

# Occupational segregation limits employment opportunities of women?!



## Policy brief No. 72

This policy brief recommends joint action of all key stakeholders (business sector, employment agency, education institutions) to tackle occupational gender segregation through education, public outreach and job adjustments that will ensure guiding women and men towards the needs of the labor market and maximizing their potential.

### INTRODUCTION

Women are inferior on the labor market around the world. They are less active, tend to work in low-paid and low-quality jobs, and finding a job is more difficult for them compared to men. The reason behind these gender inequalities remains a puzzle in economic theory, and is often explained through the lens of segregation of women and men into markedly different occupations. Two competing theories explain the existence of gender segregation on the labor market (Close the Gap, 2013). First, the supply side theory that highlights the neo-classical approach, which suggests that workers' characteristics like gender, race, ethnicity, age, etc. can explain existence of segregation. Second, the demand-side thesis, explained by the labor market segmentation theory, argues that employers' behaviour can create artificial segregation between the genders. Many economists conclude that only a mix of both theories may explain the existing labor market segregation (Anker, 2001; Blackburn et.al, 2002; McDonalds, 2016).

The characteristics of both, workers and jobs, are likely to determine occupational segregation of women and men.

There are two types of labor market segregation: vertical, where women and men do different levels of work, and horizontal, where they are differentiated based on the types of work they do. Within the vertical segregation, men are more frequently represented at higher, managerial positions and women hold low-skill positions. The horizontal segregation is explained through the different types of occupations, where some are seen as women's jobs, like caregivers, catering, sellers, which usually have the status of low-pay and low-skill occupations.

The aim of this brief is to understand the segregation of women and men into different occupations, characterized by the dissimilar opportunities of finding a job, i.e. to estimate horizontal occupational gender gaps that exist at the Macedonian labor market.

**DATA AND METHODOLOGY**

The objective of this brief is to provide a snapshot of the situation with regard to the strain the food and energy crisis imposes onto Macedonian households. Namely, it is frequently argued that the weight of the crisis is heavier for the poorer households because they spend proportionally larger share of their budget on food items, as well as potentially on energy products. However, we would like to understand if households are differently affected by the crisis due to their consumption structure or due to their income levels. It may pave the way for designing more appropriate government measures.

**METHODOLOGY**

To estimate the occupational gap, we use data on labor supply and demand by occupation, provided by the Employment Service Agency of North Macedonia (ESA). The obtained data on labor supply are administrative data from ESA collected by June 2024, classified according to the profile of the individuals, i.e. the occupation that an unemployed person reported to ESA registry based on his/her qualifications and/or prior occupation, as well as the sex. These data do not have a corresponding code according to the International Standard Classification of Occupations (ISCO-08). Therefore, all occupations are appropriately coded at the 2-digit level. However, we are left with a contingent of unemployed individuals who reported no occupation. As these individuals are mostly without or at most with a primary education, their joint observation with the low-skill groups of ‘elementary occupations’ and ‘plant and machine workers’ provides a satisfactory proxy of the occupational gaps.

The demand-side data are obtained from the Survey of Skills Needs for

2024, whereby occupations are already coded according to ISCO-08. To this end, using both supply- and demand-side data, we calculate the gender occupational gap, i.e., the number of unemployed women/men per job vacancy, using the 2-digit ISCO-08 code.

