Gender dimension of overeducation of migrant workers in the European Union

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Abstract

In this quantitative exploratory study, I examine overeducation among migrant workers in the European Union. I analyze data from the OECD Migration Database (DIOC) covering the period 2000/01 to 2015/16 I find that the highest risk of overeducation is faced by women—who are increasingly prevalent in the migrant workforce—and non-Western migrants. These insights highlight the need for policies that enhance the efficient allocation of migrant human capital in Europe.

Keywords

Migration, DIOC, skill mismatch, women's work, migrant hierarchies

I. Introduction

The European Union (EU) has emerged as an important destination for global migration flows in the 21st century. Two major factors have contributed to these migration flows: First, the EU's eastern enlargements in 2004 and 2007 spurred increased migration from "new" to "old" member states. This trend accelerated following the Great Recession of the late 2000s (Baláž & Moravčíková, 2017; Kahanec et al., 2010; Kahanec & Fabo, 2013). Second, the EU attracts global asylum seekers due to its stability and geographical proximity to unstable regions in Eastern Europe, Asia, and Africa (Hatton, 2016, 2017; Léonard & Kaunert, 2019). In consequence, the importance of migrants in the European labor force has increased substantially.

In this study, I analyze the labor outcomes of these migrant workers, specifically, focusing on the issue of skill mismatch. Conceptually, a skill mismatch occurs when a worker's employment does not align with her skill level. However, given the challenge of measuring skills directly, I use educational level as a proxy, following conventional approaches (Fabo & Tijdens, 2014). The issue is worth examining because skill mismatch is typically associated with inefficient allocation of human capital and empirical studies link mismatch to lower workers' satisfaction, mobility and training participation as well as higher staff turnover (Verhaest & Omey, 2006).

In this paper, I utilize the Databases on Migration (DIOC). Unlike commonly used data sources, such as the EU Labor Force Survey (LFS) or EU Survey of Incomes and Living Conditions (SILC), DIOC is focused specifically on mapping the migrant worker population in the Organization for Economic Co-operation and Development (OECD), which includes a majority of EU member states.[2] It utilizes a range of administrative sources, such as national censuses and population registries, on top of the representative surveys. On the downside, the database only covers a limited range of variables, which limits the depth of the analysis (OECD, 2016). Although DIOC's limited scope restricts its use for causal analysis, its extensive coverage renders it suitable for exploratory studies. (Widmaier & Dumont, 2011). To study development of mismatch in time, I utilized the earliest and latest available datasets from the Databases on Migration (DIOC), specifically covering the years 2000-2001 and 2015-2016. My analysis is confined to sixteen out of the twenty-seven EU member countries, selected

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[2] Cyprus, Malta, Romania, Bulgaria and Croatia are not members. Slovenia, Lithuania, Latvia and Estonia joined OECD during the analysed period.

based on the availability of all analyzed variables. These countries represent approximately 86% of the total EU population.

During the examined period, the European economies experienced a significant shift from manufacturing to services, as evidenced by the declining share of blue-collar employment (see Table 1 for details). While countries like Poland and Hungary show a marked reduction in industrial and agricultural employment, others like Denmark and the Netherlands exhibit a more gradual shift.

Table 1: Share of employment in industry and agriculture 2000-2015

Country	Total employment		Total hours worked	
	2000	2015	2000	2015
EU 27	35%	28%	38%	30%
Czechia	44%	40%	44%	40%
Denmark	25%	19%	29%	22%
Germany	30%	26%	33%	28%
Ireland	34%	23%	39%	27%
Greece	35%	25%	35%	26%
Spain	35%	21%	38%	23%
France	24%	20%	28%	22%
Italy	32%	27%	35%	29%
Hungary	41%	31%	44%	33%
Luxembourg	27%	20%	29%	22%
Netherlands	22%	17%	26%	21%
Poland	49%	42%	48%	43%
Portugal	46%	33%	45%	31%
Slovakia	40%	34%	40%	35%
Finland	33%	26%	36%	29%
Sweden	26%	22%	29%	24%

Data: Eurostat – Table Employment by A*10 industry breakdowns [NAMA_10_A10] Note: The figure represents the share of employment in NACE Rev. 2 activities A-F on total employment. EU 27 represents the total per 27 EU member states as of 2020.

