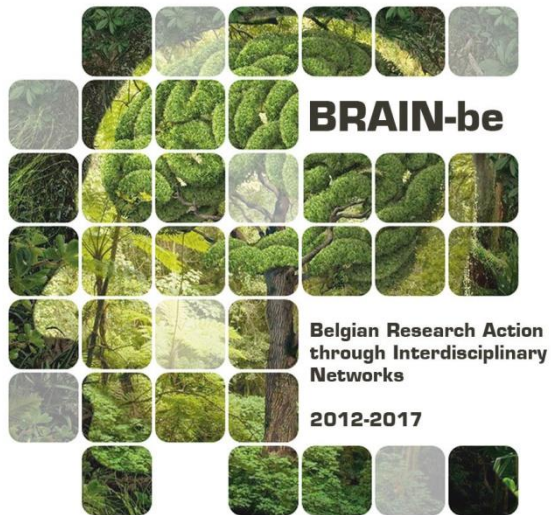


IMMIGBEL/IMMILAB

**Improving the Labour Market Position of People with a Migration
background in Belgium**

MARX Ive (UAntwerpen) - VERBIST Gerlinde (UAntwerpen) - NEELS Karel
(UAntwerpen) - RYCX François (ULB)

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PROMOTORS: MARX Ive (UAntwerpen) - VERBIST Gerlinde (UAntwerpen)
NEELS Karel (UAntwerpen)
RYCX François (ULB)





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WTCIII

Simon Bolivarlaan 30 Boulevard Simon Bolivar

B-1000 Brussels

Belgium

Tel: +32 (0)2 238 34 11

<http://www.belspo.be>

<http://www.belspo.be/brain-be>

Contact person: Aziz NAJI

Tel: +32 (0)2 238 36 46

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1. INTRODUCTION

This report reflects the research results of the BELSPO-BRAIN project 'IMMILAB', titled 'Improving the Labour Market Position of People with a Migration background in Belgium' (BR/165/A4/IMMILAB). Undertaken between 2017 and 2022, three teams of researchers analysed the labour market trajectories of people with a migration background in Belgium, and this from an individual, family as well as firm level perspective.

The three teams are:

- 1) Centre for Social Policy – University of Antwerp – promotor (and coordinator): Prof. Ive Marx and Dr. Gerlinde Verbist, with contributing researchers Dries Lens, Ninke Mussche and Jarmila Oslejová.
- 2) Centre for Population, Family and Health – University of Antwerp – co-promotor Prof. Karel Neels, with contributing researchers Julie Maes, Jonas Wood and Naomi Biegel.
- 3) Université Libre de Bruxelles - SBS-EM (CEB and DULBEA) & UMONS – promotor Prof. François Rycx, with contributing researchers Benoît Mahy, Melanie Volral, Valentine Fays, Valentine Jacobs, Kevin Pineda.

The Federal Migration Centre *Myria* (with Director Koen Dewulf) contributed to the project as subcontractor with contributing researcher Iulia Rautu.

The motivation behind the project is that the socio-economic position of migrants in Belgium, as elsewhere in Europe, leaves much to be desired. Belgium has become an immigrant society. First generation migrants account for more than 15 percent of the Belgian work force and for over 50 percent of labour force growth. Immigrants have lower employment rates, higher unemployment and inactivity rates, and are far more likely to be poor. Yet Belgium is exceptional in this context. Nowhere in the EU15 is the employment rate gap between migrants and natives as large. First generation migrants' poverty rates are of the worst in the EU15. In no other EU country are first generation migrants so strongly overrepresented in minimum income protection schemes.

Additionally, Belgium also displays differences in employment conditions of native- and foreign-born workers. These differences can be explained by various phenomena, including wage discrimination and over-education. On the one hand, according to the definition proposed by Heckman (1998), wage discrimination occurs when two equally productive workers are paid differently on the basis of different non-productive characteristics, such as place of birth. On the other hand, over-education occurs when the level of education attained by a worker is higher than the level of education that is required to do his specific job. This phenomenon of over-education has been estimated in Belgium at 21% for foreign-born workers compared to 12.8% for natives in 2016 (Conseil supérieur de l'emploi 2018).

