



POLICY BRIEF

BRIDGING SKILL GAPS AND ADDRESSING LABOUR MARKET MISMATCHES IN NORTH MACEDONIA, TÜRKIYE, UKRAINE, AND ETHIOPIA - IN A SEARCH FOR A PATHWAY TO SUSTAINABLE WORKFORCE DEVELOPMENT

Horizon Europe research project 'Skill partnerships for sustainable and just migration patterns (Skills4Justice) Horizon-CL2-2023-TRANSFORMATIONS-01-03 No. 101132435.

Executive summary

Labour markets across North Macedonia, Türkiye, Ukraine, and Ethiopia are experiencing significant structural challenges, driven by skill mismatches, migration trends, and demographic changes. Persistent gaps between educational outputs and employer needs, alongside widespread emigration of skilled workers, are leading to economic inefficiencies and declining workforce stability. Addressing these challenges requires a multifaceted approach that integrates education reform, enhanced workforce adaptability, and innovative migration governance strategies.

This policy brief presents findings from the research study executed in the **SKILLS4JUSTICE** project, which examines the labour market conditions in these four countries. The study highlights the common factors contributing to skill shortages and proposes a set of targeted interventions to modernize education systems, retain skilled labour, and align migration policies with national workforce needs.

By focusing on vocational training improvements, upskilling initiatives, and international collaboration, this policy brief aims to offer solutions that will promote economic resilience, reduce workforce depletion, and foster sustainable employment. Implementing these recommendations will support policymakers, industry leaders, and educational institutions in their efforts to create more dynamic and competitive labour markets.



Funded by
the European Union

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Agency. Neither the European Union nor the granting authority can be held responsible for them.



1 Introduction

Labour market disruptions are even more acute for countries of origin for international migration. **North Macedonia, Türkiye, Ukraine, and Ethiopia** face challenges related to the misalignment of skills and employment opportunities. Their labour markets exhibit structural inefficiencies that hinder workforce sustainability. The findings reveal several common challenges:

1. **Misalignment between educational curricula and labour market needs**, leading to skill shortages in high-demand sectors.
2. **Persistent emigration of skilled workers**, creating talent gaps in ICT, healthcare, manufacturing, and technical fields.
3. **Limited industry-education collaboration**, resulting in insufficient practical training and job-ready skills among graduates.
4. **Inflexible migration policies**, preventing the efficient integration of skilled foreign workers into domestic labour markets.
5. **Youth unemployment and gender disparities**, restricting labour force participation and economic productivity.

Educational institutions are struggling to keep pace with evolving industry needs, while a significant portion of the workforce remains either unemployed or underutilized. Meanwhile, skilled professionals continue to emigrate in search of better opportunities, further exacerbating workforce shortages.

The findings from the research study of the **SKILLS4JUSTICE** project provide valuable insights into the root causes of these labour market challenges. The research explores the role of vocational training and higher education institutions, employers, and policymakers in addressing skill mismatches, mitigating the effects of migration, and fostering long-term workforce sustainability.

This policy brief presents an evidence-based framework for addressing these issues and recommends **strategic reforms** to enhance economic resilience and labour market efficiency across all four study countries.

Research is focused on the following objectives:

- 1) **Evaluate labour market trends** in North Macedonia, Türkiye, Ukraine, and Ethiopia, identifying key industries facing skill shortages.
- 2) **Assess the responsiveness of education systems** to labour market demands, particularly in vocational and technical education.
- 3) **Analyse the impact of migration** on workforce availability and labour shortages.
- 4) **Identify policy gaps** and propose targeted interventions to improve workforce retention and mobility.
- 5) **Provide evidence-based recommendations** to align workforce development strategies with national economic objectives.

The study employs a **mixed-methods approach**, integrating both quantitative and qualitative research methodologies to develop a comprehensive understanding of labour market dynamics. The methodology includes:

- 1) **Labour Market Data Analysis:** Examination of national employment statistics, skill gap reports, and migration patterns.