The heterogeneous deindustrialization process has profound implications for labor markets, influencing not only the demand for migrant labor but also the types of jobs available to migrants. In general, the traditional, Cold War era migration framework was intended to facilitate temporary migration of working aged men, typically from the Iberian Peninsula or Turkey as well as Central Europe after the fall of the Iron Curtain, capable of satisfying the demand for blue-collar workers in Western European mines and factories. A typical example of such a system was the West German "Gastarbeiter" system. This system became increasingly marginal in the examined period (Mandel, 1990; Rudolph, 1996).

In the late 2000s, deindustrialization in the EU progressed, with the remaining manufacturing work increasingly becoming automated (Acemoglu & Autor, 2010; Arntz et al., 2016; Autor & Dorn, 2013; McGuinness et al., 2023). In response, a new system has emerged to provide labor in the service and caring sector, where replacement of human labor with machines remains challenging (Beblavý et al., 2016; Black & Spitz-Oener, 2010). A typical example of such migration is the "au-pair" live-in nanny, which brought millions of predominantly female workers from Eastern Europe and Asia to Northwestern European countries (Isaksen, 2010; Sekeráková Búriková, 2023; Sekeráková Búriková & Miller, 2010; van Riemsdijk, 2013). This movement, alongside the permanent migration spurred

by the ascension of formerly Communist countries with comparatively low living standards (Fabo & Belli, 2017; Guzi et al., 2021) to the EU, contributed to the "feminization of migration" (Kahanec & Fabo, 2013, (Castles & Miller, 1993; Tittensor & Mansouri, 2017).

Unlike their working-class predecessors, many of the migrants coming "new" to "old" member states were highly qualified (Kahanec et al., 2013). Nonetheless, a vast body of literature documented that those migrant workers often found employment below their skill level or in less skilled roles than their peers in their home countries (Currie, 2007; Favell, 2008; Johnston et al., 2015). This anticipated skill mismatch forms a crucial aspect of my analysis, in particular because it is related to structural factors such as gender or nation of origin of the migrant workers. (Kahanec & Zaiceva, 2009; Webb, 2015). For example, the well-documented hierarchies distinguish Western "expats" from other migrants, potentially influencing skill mismatch rates among different groups (Ford, 2011; Leschke & Weiss, 2023).

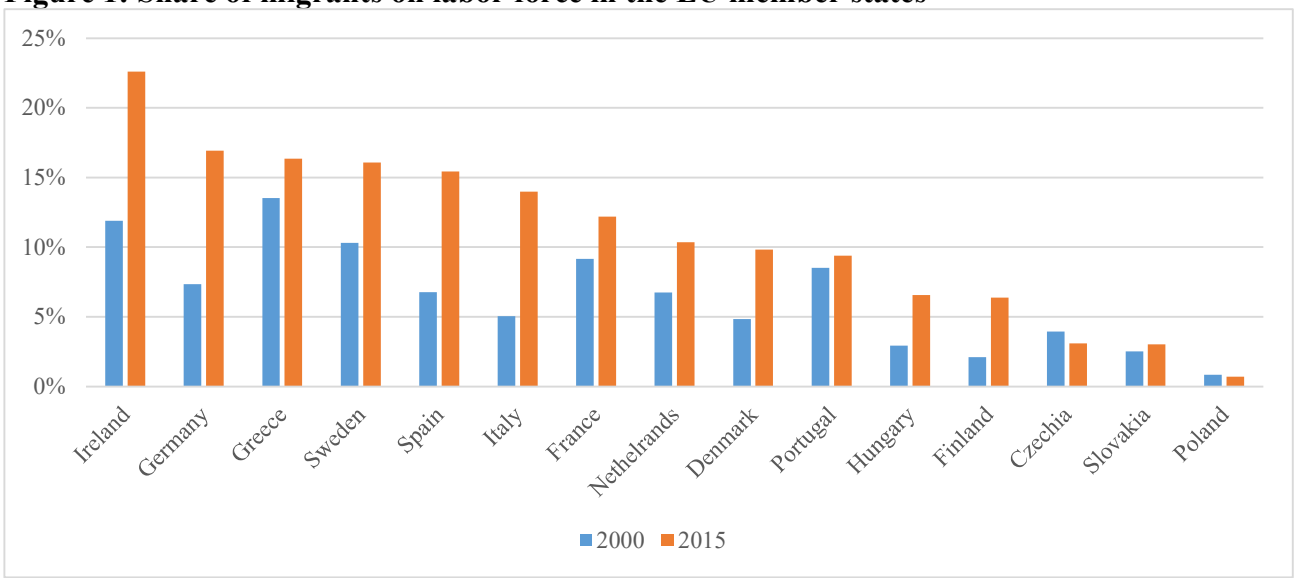
II. Characteristics of migrant workers in the EU

In this section, I present the size and gender characteristics of migrant workers in the EU. In general, the intensive migration inflows have significantly increased the share of migrants in the European workforce. However, the growth's pace was uneven, largely due to the diverse legal frameworks and socio-economic conditions across member states.