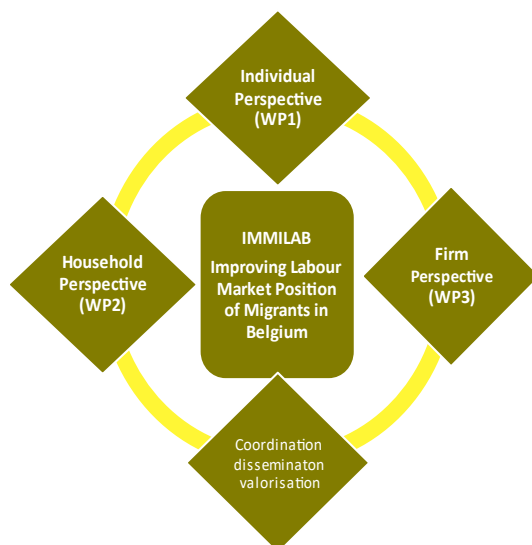
At both the federal and the regional level a range of measures have been developed to improve the labour market position of people with a migration background, including civic integration programmes, active labour market policies, family policies and career and diversity plans. These policies, however, are not performing as expected, possibly because of contextual and institutional barriers. The weak economic position of people with a migration background is all the more problematic in view of the fact that Belgium is a bottleneck economy: Belgium faces severe and long-term shortages in many professions, and is troubled by an increasing mismatch between supply and demand of labour. Moreover, population ageing has major implications for the labour force (Neels et al. 2020).

Even though we know that the employment rate of people with a migration background is lagging, we know less about the causes behind it. Research on the position of people with a migration background in Belgium is based almost exclusively on cross-sectional data. The main drawback of using cross-sectional data is the fact that they capture only a snapshot of the substantive process under study and thus preclude a (causal) analysis of the very complex labour market outcomes and dynamics of people with a migration background. Rather than a one-time event, migrant integration is a sequential process of transitions.

Currently, literature lacks the kind of quantitative research that would allow a systematic and detailed picture of migrant pathways through the labour market or enable us to understand how differences in these trajectories might shape employment outcomes in the future. However, without accurate knowledge of how people with a migration background progress (or regress) in the host society it remains very difficult to take apt policy measures that can promote their integration and it remains even more difficult to assess the impact of these policy measures. Following up on new migrant groups and quickly identifying which challenges to integration develop is crucial to make efficient policy interventions.

Hence the IMMILAB project developed research on the labour market trajectories of immigrants based on longitudinal data, and this from the individual, the family and the firm level perspective.

Figure 1 – Overview of IMMILAB approach



3

Before we describe the policy implications of our research, we set out the state-of-the-art knowledge regarding labour market integration in Europe (section 2), and in Belgium in particular (section 3). We then turn to the IMMILAB methodology (section 4) and research results (section 5) and discuss the policy implications of our research (section 6).

2. STATE OF THE ART - LABOUR MARKET INTEGRATION OF IMMIGRANTS IN EUROPE AND BELGIUM

Immigrants’ labour market trajectories and their determinants

In the course of the last decades, immigrants’ troubling labour market incorporation has become one of the most urgent problems facing European policymakers. Hence, labour market integration of immigrants has become one of the central issues in migration research, as it largely shapes the economic impact of migration and the social inclusion of immigrants and their children into receiving societies (Heath and Cheung 2007).