**RESULTS**

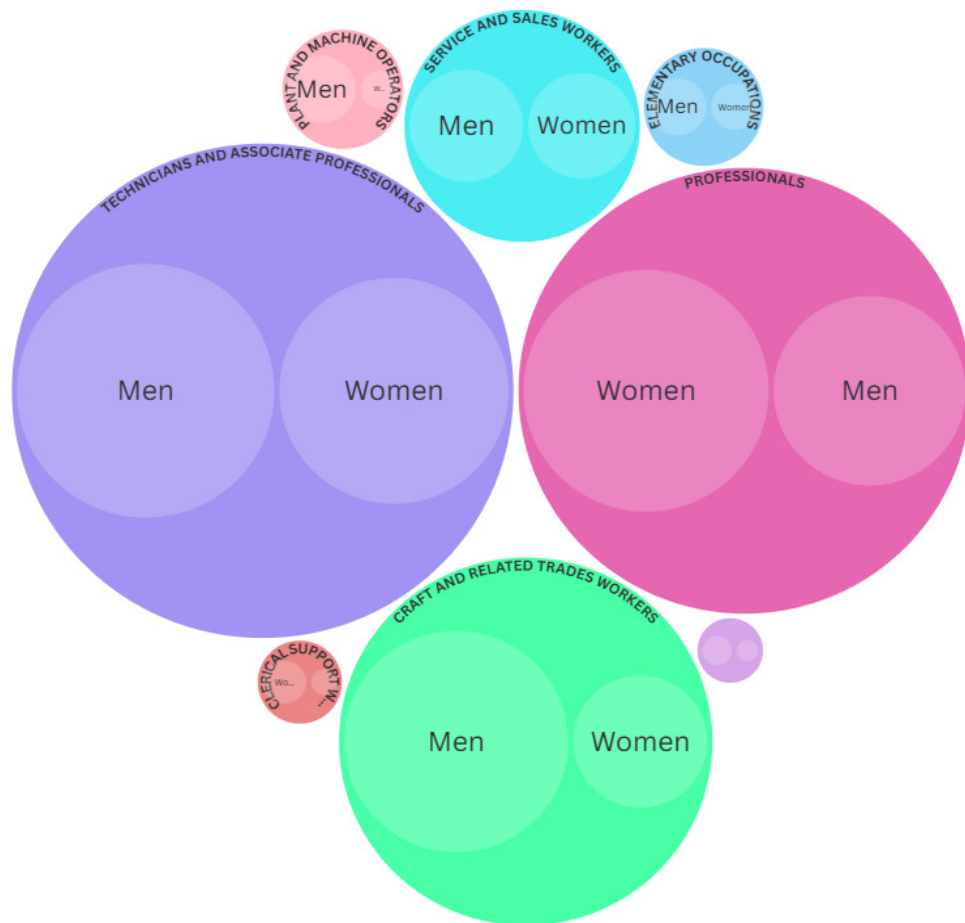
**A horizontal occupational segregation exists on the labor market in North Macedonia.**

More than 100 thousand people have been registered as active jobseekers at the ESA, with almost equal gender representation. More than two thirds are with primary education and no

designated occupation, majority of which (55.2%) are women.

Among the others who have a specific occupation, there are gender differences. Picture 1 shows that women prevail in only two occupations: professionals and clerical support workers, while the remaining six occupations are dominated by man, although there are no significant differences among the service and sales workers and individuals with elementary occupations. The supply of skilled agricultural, forestry and fishery workers is very low (50 women and 93 men), and cannot be marked as male-dominated occupation. The same applies for the clerical support workers.

Picture 1. Gender segregation among the occupations



Note: The size of the circle corresponds to the number of persons registered with such occupation, while the in-circles present the gender share within the occupation. The smallest circle Agricultural, fishery and forestry workers, which is not visibly labelled due to the low number of individuals registered with this occupation.