As a result, while the share of migrant workers in the labor market has risen nearly universally across the EU, the extent of this increase varies. Notably, countries like Ireland, Germany, Spain, Italy, and Finland saw their share of migrants in the workforce more than double. In contrast, many Eastern countries, such as Czechia, Poland, and Slovakia saw a stagnation of the size of their migrant workers populations.[1] This disparity underscores the significant impact of national policies and economic conditions on migration patterns within the EU (Figure 1). Moreover, the diverse origins of migrants in different member states highlight the varied nature of migration flows. For instance, Spain has become a major destination for many Latin Americans, while Ireland has predominantly attracted immigrants from the new EU member states (see Table A1 in the Appendix for detailed origin countries).

[1] With growing prosperity of these countries and Russian invasions of the neighboring Ukraine, these countries became a major migrant recipients after 2015 (Okólski, 2021).

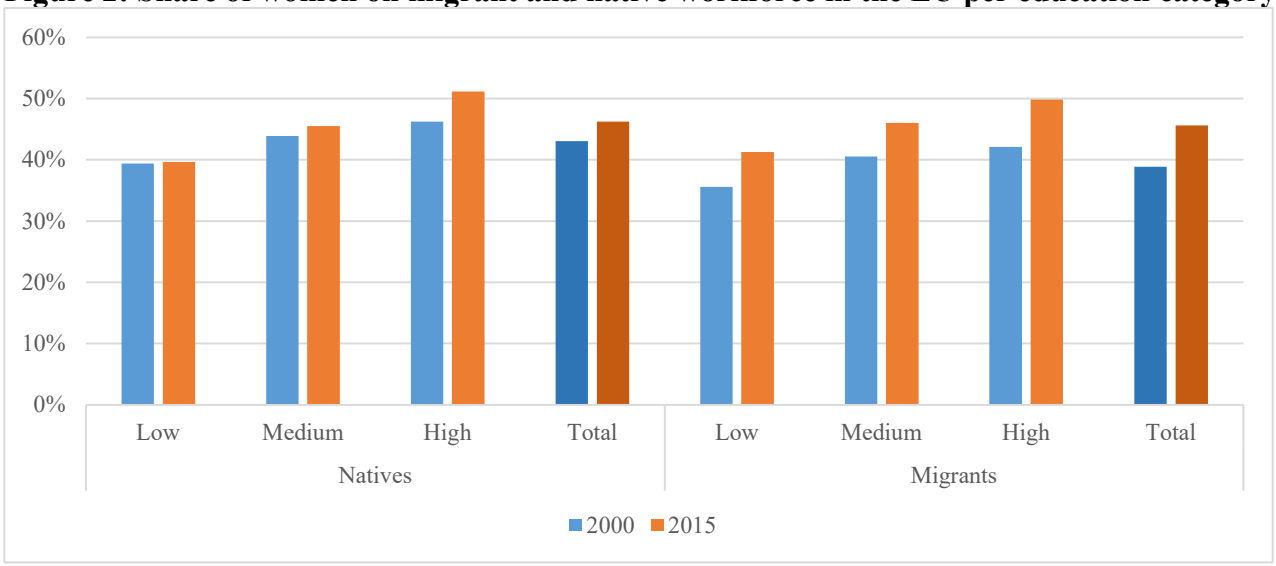
Figure 1: Share of migrants on labor force in the EU member states



Own calculation, data OECD, 2016. Note: Luxembourg not displayed due to chart scaling

The gender composition of migrant workers in the EU has undergone significant changes over the examined period (Table 2). In 2000, the migrant workforce was predominantly male, with men comprising roughly 60%. However, by 2015, the share of men among migrant works decreased to 54%. This shift towards gender balance is in line with a broader trend towards gender parity in the labor market associated with the shift from manufacturing to service economy (Ngai & Petrongolo, 2017). In terms of education, the analysis reveals that the educational profile of migrant women has become increasingly comparable to that of their native counterparts (Figure 2).