- 2) **Stakeholder Surveys & Interviews:** Data collection from employers, policymakers, vocational and higher education institutions, and labour market intermediaries to gain insights into current challenges and best practices. The interviews were conducted in selected sectors such as manufacturing, ICT, healthcare, education, hospitality, construction, energy etc., which are crucial for countries' economic development and where mismatches commonly occur based on statistical information.
- 3) **Comparative Analysis:** Evaluation of workforce development trends in the four study countries to identify commonalities and policy gaps.
- 4) **Policy Effectiveness Review:** Assessment of existing national and regional labour policies and their impact on employment and migration trends.

2 Labour market and skills mismatches

Labour markets in North Macedonia, Türkiye, Ukraine, and Ethiopia are characterized by structural inefficiencies that impede workforce sustainability. In North Macedonia, these inefficiencies primarily stem from a mismatch between educational curricula and the demands of the labour market, resulting in persistent skill shortages in critical sectors such as manufacturing, ICT, and healthcare. Employers often point out the disparity between graduates' theoretical knowledge and the practical skills needed in industry, particularly in technical roles like welding and programming. Additionally, the ongoing emigration of skilled professionals worsens the talent shortage, further compromising workforce sustainability. To address these challenges, policy measures in North Macedonia focus on enhancing vocational education and training (VET) and improving collaboration between educational institutions and industries. Strategic interventions aim to retain skilled personnel by providing incentives such as career advancement opportunities and competitive salaries, thereby addressing the skill gaps caused by migration.

Economic challenges, unfavourable working conditions, and the large number of immigrants have placed Türkiye in a situation where it faces multifaceted difficulties in its labour force. The reflection of this situation on the labour market has evolved into a different dimension. While it is thought that immigrants arriving in Türkiye could be a source to meet the labour shortage, the fact that most of them are unskilled and therefore do not contribute to the country at the desired level is an important reality. On the other hand, with the economic instability over the past 10 years, the private sector has contracted, and many foreign companies have left the country, leading to an increase in unemployment. The lack of job security felt by trained individuals who could join the labour force, the low wage policy, and the absence of job satisfaction have led to labour shortages. To cope with this insecurity, the level of unionization is far from the necessary level. Indeed, Türkiye's unionization rate stands at 15.22%, one of the lowest in Europe. While most unionized workers are in the public sector, the unionization rate in the private sector remains at a small scale of 5.5%. This situation increases insecurity among workers and decreases job satisfaction and performance. Furthermore, there are mismatches between the demands of the labour market and the existing skills. In this context, within the current state of Türkiye's employment policy and the challenges it faces, it is necessary to align the framework of the Vocational Qualifications Authority with the European Union's qualification framework, create sustainable vocational and technical education models and policies, align the expectations of the sector with vocational and technical education, and develop incentive policies to provide vocational qualifications to both idle labour and migrant labour under continuous education. In



particular, a series of incentives are needed to overcome challenges such as increasing wages and job opportunities for young people, especially young people not in education or employment, and women. Establishing a strong collaboration between industry and education and improving the education standards by providing skills that meet the needs of the labour market is essential. Additionally, policies that fairly integrate migrant workers are needed.

Ukraine's labour market policies exhibit several similarities to those in partner nations, primarily concentrating on tackling deficiencies in employee training. These initiatives aim specifically to enhance the inadequate level, volume, and quality of training delivered by educational institutions, striving for better synchronization between the number of trained professionals and the actual labour market needs concerning professional qualifications. Furthermore, policy efforts seek to diminish structural unemployment by boosting regional, professional, and qualification mobility within the populace. To ensure a skilled local workforce, initiatives are being implemented to lessen the considerable wage disparity, which currently remains several times lower than similar figures in EU member states. To retain youth and other highly productive demographics, financial incentives are being introduced to mitigate their emigration. Uniquely, Ukraine has crafted policies specifically suited to its distinct situation, particularly influenced by the ongoing war. Notably, initiatives have been launched to avert the mass departure of qualified individuals, especially refugees, by promoting their internal movement to safer areas within the nation. Additionally, the government has initiated financial support and the creation of specialized executive bodies and institutions in countries with significant populations of Ukrainian refugees, dedicated to aiding their eventual return. Moreover, in response to the urgency prompted by wartime circumstances, Ukraine has established a highly adaptable and simplified system for professional training, retraining, and employment aimed at the adult population. Another notable policy strategy includes public-private partnerships that provide financial assistance, favourable loans, and tax benefits to stimulate employment in essential sectors, such as logistics and the military-industrial complex.