A large body of empirical research has repeatedly shown that the labour market prospects of immigrants in Europe are weaker than those of natives. However, the patterns and the underlying mechanisms driving these disadvantages are not the same for differently situated immigrants (Corluy 2014; Kogan 2011). One crucial distinction is between immigrants in a favourable situation with easy access and rights in Europe (EU citizens and highly skilled third-country immigrants) and those in less favourable situations (mainly those arriving from outside Europe for other reasons). Third-country immigrants indeed consistently record worse labour market outcomes than EU

immigrants or the native-born: on average, they have lower employment rates (62 per cent compared to 74 per cent for EU immigrants and natives) and figure more prominently in unemployment (14 per cent compared to 8 per cent for EU immigrants and 6 per cent for natives) and inactivity statistics (28 per cent compared to 20 per cent for EU immigrants and 22 per cent for natives) (Eurostat 2021).¹ When employed, immigrants – especially those from third countries – are more likely to work on temporary contracts in low-skilled occupations and jobs below their skill levels. Among highly educated immigrants in the EU, 34 per cent is working in a job for which they are formally overqualified, compared with 21 per cent of the highly educated native-born (OECD/EU 2018). Although migrant-native differentials in labour market positions are most pronounced among the first-generation, second-generation migrants (particularly of non-European origin) still display lower employment levels and weaker labour market positions than natives.

A vast amount of international research identifies the potential explanatory factors for the gap in labour market outcomes between immigrants and the native-born. Decades of research on this crucial topic have shown that these factors are diverse and complex but fall into two broad categories, each shaped by an institutional context (Corluy 2014; Kogan et al. 2011; Reitz 2007; Reyneri and Fullin 2011; Van Tubergen et al. 2004). First, *immigrants' characteristics* may cause lower employment chances, including human capital endowments and migration-specific factors. Due to varying educational possibilities in diverse origin countries, immigrants bring lower average educational qualifications and different kinds of human capital than those required to integrate into the host country labour market successfully (Heath and Cheung 2007; Kalter and Granato 2007; Neels and Stoop 2000). Furthermore, some aspects of human capital, such as language skills and knowledge of the functioning of the local labour market, are country-specific and hence less valuable in a new societal setting. Because skills are difficult to transfer and employers are unsure about the quality of education and experience obtained in the home country, immigrants' human capital is typically 'devalued' upon arrival in the host country (Borjas 1994; Friedberg 2000; Chiswick and Miller 2009).

The labour market disadvantage of immigrants should, however, diminish over time as immigrants learn the host country language(s), obtain local education and training, and gain a grasp of how the local labour market works (Akresh 2008; Chiswick 1978; Duvander 2001; Kanas and van Tubergen 2009). However, this process of gradual socio-economic convergence is not uniform and varies considerably across differently situated immigrants. While some immigrants catch up with the native-born quickly after arrival in a new country, others face stubbornly persistent labour market barriers (Ballarino and Panichella 2015; Barbiano di Belgiojoso 2017; Fuller and Martin 2012; Kogan and Weißmann 2013; Simón et al. 2014; Stier and Levanon 2003).

¹ All the labour market indicators in the introduction use definitions drawn up by the International Labour Organization. Employed persons worked at least one hour in the reference week. Unemployed persons were without work during the reference week, available to start work within the next two weeks, and actively sought employment at some time during the last four weeks. Inactive persons are not employed or unemployed.

Language acquisition is an essential factor in this respect, and the effect of language skills upon labour market success amplifies by its interaction with education, training or labour force experience (Auer 2018; Dustmann and Fabbri 2003; Esser 2006; Kanas and Van Tubergen 2009; Ipsfording 2015). Migration motivation and residency status are also crucial factors in determining the speed of integration. Individuals who have moved for economic reasons are more likely to exhibit labour market-oriented behaviour than those who have migrated for family or humanitarian reasons (Cangiano 2014; Zwysen 2018). The migration perspective also influences the integration process. Immigrants who perceive their stay in the host country as temporary are often more reluctant to invest in human capital specific to the host country and instead pursue labour market investment options that yield quicker returns (Dustman 2000; Drinkwater et al. 2006).