Source: Employment Service Agency

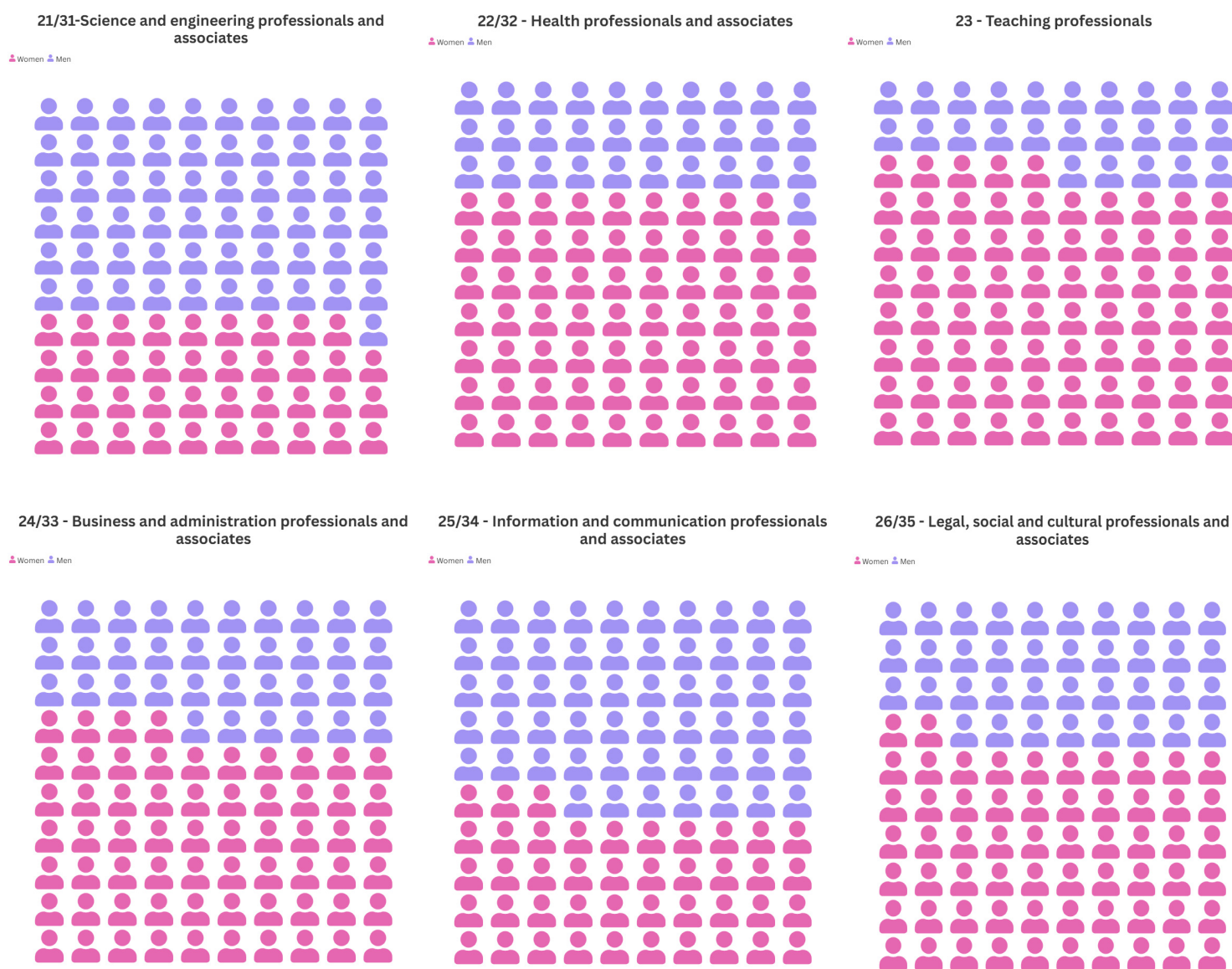


The in-depth analysis within occupations also reveals gender differences (Picture 2). Although ‘Professionals’ are female-dominated, there are significant differences between the various sub-occupations. Among science, engineering and IT professionals men dominate women. In the remaining sub-categories, there is a significant female dominance, mostly pronounced among teaching professionals. Here, the largest difference is made by women – teaching professionals in preschool education, primary school teachers and language teachers.

Although most numerous, the occupation group no. 3 – Technicians and associate professionals is not characterized with significant gender differences. It follows nearly similar pattern as group no. 2. Most of the persons within this group (78%) are science and engineering associates and the number of registered men is 40% higher compared to women. Opposite, the number of registered female health associates is more than double that of men with this occupation.

A detailed gender analysis of the high-skill sub-occupations shows that women are more prevalent in the lower-pay occupations.. For example, the average net salary of teaching professionals is around 39 thousand MKD, for administrative activities nearly 33 thousand MKD, health sector receives 44 thousand MKD, while the average salary for male-dominated occupations is around 77 thousand MKD (IT and communication) and 47 thousand MKD (science and technical sector)<sup>1</sup>.

**Picture 2. Gender segregation within high-skill occupations**



Source: Employment Service Agency Gender segregation also exists among medium- and low-skill occupations.

<sup>1</sup> Data presents the average net paid salary for September 2024 collected from State Statistical Office.

Generally, these occupations are male-dominated, mainly due to the significantly higher number of men registered within occupation no.7 – Craft and related trade workers. Three of the sub-occupations (71, 72 and 74)

are more than 95% populated by men. Most of the low-skill sub-occupations are men-dominated, with exception of the refuse workers, where two thirds are women. Here, we should take into account persons with no designated

occupations, who could fit in some of the low-skill occupations. If they are added to the low-skill group, the number of women exceeds men by about 20%.

