017), based on STEP survey

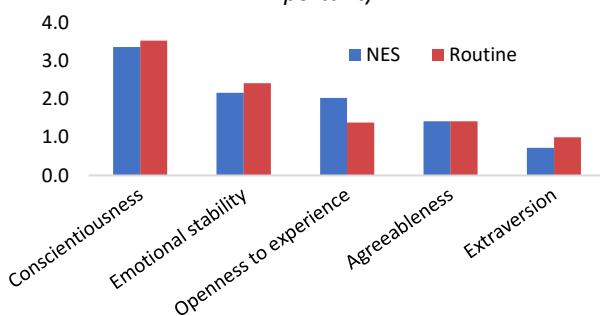
Figure 20: ...which can be traced back to the training provided in the educational system



Source: North Macedonia SCD, based on STEP survey

Figure 21: Employers most valued socio-emotional skill is conscientiousness

How important different socio-emotional skills are to employers, on a scale from 0 (least important) to 4 (most important)



Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Employers rank workers' ability to stay on task and doing it well as conscientiousness as highly important to attain business objectives.

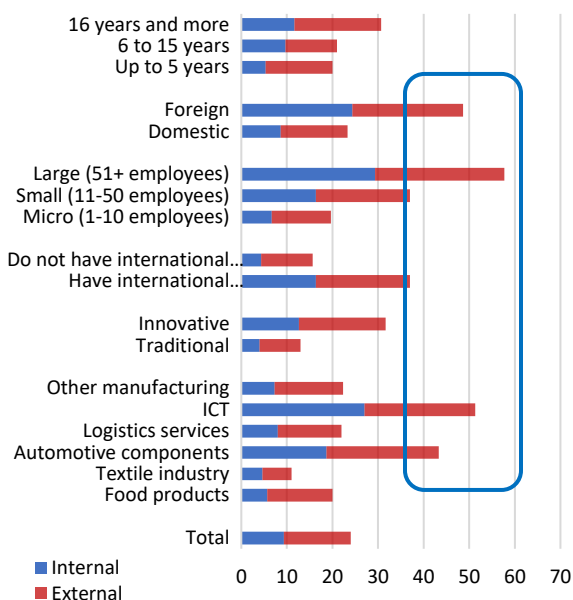
Among five different socio-emotional skills consulted among employers, conscientiousness (i.e. the quality of wishing to conduct duties in a thorough manner) showed up as the most desirable in North Macedonia, both for New Economy and routine skills. In contrast, traits as agreeableness and extraversion were ranked as less important by employers.

The major complaints of employers for the VET graduates is the lack of practical knowledge and skills, as well as the inability of the VET system to transfer new, updated

knowledge to its participants (ETF, 2010). Practical training accounts for only a fraction of the programme content (as low as 6 percent in some areas) and it is not compulsory (ETF, 2019). Moreover, VET students report much lower practical component of their education than what is prescribed in the curricula and by the legislation (Mojsoska-Blazevski and Ristovska, 2013).

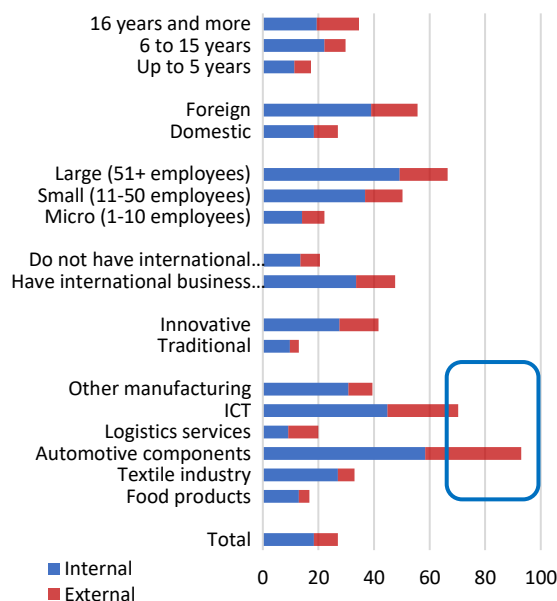
Despite significant skills gaps, only a minority of firms provide training to their employee once they are hired. Only about 25 percent of firms offer on-the-job training, but these are typically the most productive firms (Figure 22 and Figure 23). Firms with international links and foreign participation, like those in the automotive industry, or with a high intensity of new-economy skills, like those in ICT, are a significant exception: not only do they train workers, they attempt to engage with the education sector, although generally not system-wide. Not surprisingly, when there is training, the form it takes depends on trainee occupations. For routine skills—learning repetitive tasks on the job—training is internal. For new economy skills, training is more likely to be external (North Macedonia SCD, Koettl et al., 2017).