In modern European societies, (host-country) human capital is undoubtedly necessary yet hardly sufficient to explain immigrant labour market penalties (Brinbaum 2018; Corluy 2014; Euwals et al. 2006; Kogan 2011; Neels and Stoop 2000). Due account needs to be taken of the second set of factors related to *immigrants' access to labour markets*, including social networks, ethnic discrimination, access to specific labour market segments and occupations, and training opportunities or other means of career advancement. Immigrants, especially recent arrivals and those intending a temporary stay, often operate with a dual frame of reference (Piore 1979). Because of their different frame of reference, immigrants are more willing to accept low paying, low-status position with skill requirements that are substantially below their skills and qualifications. This tendency tends to fade as immigrants become more settled in the host country (Alberti 2014; Heath and Ridge 1983; McCollum and Findlay 2015). At the same time, employers often turn to immigrants to fill low wage and low prestige jobs in specific sectors of the economy because native-born workers shun these jobs (Andersson and Ruhs 2012). However, the occupational strategies of immigrants and employers' recruitment strategies may permanently *trap* immigrant workers in secondary labour markets. Not only is the second segment associated with high job turnover and more frequent and extended unemployment, but employers are also less keen on investing in workers' human capital through on-the-job training. Both aspects lead to a lack of mobility between primary and secondary segments in European labour markets and leave immigrants permanently in *outsider* positions (Constant and Massey 2005; Kogan 2004; Lindbeck and Snower 1988; Felbo-Kolding et al. 2019).

Social resources may play a similar role (Portes and Sensenbrenner 1993). Although immigrants are often embedded in extensive social networks, they lack the social capital needed to access better jobs. While ethnically homogeneous ties offer much-needed support to help find a job in the initial period after arrival, research shows that ties with the native population are more effective for finding stable employment and jobs commensurate with immigrants' skill levels (Behtoui 2008; Kalter and Kogan 2014; Kanas et al. 2012; Lancee and Hartung 2012). Finally, disadvantages for immigrants also emerge from discriminatory behaviour by employers, institutions, or both (Heath and Cheung 2007). International literature has revealed the occurrence of (different forms of) ethnic discrimination in European labour markets (Fossati et al.

2020; Lippens et al. 2020). Employers may also be hesitant to engage in the upskilling of immigrants, anticipating their temporary residence perspective (Andersson and Ruhs 2010).

The relative importance of labour supply (immigrant characteristics) and labour demand (immigrant labour market access) as elements explaining immigrant disadvantages is strongly dependent on the host country's *institutional set-up*. The first vital institutional variable is the structure of the labour market and its regulation. Research shows that immigrants fare considerably better in countries with a flexible labour market and a sizeable low-skilled segment (Kogan 2006; Fleishmann and Dronkers 2010). Employers have more reservations against hiring 'risky' workers in less flexible labour markets, putting immigrants at a higher risk of suffering discrimination. When a perfect fit is not as important to an employer or when a stronger demand for specific types of occupations occurs because the supply of native workers is scarce, employers more eagerly hire immigrants (Baert et al. 2015). Immigration policies also impact the selection process of immigrants for human capital, the degree of transferability of their human capital, and its relevance in the host society (Borjas 1994; Reitz 2007). Immigrant labour market allocation also depends on immigration policies and the context of immigrant reception. Finally, welfare state policies influence immigrant labour market fortunes (Kessler 2006; Kogan 2006; Koopmans 2010). Immigrants will be pushed to take jobs in the secondary labour market in countries where the welfare system is more restrictive and does not offer the financial resources needed to sustain job search. If immigrants can access more extensive financial assistance when looking for work, they will prefer to look for jobs that match their qualifications, even if that means spending more time relying on social benefits.