Ethiopia possesses distinctive characteristics regarding the demand and supply of skilled labour and migration patterns. First, while the country has experienced economic growth over the years, this growth has primarily been focused on public service infrastructure and has failed to create sufficient decent jobs. This has resulted in a skills mismatch and has become a driving force behind the emigration of graduates. Second, as Ethiopians attain higher levels of education, they often migrate from rural areas to small towns, then to larger cities or abroad. This movement is driven by the search for better employment opportunities and living conditions, as towns and cities offer greater access to modern services, infrastructure, and jobs that require skilled labour. Besides, educated individuals are frequently targeted during the unrest, forcing them to evacuate when unrest is anticipated in rural areas. Third, Ethiopia has demonstrated an intriguing shift in migration policies, moving from a negative to a more positive stance. This is evident in government efforts to recruit skilled workers for European countries and semi-skilled or unskilled workers for Middle East countries. Furthermore, the mindset of Ethiopian youth regarding migration is another noteworthy feature. Combined with ongoing political instability and the government's evolving migration policies, the aspiration of young people to move to Europe and other developed nations may result in a significant intellectual flight. If not addressed, this could lead to a situation where the domestic market is left without the skilled personnel necessary for its development.



3 Perspectives of employers, education and training providers

Executed qualitative study provides perspectives from employers, policymakers, educators, and labour market intermediaries across North Macedonia, Türkiye, Ukraine, and Ethiopia. The findings highlight sector-specific challenges, employer concerns, policy gaps, and workforce aspirations.

Employers' Perspectives: Persistent Skill Gaps and Hiring Challenges

Employers across all four countries expressed difficulties in finding adequately skilled workers. While each country faces unique national and sectoral challenges, the following common themes emerged:

- **North Macedonia:** Employers in manufacturing, ICT, and healthcare cited a lack of specialized skills among recent graduates. While manufacturers note persistent shortages in technical roles such as welders and transformer fitters, healthcare providers point to difficulties in recruiting specialized medical staff, mostly those proficient in modern diagnostic techniques. A leading ICT firm noted the discrepancy between practical and theoretical knowledge, stating: *"We struggle to find programmers with practical experience, most university graduates lack industry-relevant coding expertise."*

- **Türkiye:** Aligned with the broader skills shortage (where 17 out of 19 companies report significant recruitment difficulties), businesses in textiles, logistics, and construction identified gaps in mid-level technical skills. One HR director in a production sector company stated, *"Recently, we've been struggling across all departments without distinction. In white-collar roles, we receive numerous responses whenever we post a job advertisement. However, this pertains only to the volume of applications. For our production departments, we don't receive nearly as many responses. In fact, we face this issue across all areas in production. From our cleaning staff to quality control, weaving, garment production, ironing, intermediate ironing, and machine operators, we face serious problems in every aspect."* Companies often resort to in-house training to fill these gaps but often note fundamental discrepancy between formal education outcomes and real-world requirements.

- **Ukraine:** Employers in the construction and energy sectors indicated an urgent need for re-skilling programs due to wartime disruptions. Many note the direct impact of martial law on the availability of workforce as employees have either relocated to the safer western regions or completely emigrated. *"Many experienced workers have relocated, leaving us with an unbalanced workforce,"* shared a company manager. As employers note, almost half of all shortages stem from the war, implying production slowdowns and disrupted supply chains.

- **Ethiopia:** Businesses in agriculture and industrial production reported a lack of technical and digital skills among new hires, hampering efficiency and growth. While many firms hire recent graduates and provide in-house training, they argue that *"vocational training needs a stronger focus on applied learning,"* as suggested an employer in Addis Ababa. Employers emphasize that recent graduates lack the practical abilities needed to run modern equipment or apply advanced IT. One manufacturer states that *"no university or polytechnic colleges prepare professionals that meet our company's expectations...the system is not serving us... All new employees from these educational institutions have one thing in common: almost all of them lack practical skills."*



Education Providers: Mismatched Curricula and Limited Industry Collaboration

Education institutions, including universities and vocational training centres, acknowledged the challenges in aligning curricula with industry needs. Many reported limited employer engagement and outdated training materials.