Figure 22: Only large foreign firms provide training to their workers in new economy skills...



Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Figure 23: ... and in traditional skills



Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

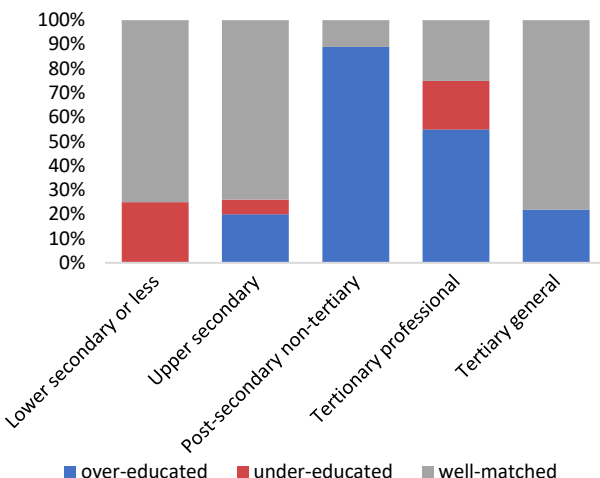
c. Priority Area 3. Strengthening labor market intermediation

Workers end up in jobs that are below their level of education. More than one in four (27.6 percent) of the employed youth in North Macedonia are working in an occupation that does not match their level of education (Figure 24). This share is even larger for young worker with post-secondary non-tertiary education and tertiary professional education, for which close to 90 percent and 55 percent, respectively, consider that they are over-educated for the positions their hold. Unsurprisingly, this leads to disappointment among the youth with respect to their educational decisions. Among the over-educated, more than half find that their education was not useful at all for the positions they hold, and even for the well-matched this share is close to 25 percent.

Labor market intermediation remains mainly informal. The most prevalent method used for finding employment is the use of personal networks, like friends, relatives or acquaintances. Close to a third of current workers indicate that they relied on that source of information for finding their job, while only four percent of those currently employed registered at an employment center (Figure 26).

Figure 24: Workers finding themselves over-qualified for the jobs they perform is prevalent among post-secondary non-tertiary and tertiary professional graduates...

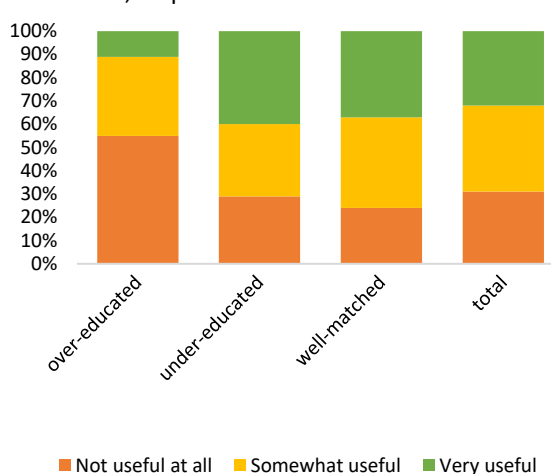
Over-educated, under-educated, and well-matched, by level of education



Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Figure 25: ... leading to a perception of uselessness regarding their studies

Over-educated, under-educated, and well-matched workers, responses on usefulness of education



Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Public employment services are weakly utilized. Looking at those currently looking for a job paints a more encouraging picture, but still with considerable room for improvement. More than 40 percent of job-seekers make use of the Public Employment office, a sizeable share, but still lagging the use of friends or relatives as a source of information, which at over 80 percent is the most commonly used method (Figure 27). The reported rate of usage of the Employment Service Agency is especially low considering that all job openings must be advertised to the agency, by law.