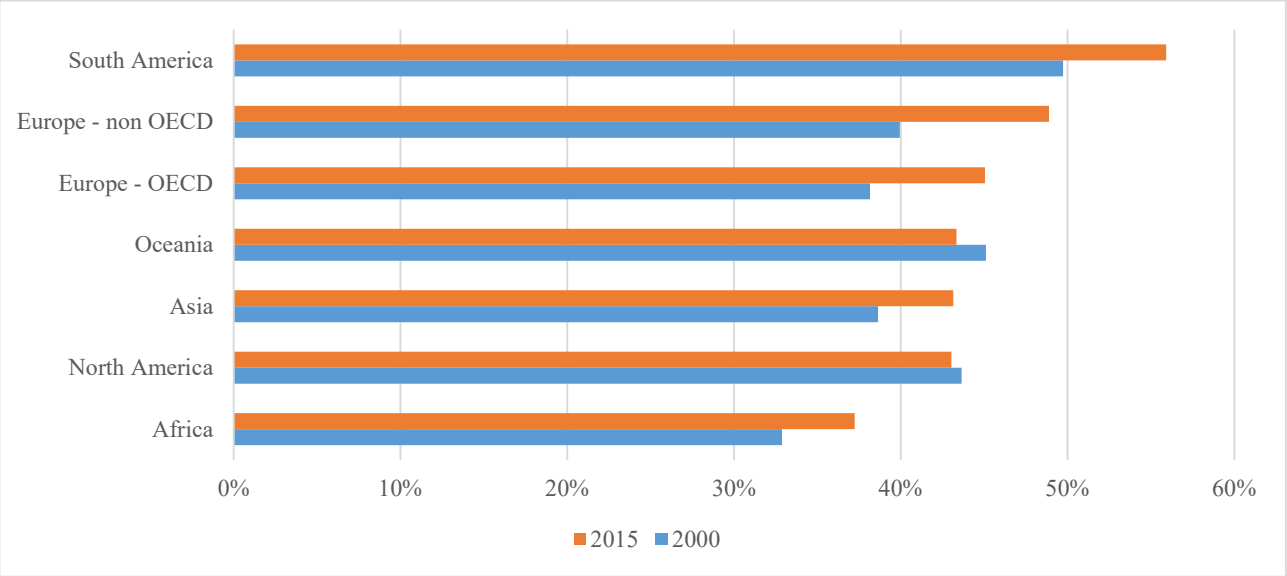
Figure 2: Share of women on migrant and native workforce in the EU per education category



Own calculation, data OECD, 2016.

A migrant's region of origin plays a crucial role in determining the gender composition of the EU migrant workforce, as detailed in Figure 3. Notably, among migrants from Latin America, the gender ratio was nearly balanced already in 2000 By 2015, female migrants had become the majority in this group. For migrants coming from non-OECD European countries, gender parity was nearly achieved by 2015. Africa, nonetheless, remains an important exception to the trend of feminization of migration. While the share of female migrants from Africa has increased, it remains under 40%. This phenomenon is possibly linked to the irregular migration routes often undertaken by the African migrants, which may disproportionately affect women's mobility and decision to migrate.