- Although 12 of the interviewed 15 **education institutions in Türkiye believe their programs meet market demands**, some acknowledge that theoretical curricula often fall short of preparing students for actual workplace requirements. A university professor from Türkiye stated that, *“Our curriculum is strong in theory, but companies tell us our graduates lack hands-on experience. We need more industry partnerships.”* These gaps in practical training, outdated courses alongside a lack of operational graduate-tracking systems imply the need for closer partnerships with the industry.

- **The concerns of education institutions in North Macedonia** frequently revolve around quality, outdated course content and limited practical training, with a respondent noting that *“private colleges have blurred the picture and reduced quality”*. A prevailing issue is the gap between theoretical knowledge in curriculum and real-world applications. However, funding constraints further exacerbate these challenges. A vocational school director noted that *“Employers expect job-ready graduates, but we [the institution] lack funding for modern training equipment.”*

- **Ukrainian educators** stressed the importance of flexible learning pathways to accommodate displaced students and returning migrants. They emphasize the urgent need to adapt educational programs and accommodate both internally displaced persons (IDPs) and returned migrants who gained work experience abroad but yet require credential recognition or additional training. This points to the need for academic recognition services. Respondents underscore that short-term certification courses, individualized study plans, and partnerships with local employers all play a role in smoothing the reintegration into the Ukrainian workforce.

- **Ethiopian training institutions** identified a lack of industry engagement in shaping vocational education programs despite active contacts with local employers during internship and feedback mechanisms in place. As one of the TVET representative notes, *“companies in our country [Ethiopia] are not self-reliant enough to do this job... In our case, trainees go there just to observe. Companies don’t want them to touch the machinery and other tools.”*

4 Policy recommendations

Based on the above introduced research findings there are suggested policy recommendations aimed at addressing the critical labour market challenges, skill mismatches, and migration dynamics identified across North Macedonia, Türkiye, Ukraine, and Ethiopia. These recommendations focus on improving workforce alignment, addressing skill shortages, and enhancing long-term labour market resilience.

1. **Revamp Educational Curricula to Align with Industry Needs:** Governments must prioritize the modernisation of educational curricula, focusing on STEM, technical skills, and digital competencies. Collaboration between educational institutions and the private sector should be strengthened to ensure that graduates are equipped with the relevant skills demanded by the labour market.

2. **Expand Vocational Education and Training (VET):** Countries should significantly invest in expanding VET opportunities to fill the growing demand for skilled trades and technical



professionals. Providing hands-on training and apprenticeship programs in partnership with industries will help address skill shortages, particularly in sectors such as ICT, manufacturing, and healthcare.

3. Promote Lifelong Learning and Micro-Credentials: Policymakers should encourage the introduction of lifelong learning programs and micro-credentials to ensure that workers can continuously adapt to evolving market needs. Modular training systems will enable individuals to gain skills in small, manageable increments, offering a more flexible approach to workforce development.

4. Enhance Labour Market Policies to Retain Skilled Workers: Governments should offer incentives such as tax breaks, competitive salaries, and career advancement programs to retain skilled workers, particularly in sectors with high emigration rates. Additionally, special efforts should be made to encourage the return of emigrants through incentives like business grants and opportunities for remote work.

5. Encourage Female Labour Force Participation: Gender-responsive policies such as flexible work arrangements, paid parental leave, and targeted employment initiatives for women are crucial in increasing female participation in the workforce. This is particularly pressing in countries like Türkiye and Ethiopia, where gender disparities in employment are significant.

6. Address Informality and Improve Job Quality: Tackling the issue of informal employment should be a priority, with stronger enforcement of labour laws, including social security and fair pay provisions. This will not only stabilize the labour market but also create more attractive and sustainable job opportunities.

7. Strengthen Migration and Integration Policies: Countries hosting migrants, such as Türkiye, need to improve work permit processes, recognize foreign qualifications, and establish pathways for migrant integration. This approach will better harness the potential of migrant workers to fill gaps in the labour market.

8. Create Talent Mobility Frameworks: Establish skill partnerships with migrants' destination countries to facilitate the exchange of qualified labour. These frameworks could help bridge the gap between talent shortages in origin countries and the demand for skilled workers in destination countries, while ensuring that emigration does not lead to a permanent brain drain.