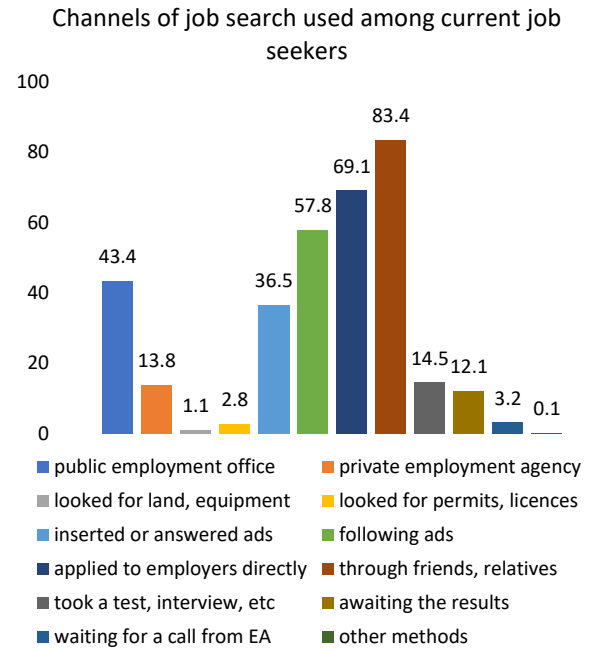
Services by the Employment Service Agency are mainly used by job seekers with tertiary education, which constitute only a minority of youth out of work. Close to 60 percent of the unemployed registered at the Employment Service Agency have tertiary education (Figure 28), while they only represent 20 percent of overall unemployed. In contrast, those with secondary education, who are close to 55 percent of the unemployed, represent only close to 20 percent of those registered at the Employment Service Agency. For those with primary education, this difference is even wider. These results signal that there can exist barriers to access the services of the agency, either due to demand side constraints, like lack of information or difficulty in accessing services provided, or due to supply side constraints, like a limited offer of services or a small number of locations in the country. For the most vulnerable unemployed, mainly the beneficiaries of the social assistance programs (i.e. guaranteed minimum income), there is currently a need for introducing an effective case management framework, with a focus on creating tailored approaches to support those beneficiaries and other vulnerable groups.

Figure 26: Most important channel for finding employment is personal connections...



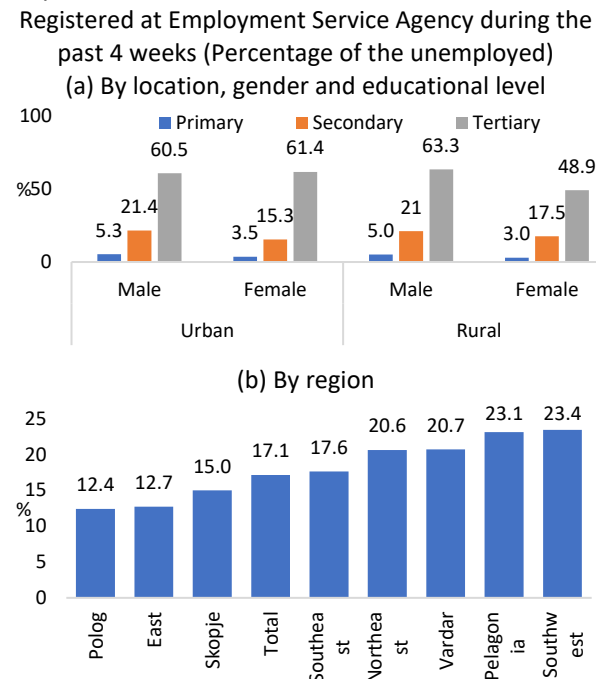
Source: WB calculations based on 2016-2017 LFS

Figure 27: and the public employment office is used by less than half of job seekers



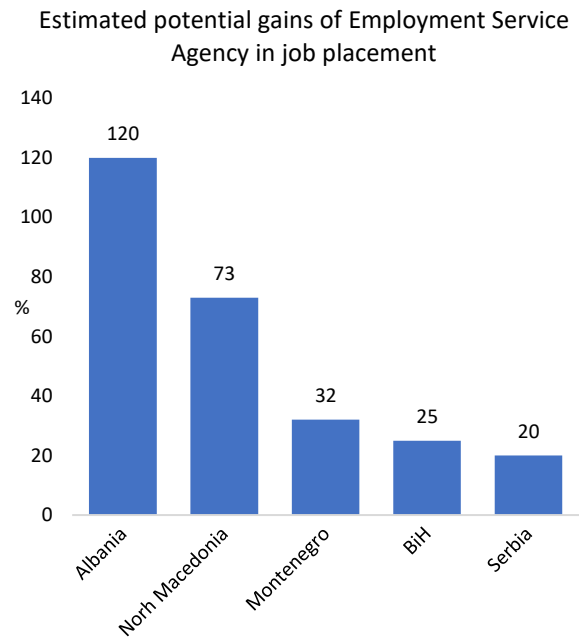
Source: WB calculations based on 2016-2017 LFS

Figure 28: Even among unemployed workers using ESA services, there are considerable disparities in use



Source: North Macedonia LFS 2017. Age: 15-29. EA=Public Employment Agency.