Figure 3: Share of women on migrant workforce per country of origin

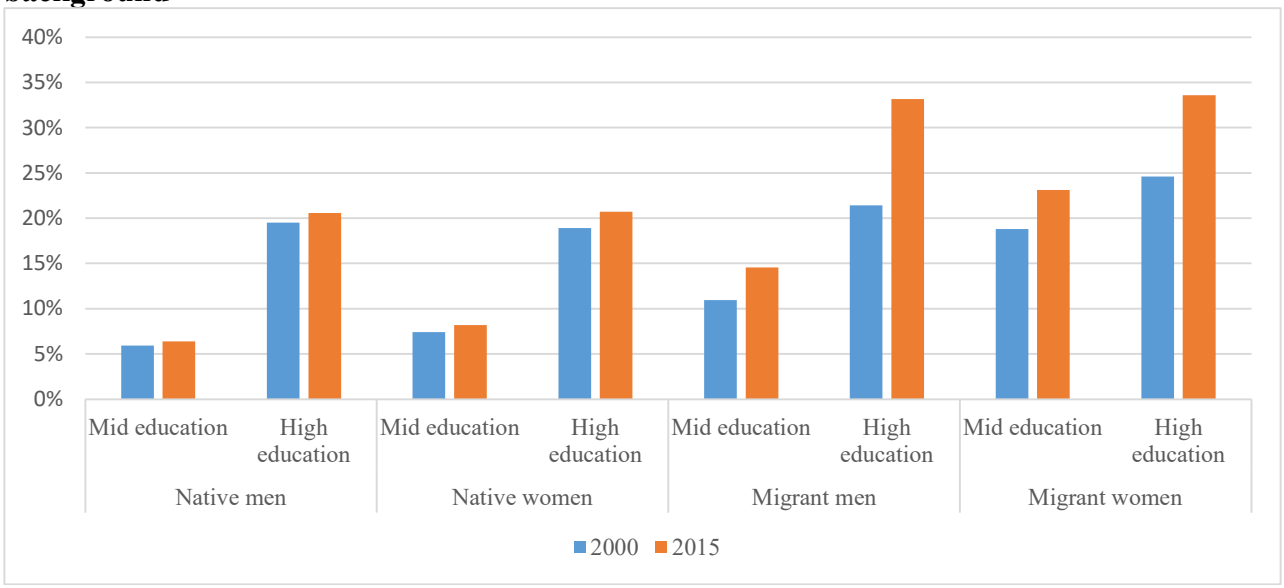


Own calculation, data OECD, 2016.

III. Overeducation among migrant workers

In this section, I analyze significant disparities in terms of the extent of overeducation among migrant workers when compared to native workers within the EU labor market. Data shows that from 2000 to 2015, the education mismatch among native workers increased only marginally. Migrant workers experience significantly higher rates of overeducation. Specifically, 23% of women and 15% of men with medium education levels, equivalent to a high school diploma, are overeducated. Furthermore, 34% of women and 33% of men with high education level, typically corresponding to a college degree, are overeducated. All these overeducation rates saw a dramatic rise compared to the situation in 2000, as shown in Figure 4.

Figure 4: Share of overeducated workers per level of education, gender and migration background



Own calculation, data OECD, 2016.

Zooming on the high school migrants, I observe a decreasing representation in professional roles alongside growing employment in service and skilled blue-collar occupations (Table 2). Specifically, the share of highly educated male migrants in professional roles decreased from 48% to 42%, while their representation in managerial positions also saw a reduction, from 15% to 10%. Concurrently, there has been a noticeable shift towards service and skilled blue-collar occupations among highly educated male migrants. The data indicates an increase from 4% to 8% in service roles and from 12% to 14% in skilled blue-collar jobs by 2015. Moreover, the share of highly educated male migrants in elementary occupations has risen from 4% to 6%. For highly educated female migrants, analogous challenges are observed, evidenced by a reduction in the proportion of professionals from 43% to 39%. In contrast, the representation of female migrants in service roles markedly increased, from 9% to 15%, and the prevalence in elementary occupations grew from 5% to 11%.

Table 2: Occupational distribution of highly educated migrant workers in the EU.

	Occupation	2000	2015
Migrant men	Managers	15%	10%
	Professionals	48%	42%
	Technicians	17%	15%
	Administrative workers	3%	5%
	Service workers	4%	8%
	Skilled agriculture workers	1%	1%
	Craft and trade workers	7%	8%
	Operators	3%	5%
	Elementary occupations	4%	6%
Migrant women	Managers	7%	6%
	Professionals	43%	39%
	Technicians	25%	17%
	Administrative workers	8%	10%
	Service workers	9%	15%
	Skilled agriculture workers	0%	0%
	Craft and trade workers	1%	1%
	Operators	1%	1%
	Elementary occupations	5%	11%

Own calculation, data DIOC.

Skill mismatch rates among migrants vary significantly based on their region of origin as detailed in Table 3. Migrants from Western regions, including North America and OECD-member European countries, face a lower incidence of skill mismatch compared to those from other regions. Notably, migrants from Latin America and non-OECD European countries are most likely to experience skill mismatch. This variation underscores the significant impact of geographical origin on migrants' employment prospects within the EU.