Picture 3. Gender segregation within medium-and low-skill occupations

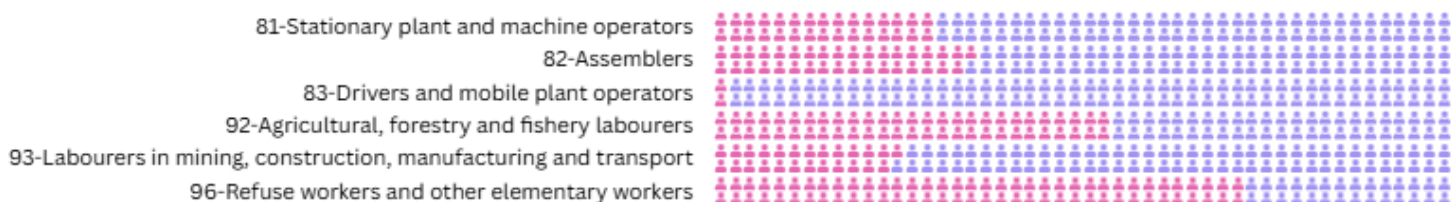
## Medium-skill occupations

 women  men



## Low-skill occupations

 women  men



Note: Occupations with less than 100 registered unemployed are excluded.

Source: Employment Service Agency.



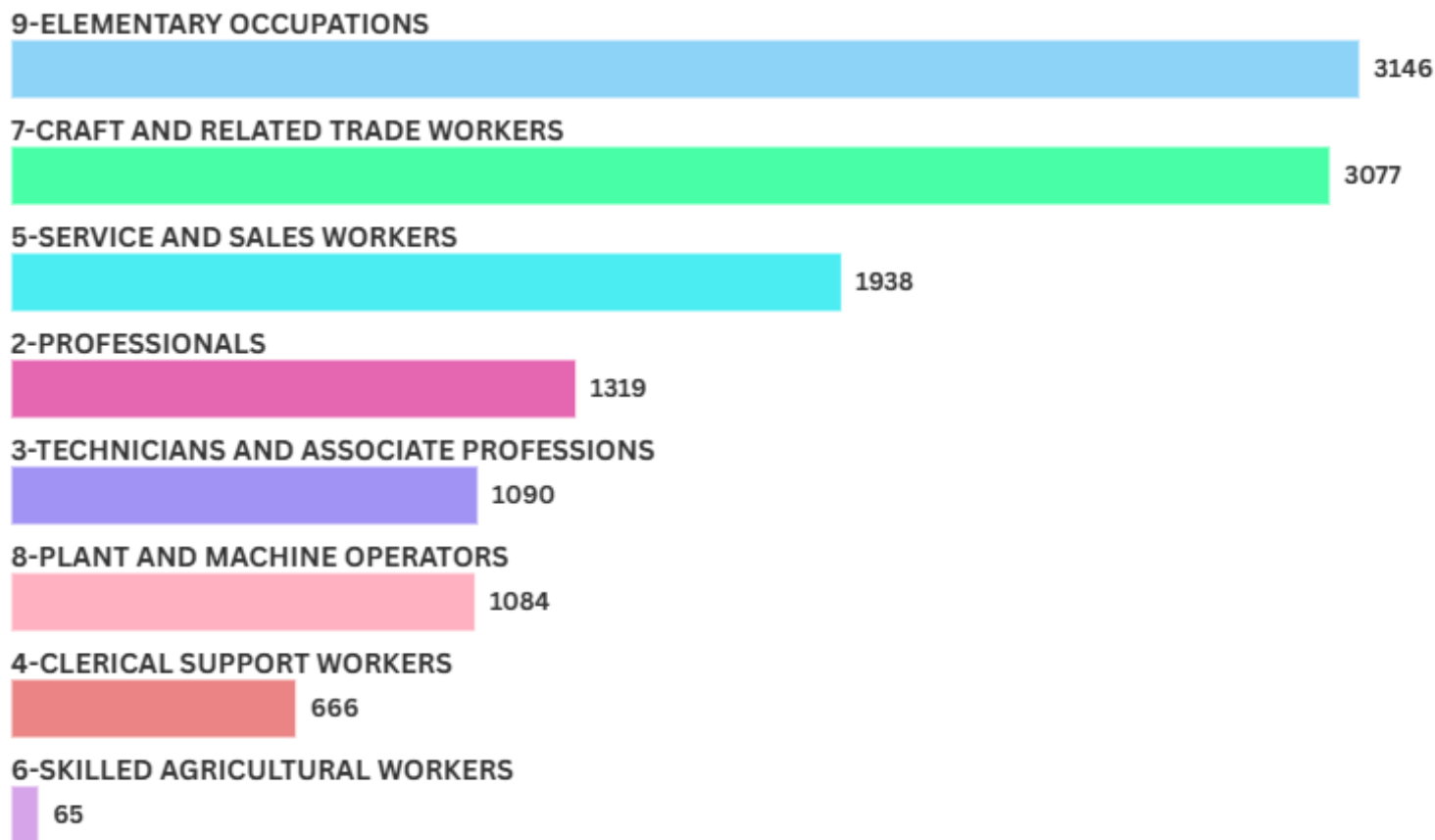
**The demand for male-led occupations is higher**