The interlinkage between labour market and family trajectories

Research indicates that the employment gap with natives is larger among migrant origin women than men. Moreover, the migrant-native employment gap is larger among women with children than among childless women (FOD WASO and UNIA 2017; Holland and de Valk 2017; Rubin et al. 2008), suggesting that family formation has a stronger impact on the employment trajectories of migrant origin women compared to those of native women. The literature on women's employment patterns around family formation is extensive among general populations and indicates that although maternal employment has increased over the last 50 years, many women reduce their working hours after the birth of their first child (Gutierrez-Domenech 2005; Kreyenfeld 2015; Kuhhirt 2011; Wood et al. 2016). In contrast, research specifically focusing on interlinkages between family formation and employment trajectories among migrant origin women is limited and mainly based on cross-sectional data. Using cross-sectional data it is, however, cumbersome to disentangle the effect of family formation on employment from the effect of employment on family formation, and low maternal employment among migrant origin women may also reflect general factors affecting employment positions such as lower human capital, weaker social networks and discrimination in the labour market.

Given that the development of work-family strategies operates at the household-level, research increasingly uses couples as research unit. Previous studies indicated that although the gender gap in labour force participation has narrowed considerably in many European countries, the transition to parenthood exacerbates gender inequality in couples' division of (un)paid work. While men's labour market participation remains relatively stable, women are more likely to reduce their working hours after the birth of the first child (Baxter, Hewitt, & Haynes, 2008; Gutierrez-Domenech, 2005; Kreyenfeld, 2015; Kuhhirt, 2011; Schober, 2013; Wood, Neels, De Wachter, & Kil, 2016). A review of the literature indicates that micro-economic theories (emphasizing partners' relative labour market characteristics) and socio-cultural theories (emphasizing parenting norms) provide complementary insights regarding couples' gender division of (un)paid work around the transition to parenthood. Whereas couples' gender division of (un)paid work around the transition to parenthood has been well-documented in the general population (Baxter et al., 2008; Kuhhirt, 2011; Schober, 2013; Wood, Kil, & Marynissen, 2018; Wood et al., 2016), variation by couples' migration background has hitherto only been examined to a limited extent due to the limited availability of large-scale longitudinal data. Available research focusing on migrants' gender division of (un)paid work has assessed how first and second-generation migrants divide (un)paid work at a particular moment in time, controlling for the presence of children, but have not addressed how this division unfolds around family formation (Diehl et al., 2009; Goldscheider et al., 2011).

Countries' work-family reconciliation policies furthermore shape the degree to which work and family are (in)compatible and in turn affect how parents organize their work and family life. However, not all work-family reconciliation policies have the same effect on parents' labour market outcomes and countries vary in the degree to which they rely on work-reducing policies such as parental leave versus work-facilitating policies such as formal childcare (Ciccia & Bleijenbergh, 2014; Mandel & Semyonov, 2006; Pettit & Hook, 2009). In addition, the (long-term) effects of such policies depend on the specific policy designs, which also vary between countries. Belgium is characterized by a long history of reconciliation policies and is, alongside France and Nordic countries, considered as a context in which work and family are relatively compatible. At the same time, Belgium also exhibits strong socio-economic and migrant-native differentials in the uptake of parental leave and formal childcare compared to other European countries (Ghysels & Van Lancker, 2009; Pavolini & Van Lancker, 2018). This has been related to the fact that access to childcare and parental leave are – in contrast to Nordic countries - strongly conditioned on stable employment (Kil, Wood, & Neels, 2017; Marynissen, Wood, & Neels, 2021; Vandebroek, De Visscher, Van Nuffel, & Ferla, 2008).

Hence, the second objective of the Immilab project was to examine the work-family trajectories of (second-generation) migrant women in comparison to native women, with particular attention to gender dynamics within households and the uptake of work-family reconciliation policies (parental leave and formal childcare).

Differences in migrants' working conditions

Another problematic aspect of immigrants' challenges in the host labour market is the differences in employment conditions they face. Differences in employment conditions observed between native- and foreign-born workers can be explained by various phenomena, among which 1) wage discrimination and 2) over-education.