9. Promote Data-Driven Labour Market Policies: Governments should establish national labour observatories to track employment trends and predict future skill needs. This will allow for timely adjustments of education, training, and migration policies, ensuring that they are proactive rather than reactive.

10. Foster Regional and International Cooperation: Strengthening cooperation with international bodies, EU agencies, will help countries align their National Qualifications Frameworks with international standards. This will enhance workforce mobility and facilitate the recognition of qualifications across borders, leading to more robust labour market integration.



The labour market challenges identified in North Macedonia, Türkiye, Ukraine, and Ethiopia reflect a broader global trend of skill mismatches, migration-induced skill shortages, and the slow adaptation of educational systems to the needs of rapidly evolving economies. Each country presents unique challenges, but the common thread is the urgent need for comprehensive reforms in education, labour market policies, and migration management.

Addressing these challenges requires multiple actions and long-term approaches that combine education system reforms, labour market interventions, and enhanced migration strategies. By aligning educational curricula with industry needs, expanding vocational training, and fostering closer cooperation between educational institutions and businesses, these countries can develop a more resilient workforce. Additionally, strategic measures to retain skilled workers, integrate migrants, and leverage diaspora talent would mitigate the negative effects of emigration and talent loss.

Ultimately, a collaborative and forward-thinking approach, built on data-driven decision-making, will ensure that these countries are well-equipped to navigate the complexities of modern labour markets and build sustainable, competitive economies for the future.

4 Call to Action

It is imperative that policymakers, educational leaders, and industry stakeholders act decisively to implement these recommendations without delay. By aligning education with labour market demands, investing in skill development, and fostering inclusive migration policies, we can unlock the full potential of our workforce. The time for action is now, addressing these challenges will not only strengthen labour market resilience but also drive sustainable economic growth, reduce migration-induced skill gaps, and create a more competitive, adaptable workforce for the future.

For further inquiries and policy collaboration opportunities, please contact:

Authors:

Prof. Violeta Cvetkoska, PhD

Ss. Cyril and Methodius University in Skopje
Faculty of Economics-Skopje
violeta.cvetkoska@eccf.ukim.edu.mk

Prof. Igor Ivanovski, PhD

Ss. Cyril and Methodius University in Skopje
Faculty of Economics-Skopje
igor.ivanovski@eccf.ukim.edu.mk



Prof. Predrag Trpeski, PhD

Ss. Cyril and Methodius University in Skopje
Faculty of Economics-Skopje
predrag.trpeski@eccf.ukim.edu.mk

Assist. Filip Peovski, MSc

Ss. Cyril and Methodius University in Skopje
Faculty of Economics-Skopje
peovski@eccf.ukim.edu.mk



SKILLS 4 JUSTICE



Funded by
the European Union

Contributors:



Sergii Melnyk, PhD
Institute of Educational
Analytics,
Kyiv, Ukraine
s.melnik@iea.gov.ua

Andrii Lytvynchuk, PhD
Institute of Educational
Analytics,
Kyiv, Ukraine
a.litvinchuk@iea.gov.ua



Adula Bekele Hunde, PhD
Kotebe University of Education, Ethiopia
College of Educational Sciences
University of Oslo, Norway
Department of Teacher Education and
School Research
Science.adula2020@gmail.com or
a.b.hunde@ils.uio.no

Fekede Tuli Gemeda, PhD
Kotebe University of Education, Ethiopia
College of Educational Sciences
Fekede2010@gmail.com

Ephrem Tekle Yacob, PhD
Kotebe University of Education, Ethiopia
College of Educational Sciences
Ephr1981@gmail.com

Yosef Beco Dubi, PhD
Kotebe University of Education, Ethiopia
College of Educational Sciences
yosefbeco@gmail.com



Dr. Meryem Hamsi İmrol
Terraki Foundation
Schools
meryemhamsi@gmail.com

Dr. Halil Ecer
Ankara City Council
ecer.halil@gmail.com

Umut Selvi
Certified Public
Accountant (CPA)
umutselvi1@gmail.com

Berk Babadoğan
Babadogan Tech And Edu
berkbabadog@gmail.com

Durmuş Ziya Görür
Ministry of National
Education (Hatay -
Reyhanlı Middle School)
gorurdurmus@gmail.com