Figure 29: The Public Employment Agency has substantial room to improve its efficiency



Source: World Bank Data Envelope Analysis of PES in the Western Balkans (2018b)

There is room to better allocate financial and human resources across local public employment service (PES) offices, and to improve efficiency within offices. Administrative data from PES local offices reveals that the caseload - the number of unemployed individuals allocated to a given case worker in the PES – varies substantially across local offices in North Macedonia. This suggests potential gain for a more efficient allocation of resources to local PES offices. In addition, a study of the efficiency of Public Employment Services by World Bank (2018b) suggests that substantial gains in job placement could be made by improving the efficiency of local PES, holding the amount of resources constant. The analysis finds substantial variation in performance across local PES offices within North Macedonia. According to the study, job placement could be increased by 73 percent if all PES offices in the country had the same level of efficiency as the best performing PES office in the country. One possibility to improve overall efficiency and reduce the burden on case workers could be to introduce statistical profiling of the unemployed (at least in the first stage) in a similar way as it is done, for instance, in the Croatian PES.

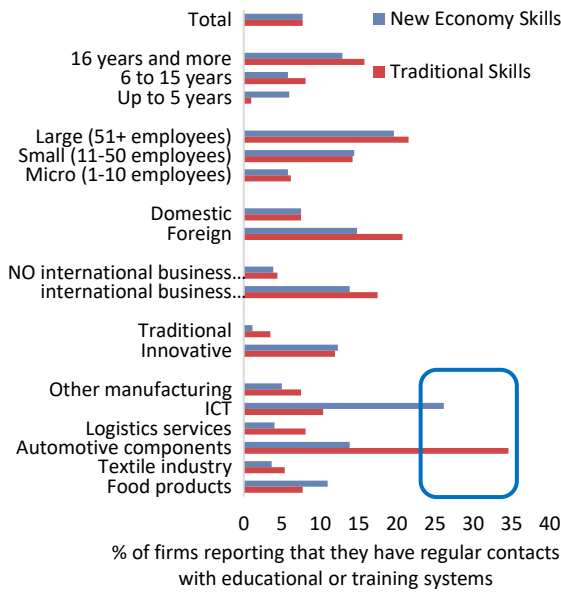
d. Priority Area 4. Increasing labor market information

Firms and the educational systems appear detached from each other. Only a very limited number of firms report to have continuous contact with educational or training institutions (Figure 30), and they are most likely to be large foreign firms in the ICT or automotive components industries. The lack of exchange of information between the future employers and the institutions in charge of providing the training for future workers leads to disconnects on the areas and types of skills that are needed by the firms. VET schools do not have a legal obligation for collecting feedback from the employers for the skills of the students which undertake practical learning in companies. The communication mainly depends on the relationship between the school and company, without any systematic process being put in place. Employers which provide practical training are though obliged to provide assessment (as a grade) for each student that is taking practical training. In case when employers give low grades, the school (mentors from the school) contact employers and discuss the issues.

One of the major problems that hinder the responsiveness of the educational system to demand from employers is the lack of reliable information about employers' demand, which is largely due to limited capacity of state institutions to use the otherwise well-developed system for labour market intelligence. With the help of donors, various ministries and donors in North Macedonia have invested in a range of systems for the collection of labour market data which include regular occupational outlooks, labour-market forecast models, surveys of employers, and a Skills Observatory (ETF, 2019). However, in almost all of these activities and projects, there is a lack of capacity of the state institutions to regularly collect, update and to use effectively the data.

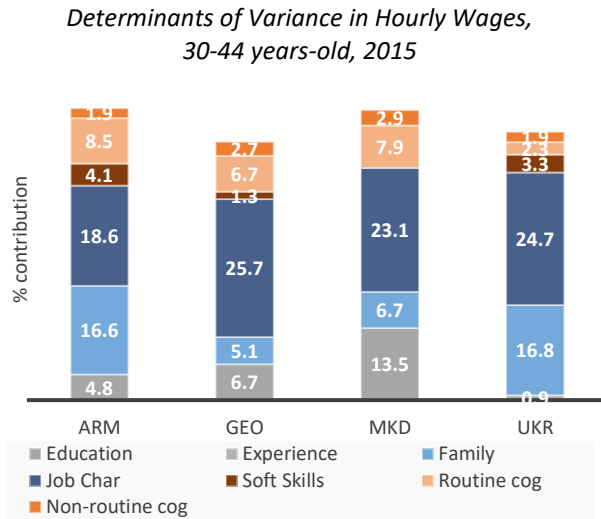
Labor markets are not sending the right signals: Diplomas matter more than skills for labor income. Education plays a larger role than skills to explain the differences observed in hourly wages in North Macedonia, indicating that employers reward diplomas rather than the actual skills workers are trained on.