Wage discrimination

Wage differences according to workers' origin are well documented in the literature (Borjas 1985; Nanos and Schluter 2014; Organization for Economic Co-operation and Development (OECD) 2017) and may occur for different reasons. First, they may partly be due to productivity differentials coming from human capital discrepancies attributed to migrants' language abilities (e.g. Carnevale, Fry, and Lowell 2001; Dustmann and van Soest 2002), literacy skills (Ferrer, Riddell, and Green 2004; Himmler and Jäckle 2018), schooling quality (Sweetman 2004), job tenure attainment (McDonald and Worswick 1998), and different school-to-work transitions (Euwals et al. 2010; Baert and Cockx 2013). Another reason may be occupational and sectoral segregation: migrant workers may be unequally distributed across occupations and industries, tending to be confined to specific jobs with lower remuneration (e.g. Peri and Sparber 2009). Wage differences according to workers' origin may also result from discriminatory behaviours (e.g. Aydemir and Skuterud 2008; Barrett et al. 2012). According to Heckman (1998), wage discrimination occurs when two equally productive workers are paid differently on the basis of different non-productive characteristics, such as their place of birth.

A first theory explaining the mechanisms behind wage discrimination is the taste-based theory developed by Becker (1957). Following this theory, some employers, co-workers or customers are prejudiced against an intrinsic characteristic of a certain type of workers, such as the country of origin. This prejudice translates into a disutility for the prejudiced individual when he/she is in contact with the type of worker he/she dislikes. To avoid this disutility, employers tend to look further and pay higher wages to the kind of worker they prefer, thereby inducing additional costs. Consequently, equally productive workers can be paid differently because of an employer's dislike towards a worker's intrinsic characteristic. The second theory on wage discrimination is statistical discrimination (Phelps 1972; Arrow 1973). This theory assumes imperfect information: employers lack information about the job applicant's productivity but can observe their non-productive characteristics. To set the worker's wage, employers then use the productivity statistical mean of the group to which a job applicant belongs as a proxy for the applicant's individual productive characteristics. So, two equally productive individuals belonging to different groups of workers may be treated differently because of their groups' statistical characteristics. A complementary argument comes from the monopsonistic discrimination theory (Hirsch and Jahn 2015), which translates into the idea that some workers have a less elastic labour supply curve due to poor information about the labour market they evolve in. Hence, they are more subject to employers' monopsonistic behaviours and to wage discrimination.

From an empirical point of view, almost all studies on wage discrimination against migrants apply the Mincer equation (1974) or the Oaxaca-Blinder (1973) specifications, using cross-sectional or longitudinal information at an individual level (e.g. Vertommen and Martens 2006; Borjas and Katz 2007; Chiswick et al. 2008; Barrett et al. 2012). However, because these studies exploit proxy (i.e. *indirect*) measures of worker productivity (such as education and job characteristics), the remaining unobserved variables that reflect worker productivity may bias their estimates.

A way to address the absence of a satisfactory productivity estimator at the worker level is to use output measures at the firm level as *direct* productivity measures. Hellerstein et al. (1999) adopted an original method: they used firm-level data deriving from matched employer-employee data in order to compare the relative marginal productivity and relative marginal wage of a type of workers' (e.g. migrants) to those of a reference type of workers (e.g. natives). To our knowledge, although the use of firm-level data to grasp origin-based wage gaps is now widespread (Aydemir and Skuterud 2008; Simón et al. 2008; Aeberhardt and Pouget 2010; Carneiro et al. 2012), no study applied the Hellerstein et al. technique for that purpose. The above-mentioned studies simply extended the Mincerian or the Oaxaca-Blinder equation with additional information about the firm as independent variables but did not use *direct* measures of workers' productivity in their equation specification. An improvement on the Hellerstein et al. technique was achieved by Bartolucci (2014). The author uses this technique to study wage discrimination against migrants in Germany and estimates that migrants could suffer wage discrimination in the order of 12.8%. The only other study, to our knowledge, that uses this approach is that of Kampelmann and Rycx (2016) for Belgium. Their first difference estimates indicate that non-EU15 workers are paid 2% less than equally productive EU15 workers. Yet, whether the extent of wage discrimination against immigrants varies according to their regions of birth, years of tenure and the degree of product market competition remains to be tested.