The analysis of the skills needed at the Macedonian labor market reveals that half of the available job vacancies fall into elementary occupations and craft and related trade workers,

both dominated by men (Picture 4). Seemingly, the need for professionals, a women-dominated occupational group, is also among the top five. However, it is primarily directed toward science, engineering, and IT and communication professionals,

fields where men also dominate. The other women-centred occupational group of clerical support workers faces occupational deficits, as the labor supply is lower than demand.

Picture 4. Number of needed workers per occupation



Source: Employment Service Agency

**Highest occupational gap is recorded among the women-led occupations.**

The occupational gap, estimated as the ratio between labor supply and demand, is dramatically high among teaching assistants and legal, social, and cultural professionals, suggesting that for each job vacancy in these occupations, there are 28 and 18 potential female workers, and 17 and 6 male workers, respectively. The supply of female workers is several times higher than the demand, as well as the supply of male workers, particularly among handcraft and

printing workers, as well as health professionals and associates (Picture 5).

However, to a certain extent, these numbers do not accurately reflect the real situation in the labor market. Employers consistently report labor shortages, particularly in the service sectors, despite the existence of a relatively large unemployed labor force without designated occupations. One possible explanation for this disconnect is that many of the unemployed individuals lack the specific skills required for certain jobs, even though they may be easily

trained or pre-qualified for positions that do not demand specialized expertise. Jobs such as salespersons, administrative associates, or processing workers could be filled by this group, given appropriate training or upskilling. The issue may lie in mismatched expectations or gaps in vocational training, which prevent the unemployed from transitioning into these roles despite the demand in the labor market.

Similarly, the shortage of healthcare staff is often discussed in both public discourse and in practice, yet data suggests that the supply



of health professionals actually exceeds demand. The reasons for this paradox are likely multifaceted. One key factor is the significant turnover of healthcare workers in public institutions, which can be attributed to lower salaries, subpar

working conditions, and high job dissatisfaction. Additionally, many healthcare professionals may prefer to work in private institutions or abroad, where the compensation and working conditions are often better. The emigration of healthcare workers,

driven by better opportunities in other countries, further exacerbates the shortage in local healthcare systems. These factors combined may help explain why supply is not matching the demand in certain sectors.

Picture 5. Number of potential workers per job vacancy



Note: The number of potential workers per job vacancy is estimated as a ratio between labor supply and demand for a certain occupation. Ratios below 1 are not presented.  
Source: Author's calculation

**The occupational gender segregation in the regions corresponds to the national position**

At the regional level, the number of active jobseekers is the highest in Polog and the Skopje region and almost half as much in Southwest, Northeast and Pelagonija regions. The supply of high-skill occupations (codes 2 and 3) is the highest, while the lowest for the low-skill occupations.

Regional analysis corresponds to the national-level conditions, whereby high-skill occupations are mainly women-dominated. The ratio between registered women and men is also positive, meaning higher number of women for the medium-skill clerical support workers. The Southeast region is the only where supply of female technicians and associates is higher than male’s, while in the other regions this occupation is male-dominated. Occupations with codes 7 and 8 are purely male-dominated in all regions, while the remaining occupations are characterized by regional gender differences (Table 1).