Figure 30: Firms and educational systems appear detached from each other



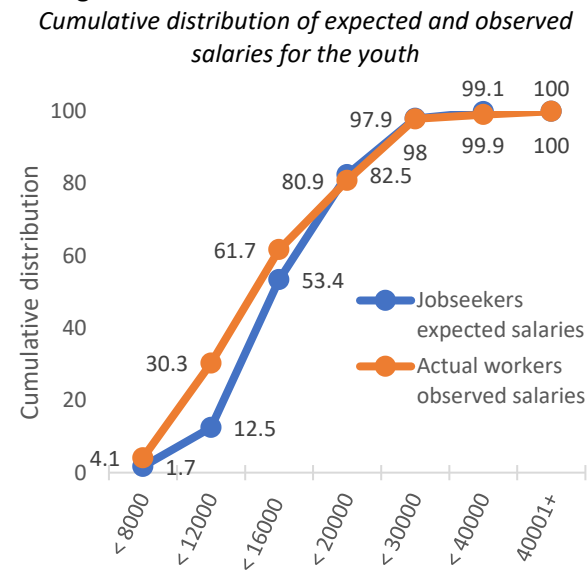
Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Figure 31: Labor markets are not sending the right signals



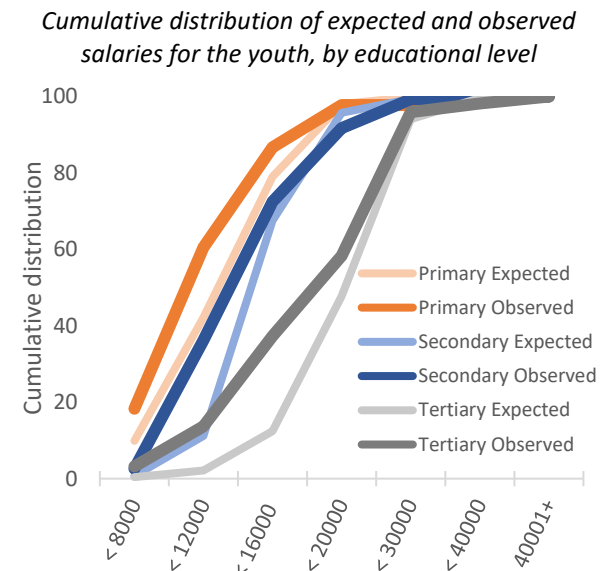
Source: Skills Towards Employability and Productivity (STEP) Survey for North Macedonia

Figure 32: Salaries expected by young jobseekers are higher than market realities...



Source: WB calculations based on 2016 LFS

Figure 33: ... irrespective of their educational level



Source: WB calculations based on 2016 LFS

Young job-seekers expectations on entry salaries are not aligned with salaries paid to working youth. Expected salaries by young job-seekers are significantly higher than market realities. While only 12.5 percent of them would be willing to accept a monthly salary of 12,000 denars (roughly 215 dollars), close

to a third of young workers receive that salary (Figure 32). If we consider a salary of 16,000 denars (285 dollars), the differences are a bit smaller, but still significant. Only 53 percent would accept that salary, when over 60 percent of youth working receive that salary or less. These differences are not driven by differences in expected salaries due to educational attainment. For any educational level given, the share of youth willing to accept almost any given salary is always below what is paid in the market (Figure 33). One potential contributor to these biased expectations among youth is the lack of systematic tracking of graduates of VET schools and universities for which data on labor market outcomes is typically not collected and made available to prospective or current students. Additionally, the limited career guidance currently received in VET schools and universities, combined with the current lack of career orientation at the end of primary school, are likely to further contribute to the mismatch between labor market outcomes expected by youth

e. Priority Area 5. Conducive labor market regulations

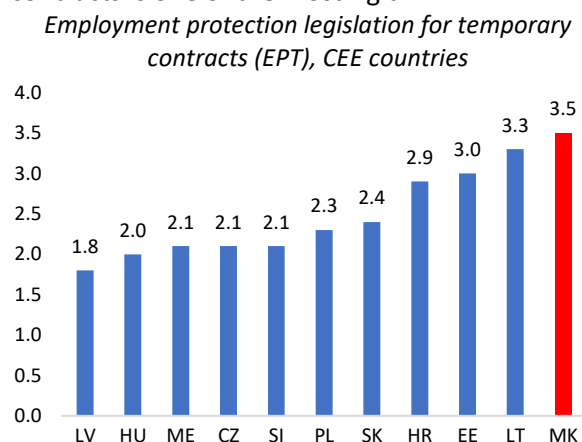
Labor market regulations regarding short-term contracts disproportionately affect youth. Labor market flexibility in the form of flexible work contract can help youth acquire work experience (Krugman, 1994; OECD, 1994). In fact, in North Macedonia, close to 30 percent of the youth employed are hired under a temporary contract, and this share goes as high as 60 percent for those with primary education (Figure 34). However, the regulations related to temporary contracts, albeit they may be more flexible than in other economies in the Western Balkans, are still more rigid than in more advanced economies in Eastern Europe (Figure 35). The reduction of the period for automatic conversion of temporary contracts planned by the new labor law should therefore consider potential adverse effects of such reforms on the hiring of youth. In addition, tight regulations regarding the apprenticeship contract may discourage employers from hiring through this type of contract. Article 59 of the current labor code prohibits the termination of the apprenticeship contract, which is in that respect not aligned with regular employment contracts. This could explain partly explain its poor usage as an instrument to hire youth: only 5 percent of workers age 15-29 have been hired through an apprenticeship contract.