A more recent strand of the literature focuses on the specific role of globalization, and more particularly global value chains (GVCs), in explaining wage differences according to workers' origin (Shepherd 2013; Lopez Gonzalez et al. 2015; Chen 2017). One particular aspect of globalization that is receiving increasing attention is the relative position of firms in GVCs, measured for example by their level of upstreamness (i.e. the number of steps before their production meets either domestic or foreign final demand). Evidence on the impact of upstreamness on workers' wages is scarce but one result emerges: there is a positive impact of upstreamness on workers' wages (Chen 2017; Shen and Silva 2018; Szymczak et al. 2019; Mahy et al. 2021). However, to our knowledge, no study has estimated the possible difference of impact of upstreamness on wages according to workers origin.

Over-education

Theoretically, two main reasons have been put forward to explain why immigrants are more likely to be over-educated than their native counterparts. The first explanation is the imperfect transferability of human capital, which suggests that the more the home and the host country

contexts differ, the greater the likelihood that immigrants will be over-educated (e.g. Friedberg 2000; Chiswick and Miller 2009; Aleksynska and Tritah 2013; Kalfa and Piracha 2017). Transferability of human capital is expected to be smoother for immigrants from advanced economies and from countries with similar cultures and languages (Ramos, Sanromá, and Simón 2015). Indeed, the difficulty for immigrants to get their diplomas or certificates recognized in the host country varies substantially depending on the country in which those were obtained (Nielsen 2011). The second reason why the incidence of over-education might be higher among immigrants is related to statistical and/or taste-based discrimination. If immigrants suffer from negative stereotypes or if employers/clients/co-workers prefer collaborating with natives, immigrants will have greater difficulty in finding a job that matches their education and will thus be more likely to accept jobs for which they will be over- educated (Lindley 2009). Our analysis is the first to investigate workers' likelihood of being over-educated in relation to their regions of birth in the Belgian context. It is also one of the few to examine the moderating role of a large range of worker and firm characteristics.

Factors such as the imperfect transferability of human capital and discrimination have also been identified as causing a larger wage penalty to over-education for migrants than for natives (e.g. Chiswick and Miller, 2009a). Indeed, estimates indicate that over-educated workers earn, *ceteris paribus*, a smaller wage than their former classmates employed in jobs that match their level of education. The under-utilisation of the skills of over-educated workers thus appears to generate a wage penalty, which is higher for migrants. In other words, results suggest that over-educated workers, and especially migrants, would earn a higher wage if they could access a job that matches their educational level (e.g. Verdugo and Verdugo, 1989; Lindley, 2009; Kalfa and Piracha, 2017). We provide first evidence of the wage effects of over-education according to worker's origin in the Belgian context. We also add to the existing literature by testing the role of a wide range worker and firm characteristics.

To date, all studies of the wage consequences of over-education consider *indirect* measures of worker productivity. As a result, it is unclear whether the key result of this literature (i.e. that the wage penalty associated with over-education is more pronounced for immigrants than for natives) would still hold if *direct* information on worker productivity could be used to estimate productivity-wage differentials associated with over-educated workers of different origins. We therefore seek to test whether the wage premia earned by native and immigrant over-educated workers are aligned with their productivity differentials or whether, on the contrary, over-educated immigrants are more underpaid (given their productivity) as suggested by the existing literature.

3. BELGIUM: AN OUTSIDER REGARDING LABOUR MARKET INTEGRATION AND LABOUR MIGRATION

The above paragraphs give an overview of the European and American literature that uncovers the hurdles and barriers migrants face when it comes to labour market integration. We now turn to Belgium – our case-study – and give an overview of the various ways Belgium is an outlier in terms of immigrant labour market integration. As mentioned, the unique Belgian position has formed a significant motivation for embarking on the IMMILAB project.