**Regional occupational differences appear in labor demand**

One-third of labor demand is concentrated in the Skopje region, while in Polog, which has the highest supply with more than 20,000 active jobseekers, there are only 162 job vacancies. This disparity in labor demand may be partly explained by the lack of large companies in the Polog region, which limits the availability of formal employment opportunities. However, it may also signal a potential spread of the informal economy, where jobs are not officially registered or reported. In regions with limited formal employment, workers may resort to informal work, which often goes uncounted in official labor market statistics. The prevalence of informal employment could mean that many jobseekers in Polog are engaged in unregistered work, thus reducing the

apparent demand for formal labor in the region. This underscores the complexity of the labor market, where formal job vacancies do not always reflect the full extent of available employment opportunities.

Generally, labor demand is concentrated in the low-skill occupations, though some regional differences exist. For example, half of the need for professionals and technicians is concentrated in the region of Skopje, while being very low in the other regions. Contrary, in Pelagonija, the need for elementary workers is the highest, where almost half of job vacancies are for refuse workers. In the Southwest, sales and service workers are most needed. The remaining regions seek workers from the male-dominated occupational group of craft and related trade workers.

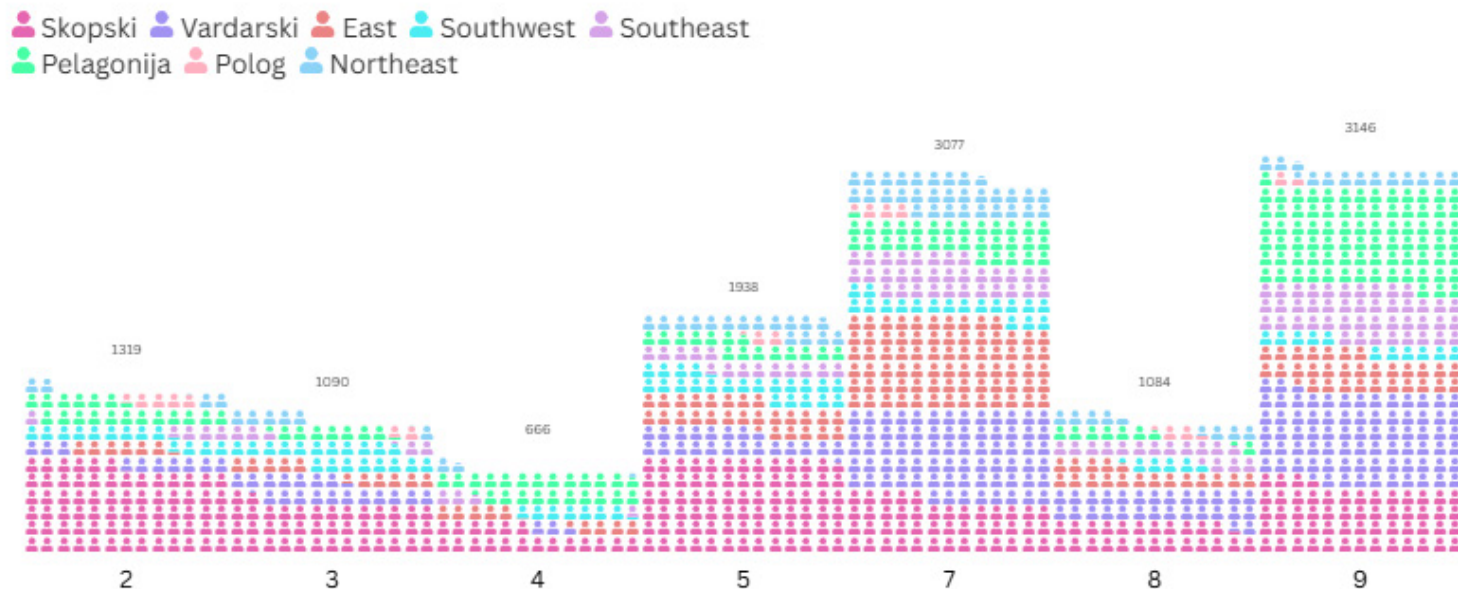
**Table 1. Ratio between registered women and men, by occupation**