Figure 34: Youth are disproportionately hired under temporary contracts, especially the low-educated



Source: WB calculations based on 2016 LFS

Figure 35: Labor market regulations are overall flexible, but legislation in the area of temporary contracts is one of the most rigid



Note: Data for Albania, Kosovo, Serbia and Bosnia and Herzegovina are not available. Source: OECD

The minimum wage may be binding for youth, particularly those with low education. A binding minimum wage can slow down school-to-work transitions, particularly among the low-educated (Neumark and Wascher, 1995). In North Macedonia, the share of workers at or below the minimum wage level is larger among young workers, peaking at almost one in every three workers between 15 and 24 years old (Table 3). Hence regulations affecting the level of the minimum wage can impact substantially employment prospects of those in age group. Currently, the minimum wage setting in North Macedonia is conducted only through waves of negotiations, considering government’s objectives and frequently pre-election promises. Calculations are rarely done, especially not in advance to the intended changes, a practice that was suggested to be changed (ILO, 2019). Worryingly, the level of minimum wage in recent years has increased at a faster pace than labor productivity (Figure 36), which may discourage hiring of young workers, affecting especially those with low education.

Table 3: Close to one third of young workers are currently paid at around the minimum wage

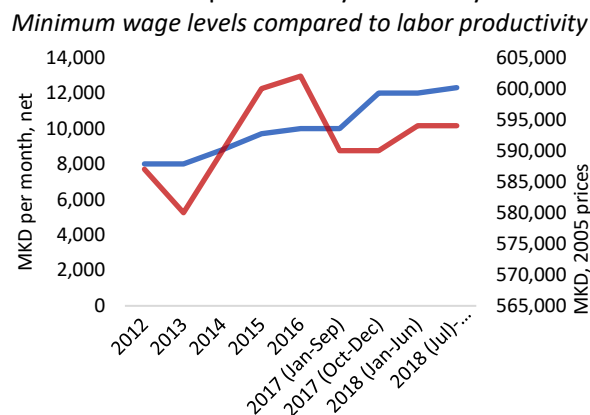
	Age			
	15-24	Above 25	15-29	Above 30
MW or below*	31.4%	22.2%	23.4%	22.6%
Above MW	68.6%	77.8%	76.6%	77.4%

Source: Author's calculation based on 2017 (Q4). The minimum wage is calculated in full-time equivalent. The fourth quarter is used, to reflect the latest increase of the MW.

** By law, the employer cannot pay a wage below the statutory MW. However, in reality there is certain degree of non-compliance.*

Source: WB calculations based on 2016 LFS

Figure 36: The minimum wage has been rising faster than labor productivity in recent years



Source: Minimum Wage Law and State Statistical Office.

5. Proposed action plan

Given the priority areas identified above, the team consulted the international evidence and experts’ opinions for concrete proposals to address the bottleneck on the supply side related to youth unemployment. Actions were consulted with different government and other relevant stakeholders, including:

- Ministry of Education
- Employment Services Agency
- Ministry of Labor
- Universities
- Vocational education center
- Employers and chamber of commerce

Pillar I. Facilitating labor market experience acquisition by youth

Sub-area	Potential policy actions	
	Short-term	Medium-term
<p>A. Facilitating the acquisition of work experience while in school</p>	<p>Adjust and flexibilize VET school and university class schedule to better match companies needs for students/interns. This could include making more flexible the rule on the number of hours per week to be spent in the firm and instead having a given number of days to be spent in the company that can be freely allocated by the receiving firm.</p>	
	<p>Amending labor law that prohibits formal employment while engaged in full-time regular education</p>	
		<p>Introducing mechanisms to facilitate the take-up of interns and work-based learners by small companies such as shared interns, or tax deductions and subsidies</p>
		<p>Enforcing compulsory internships for university students while in education. Potential measures could include making graduation and/or progression to the next grade conditional on completing a one-month internship each academic year.</p>
		<p>Establishing accompanying quality control measures to certify the quality of internships undertaken by students, and strengthening collaboration between educational institutions and employers on internships</p>
<p>B. Ensuring flexible forms of employment at the end of school</p>	<p>Enforcement of the new law on internships which limits internship duration for 6 months, ensures minimum remuneration to the intern, and grants rights to unemployment and social benefits to the intern.</p>	