Table 3: Share of mismatched workers per region of level of education and region of origin

	Medium education				**High education**			
	Men		Women		Men		Women	
High school	2000	2015	2000	2015	2000	2015	2000	2015
Africa	11%	17%	14%	26%	20%	36%	21%	34%
Asia	14%	18%	21%	26%	21%	35%	30%	43%
Europe - non OECD	11%	15%	21%	31%	23%	43%	26%	49%
Europe - OECD	8%	11%	14%	19%	18%	27%	19%	31%
North America	6%	8%	5%	6%	10%	13%	14%	17%
Oceania	6%	4%	5%	7%	21%	20%	21%	18%
South America	14%	19%	25%	36%	28%	39%	35%	48%

Own calculation, data DIOC.

IV. Conclusion

In this exploratory analysis, I have examined the migration flows to the EU, focusing on the structural characteristics of migrants, and their relation with overeducation. The significant rise in overeducation, disproportionately affecting women migrants, is the key finding. This phenomenon, underscores both the inefficient use of human capital and potential obstacles to the long-term integration of migrants. Furthermore, in line with existing scholarly work, a disparity in labor market outcomes between Western and non-Western migrants has been observed, even among those with

high levels of education. This disparity may reflect the lower quality of education—whether actual or perceived—originating from non-Western countries (Hardoy & Schøne, 2014), or potentially, employer biases favoring Western employees in professional settings. Regardless of the underlying reasons, these discrepancies result in suboptimal human capital allocation.

The feminization of migration in the EU goes hand in hand with increasing labor market mismatch. Nonetheless, the effect is not straightforward. In fact, the women migrants' labor market outcomes are highly determined by systemic issues—including differences in education systems, economic opportunities, and migration pathways. Gender is likely to exacerbate these challenges, indicating an intersectional nature of the issue. In policy terms, it appears that policies blanketly targeting women migrants, should be supplemented by those stemming from the specific needs of various migrant worker communities.

The issue of skill mismatch of migrants is a multi-faceted phenomenon, interacting closely with other dimensions such as gender, national origin. In this exploratory paper, I examined these structural issues to the extent possible from the data available in the DIOC dataset. Evaluating those dynamics based on more granular data should be the next step. Another important area of concern is the diversity between various EU member states, which differ not only in composition and size of the migrant inflows but also policy responses to facilitate labor market integration of migrant workers.

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Appendix

Table A1: Distribution of the countries of origin per destination countries

	2000							2015						
	Africa	Asia	Europe	Europe - OECD	North America	Oceania	South America	Africa	Asia	Europe	Europe - OECD	North America	Oceania	South America
Czechia	1%	8%	53%	37%	1%	0%	0%	1%	14%	35%	48%	1%	0%	1%
Germany	0%	10%	62%	27%	0%	0%	0%	3%	19%	31%	43%	1%	0%	2%
Denmark	7%	25%	36%	25%	4%	1%	3%	6%	29%	15%	44%	3%	1%	3%
Spain	20%	5%	21%	13%	1%	0%	40%	15%	7%	18%	17%	1%	0%	42%
Finland	6%	11%	54%	23%	3%	1%	1%	7%	19%	26%	45%	2%	0%	2%
France	54%	9%	18%	16%	1%	0%	2%	48%	11%	5%	31%	1%	0%	4%
Greece	4%	10%	71%	9%	3%	2%	1%	4%	18%	53%	19%	3%	2%	1%
Hungary	1%	6%	84%	8%	1%	0%	1%	2%	10%	70%	15%	2%	0%	1%
Ireland	4%	6%	43%	38%	5%	3%	1%	5%	10%	8%	70%	3%	1%	3%
Italy	22%	11%	36%	16%	3%	1%	11%	14%	16%	43%	14%	1%	0%	11%
Luxembourg	4%	2%	48%	44%	1%	0%	1%	5%	3%	7%	83%	1%	0%	1%
Netherlands	9%	16%	43%	6%	0%	0%	26%	16%	18%	7%	38%	2%	1%	18%
Poland	1%	5%	82%	11%	1%	0%	0%	5%	18%	48%	24%	3%	1%	2%
Portugal	60%	2%	15%	10%	1%	0%	11%	40%	3%	10%	27%	2%	0%	17%
Slovakia	0%	1%	55%	43%	0%	0%	0%	1%	6%	23%	70%	1%	0%	1%
Sweden	6%	20%	42%	24%	1%	0%	7%	9%	33%	18%	32%	1%	0%	6%

Own calculation, data OECD, 2016