	East	Northeast	Pelagonija	Polog	Skopski	Southeast	Southwest	Vardarski
2-Professionals	1.9	1.8	1.8	1.6	1.4	1.7	1.5	1.4
3-Technicians and associate professionals	0.8	0.8	0.8	0.9	0.7	1.1	0.8	0.7
4-Clerical support workers	4.0	2.5	4.7	2.9	2.0	4.5	14.0	3.9
5-Service and sales workers	1.0	1.9	0.8	0.5	1.1	1.2	0.8	1.0
6-Skilled agricultural, forestry and fishery workers	0.6	0.2	0.7	0.2	0.6	0.7	0.0	1.0
7-Craft and related trade workers	0.6	0.5	0.4	0.2	0.2	0.5	0.3	0.3
8-Plant and machine operators	0.5	0.4	0.3	0.1	0.3	0.4	0.2	0.3
9-Elementary occupations	1.2	0.2	0.8	1.1	0.9	1.2	0.2	0.4

Source: Author’s calculation



Picture 6. Regional labor demand by occupation



**In all regions, the labor supply among women-dominated occupations is higher than the demand**

Picture 7 shows the occupations where labor supply is higher than demand, signalling a surplus. The high-skill occupations (codes 2 and 3) are in surplus in all regions, and the number of women per job vacancy is higher than the number of potential male workers, which suggests that women face more intense competition

and lower opportunities to find a high-skill job. Half of job vacancies within these occupations are open for science engineers and IT professionals, occupations where men are dominant (see Picture 2), which additionally limits opportunities for women. These occupations tend to be better valued also.

Limiting women’s participation in high-skill occupations contributes to occupational segregation, which not only affects women’s pay and career

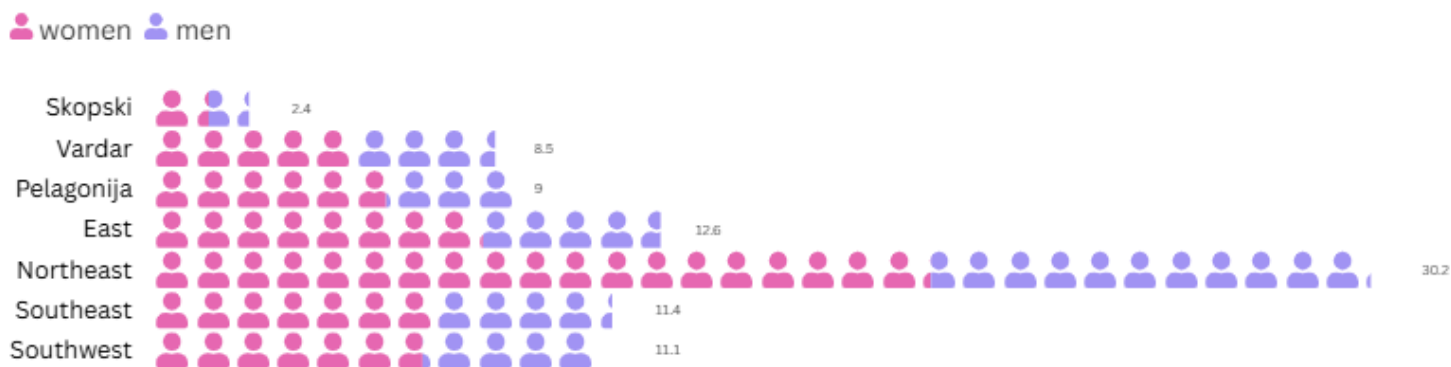
progression but also restricts the pool of skills available to employers. By excluding women from higher-skilled roles, organizations fail to fully leverage the potential of the entire workforce, leading to reduced innovation and productivity. Additionally, this segregation perpetuates gender disparities in income and advancement opportunities, reinforcing barriers that hinder women from reaching their full professional potential.