		Implementing adequate controls of enforcement of the new labor law, with responsibility allocated to the labor unit of the Ministry of Labor in collaboration with the Ministry of Education
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Pillar II. Reducing skills mismatches

Sub-area	Potential policy actions	
	Short-term	Medium-term
A. Fostering job-relevant technical skills	Establishing sustainable mechanism/ structure for employers to initiate regular curriculum reforms in vocational schools, such as bi-annual rounds tables	
	Expanding the delivery of curriculum modules by professionals and expert visits in STEM education	
		Broadening quality assurance systems for public and private education and training providers to the monitoring of delivery after licensing
		Introducing elements of performance-based funding for public and private VET provisioning, based on student placement into formal jobs.
B. Enhancing skill forecasting mechanisms in the country	Complementing the Skills Needs Analysis and STEP Surveys with more frequent data from private online job-search portals.	
	Re-activating local economic councils/sector skills committees which include representatives from the private sector to identify curricula tailored to private sector’s needs	
		Operationalization of the labor market and skills observatory (LMSO)/Labor Market information system responsible for monitoring the evolution of the demand for skills and competencies and identify skills in short supply. This could help to steer the youth educational and career decisions

		towards the best opportunities available.
C. Increasing the provision of training by employers	Providing incentives for training provisions by employers, such as co-funding mechanisms for firms investing in employees' training or tax deductions. A first phase should include a pilot, to test the sensitivity of firms to these incentives.	
D. Strengthening socio-emotional skills	Developing a strategy for soft skills acquisition and development at all levels of education.	
		Embedding socio-emotional development as part of the school curriculum, starting from early ages.

Pillar III. Strengthening Labor market intermediation

Sub-area	Potential policy actions	
	Short-term	Medium-term
A. Strengthening the Employment Service Agency of the Republic of North Macedonia (ESARNM)	Outreach and promotion of services provided by ESARNM in secondary schools (general and technical) to increase use of services among the low-skilled.	
		Address capacity constraints of ESARNM by allocating appropriate human and financial resource to ESARNM centers especially in regions other than Skopje to further reduce the caseload ratio
		Introducing statistical profiling of job seekers to improve the targeting and cost-efficiency of ESARNM, such as the one used by the Croatian PES.
		Introduction of an effective case management framework for the most vulnerable unemployed, mainly the beneficiaries of the social assistance programs (i.e. guaranteed minimum income)

B. Complementing public employment services by private intermediation		Piloting performance-based contracting of private sector providers for selected intermediation services for certain hard to serve groups (e.g. vulnerable registered jobseekers).
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Pillar IV. Increasing labor market information

Sub-area	Potential policy actions	
	Short-term	Medium-term
A. Improving career orientation for youth	Mapping of career centers with quality assessment and identification of current gaps	
		Expanding the establishment of professional orientation centers to all VET schools, and establishing career service centers at university
		Mandatory career plan for each student in both VET schools and universities
		Systematizing the tracking of graduates of VET schools and universities by collecting information on job placement, working conditions and wages of alumni, and sharing information with prospective and current students; information sharing could in addition be done in a centralized manner through the Ministry of Education. This could also help to steer the youth educational and career decisions towards the best opportunities available.
		Enhancing the quality of career advice in the last year of primary school and expanding professional orientation in secondary school
B. Reducing information asymmetries on labor market conditions	Information campaigns in secondary schools about the benefits of studying STEM subjects for future labor market prospects	
		Integrating labor market information from key stakeholders (employers, the Ministry of Education, Ministry of Labor, Public Employment Agency, Statistical

		Office). This could for example include vacancy data, duration of open vacancies, duration of job search, job placements and wages by occupation, sector of employment and type of education
		Make labor market information widely available to the youth and their family, for example through the ESARNM website or through outsourcing to another agency/institution

Pillar V. Conducive Labor market regulations

Sub-area	Potential policy actions	
	Short-term	Medium-term
A. Ensuring minimum wage levels are in line with the economy's fundamentals	Including employers as part of the minimum wage setting consultation process	
		Introducing a methodology/tool for minimum wage calculation, based on labor productivity levels and other fundamentals of the economy.
B. Maintaining employers' hiring flexibility while ensuring job attractiveness and quality jobs for youth	Maintaining the automatic conversion of temporary contract after 5 years, instead of bringing it to 6 months; or considering an intermediate option such as automatic conversion of temporary contracts after two or three years	
	Abolishing the prohibition to terminate the apprenticeship contract (art. 59 of Labor Code) to align the legal basis of the contract with that of regular employment contracts, to motivate its usage for more flexible hiring of youth.	