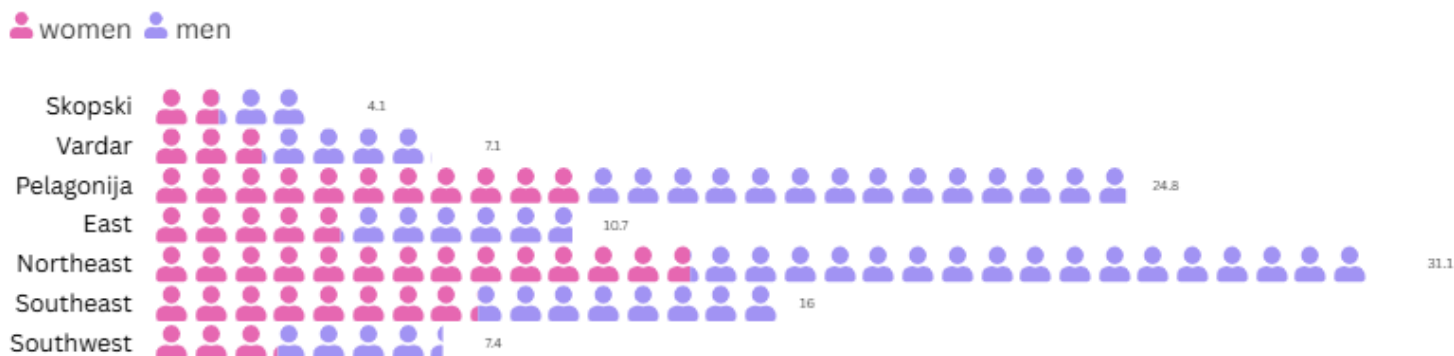


Picture 7. Number of potential workers per job vacancy, by gender and occupation

## 2-Professionals



## 3-Technicians and associate professionals



## 7-Craft and related trade works



Note: Polog region has been excluded of the high-skill occupations, as the numbers are very large and distort the image. The surplus in Polog for Professionals is 33 women and 20 men per job vacancy, and 83 women and 95 men per one job vacancy for Technicians and associate professionals. Source: Author's calculation.

### CONCLUSION AND RECOMMENDATIONS

Occupational gender segregation is prevalent in North Macedonia. Certain occupations, like preschool teachers, caregivers, and construction workers, are often stereotypically associated with either women or men. These gender assumptions lead

employers to exclude large segments of potential employees, resulting in women working below their skill level and limiting their career opportunities. Additionally, personal choices, outdated expectations about women's roles, and traditional job designs push women into specific occupations, further entrenching

segregation. Addressing this issue could enhance national economic value by tapping into the full talent pool and ensuring equal opportunities for all. It requires the involvement of all key stakeholders, providing accurate information and an enabling environment for equal access to opportunities.

**The business sector should provide fair access to the labor market, more flexible jobs and equal opportunities for promotion**

Businesses must address key challenges to workplace equality: fair access to the labor market, a more flexible and inclusive labor market, and equal pay and opportunities for promotion. Inflexible working patterns are a major barrier for many. Offering flexible working not only attracts and retains top talent but also allows businesses to adapt working hours to their needs, rather than adhering to traditional schedules. The right to request flexible working should be extended to all employees, promoting it as standard business practice rather than special treatment. Businesses must also eliminate workplace discrimination and challenge outdated attitudes and practices that hinder individuals from entering or advancing in the workforce.

**The Employment Service Agency should strengthen the career guidance tool**

First, ESA should improve careers advice for girls and women who can be disadvantaged by occupational segregation, to help ensure that they are aware of the options open to them. Also, creating measures that will guide employers to open job vacancies for women in the male-dominated occupations, and vice-versa, could decrease existing occupational gaps.

**The education system should be restructured to respond to the needs of the labor market**

Limiting quotas in surplus occupations will reduce the opportunity for women to choose

occupations where employment opportunities are more limited. Designing educational curricula that reflect labor market needs and intensifying participation of the business sector in the curricula design process, could also help in addressing occupational segregation.

**Key stakeholders should increase public awareness for making proper occupational choices among women and men**

A widespread promotional campaign should encourage and inform women and men to make smart educational and occupational choices that will allow them to do tasks typically associated with their skills and potentials, rather than their gender.

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*This product has been prepared as part of the UK Government-funded project “Unlocking Women’s Economic Potential – Beyond Gender Boundaries”, with the support of the British Embassy Skopje. The views and opinions expressed in this content do not necessarily reflect the views and opinions of the British Government.*