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Annex

Annex 1: Econometric analysis

In order to analyze school and employment decisions of the young population, we estimate how the probabilities to be enrolled in school; to be out of school and inactive; to be out of school and employed; and to be out of school and unemployed (looking for a job) are affected by gender, location, education level and educational field. To do so, we run a multinomial logistic regression using 2017 data. In our sample of 15-29 years old people in North Macedonia, 42.3 percent are enrolled in school, 11.8 percent are out of school and inactive, 27.7 percent are out of school and employed, and 18.2 percent are out of school and unemployed.

The results presented in Table 1 suggest that females are on average 15.1 percentage points more likely to be out of school and inactive, 11.9 percentage points less likely to be employed, and 6.3 percentage points less likely to be out of school and searching for a job (unemployed) than males with similar characteristics (age, educational level, field of education, and region). Females are also 3.1 percentage points more likely to be enrolled in school than males with similar characteristics. Figure 10 shows the transition from education into inactivity, unemployment and employment for men and women. It shows that women are considerably more likely to move from education into inactivity than men, while men are more likely to move from education into employment or unemployment.

In terms of education, those with secondary education and tertiary education are 15 and 20 percentage points, respectively, less likely to be inactive than those with primary education with similar characteristics. Being high educated also increases the probability to be employed by 10.4 percentage points and the probability to be unemployed by 6.2 percentage points with respect to the low educated young. Figure 11 shows that having a high educational level disproportionately affects women, reducing the probability that women move into inactivity and increasing the probability to move into employment or unemployment. In fact, there are no statistically significant differences in the probabilities to be employed and unemployed between men and women with tertiary education. Women with tertiary education are slightly more likely to be inactive than men with tertiary education (5.5 percentage points difference), while the probability to be inactive is 38.9 percentage points higher for women with primary education than for men with similar educational level and other characteristics.

In terms of the field of education, the young with STEM education are 15.2 percentage points more likely to be employed than those with general education; having other specialization (not STEM) increases the probability of employment, on average, by 8.7 percentage points with respect to those with general education. Figure 12 shows that STEM educated complete their education and start working or looking for a job, on average, earlier than those with general education or with other specialities.

In terms of location, rural inhabitants are, on average, 8.5 percentage points less likely to be enrolled in education than urban inhabitants with similar characteristics; rural inhabitants are also 3.4 percentage points more likely to be out of school and inactive, and 5.6 percentage points more likely to be employed. The employment probability is higher in Pelagonia and in Southeast regions than in other regions, while in Southwest, Polog, and Northeast regions there is higher incidence of inactivity and unemployment, see Table 1.

Table 1: School and Employment Decisions. Multinomial Logistic Regression Results.
Average Marginal Effects. FYR Macedonia 2017. Age: 15-29

	In School	Out of school and Inactive	Out of school and Employed	Out of school and Unemployed
Age	-0.0547***	0.0138***	0.0320***	0.00895***
Female vs. Male	0.0313***	0.151***	-0.119***	-0.0626***
Rural vs. Urban	-0.0845***	0.0339***	0.0558***	-0.00522
Educational Level				
Secondary Education vs. Primary	0.119***	-0.152***	0.0253	0.00805
Tertiary Education vs. Primary	0.0368*	-0.203***	0.104***	0.0622***
Field of Education				
Other Fields (not STEM) vs. General	-0.126***	1.39e-05	0.0868***	0.0396***
STEM vs. General	-0.206***	0.0211	0.152***	0.0327**
Region				
East Region vs. Vardar	0.0548**	0.00607	-0.00185	-0.0590***
Southwest Region vs. Vardar	-0.0148	0.0793***	-0.128***	0.0638***
Southeast Region vs. Vardar	-0.0841***	0.0207	0.0667***	-0.00326
Pelagonia Region vs. Vardar	0.00405	-0.00580	0.0493**	-0.0475**
Polog Region vs. Vardar	-0.0450**	0.0887***	-0.104***	0.0608***
Northeast Region vs. Vardar	-0.0868***	0.103***	-0.100***	0.0841***
Skopje Region vs. Vardar	-0.0328*	0.0789***	-0.0582***	0.0121
Observations	9,865	9,865	9,865	9,865

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$