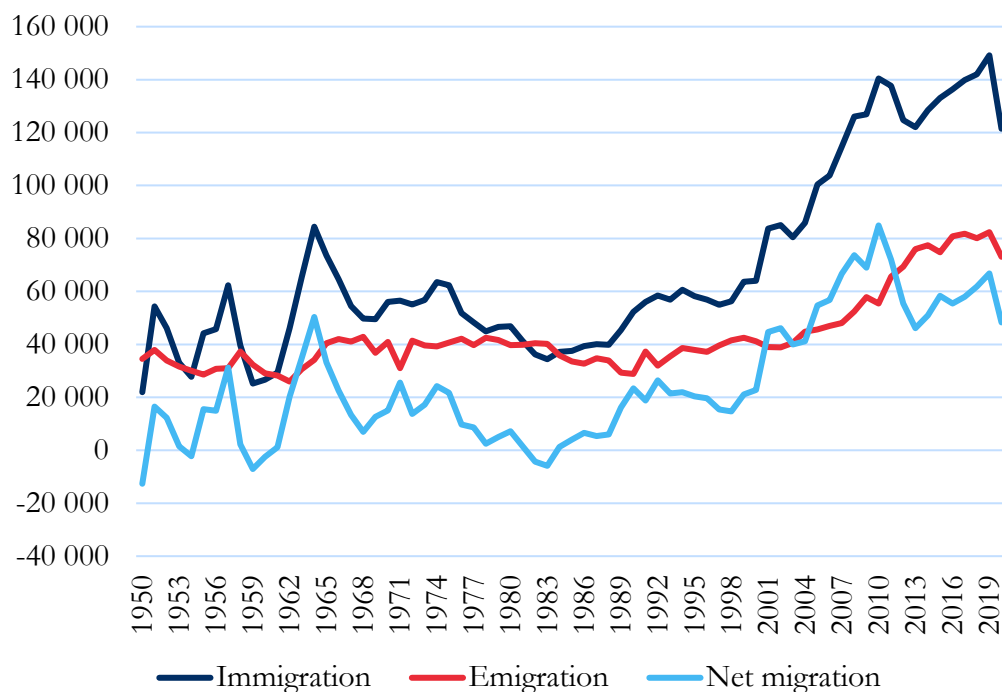
Belgium has a relatively long migration history (see Martiniello and Rea 2012; Lafleur et al. 2015). Since the post-war period, immigration to Belgium has passed through several stages: an influx of guest workers; a formal ban on labour migration and subsequent intensification of family reunification, asylum-seeking, and immigration of EU citizens; and more recently, a predominance of Central and Eastern European migration, as well as surging arrivals from Western Asia.

From the 1950s until the late 1960s, Belgian immigration policy actively recruited low-skilled migrants from Southern Europe and North Africa and Turkey to work in heavy industry sectors such as coal mining and the steel industry (Reniers 1999). These workers were recruited within a flexible working permit regime, accompanied by lenient family reunification rules. The slowing pace of economic activity and rising unemployment led Belgium to introduce a formal ban on economic migration in 1974. However, although net migration fell sharply in the 1980s and even became negative, Belgium never ceased to be a country of immigration. In fact, since the end of the 1990s, immigration has strongly and consistently increased. This increase was associated with a diversification of origin and types of migration. Labour migration from third countries continued but was limited to highly skilled workers. Mainly from Turkey and Morocco, family migration took over from labour migration as the most crucial entry channel. From the 1990s onwards, two new types of immigration gained importance: asylum migration and undocumented migration. Belgium mainly took in asylum seekers from Eastern Europe after the collapse of communist regimes and the war in the former Yugoslavia, and from sub-Saharan Africa and the Middle East after political crises and wars. Moreover, two major campaigns in 2000 and 2010 enabled around 60,000 undocumented workers to become regularised (Burggraeve and Piton 2016).

The creation of the EU and the associated *free movement of workers* was another primary driver of immigration in the post-war period. Since the 1990s, EU citizens have consistently accounted for more than half of all immigration flows (Myria 2018a). A vital share concerns longstanding immigration from neighbouring countries, mainly France and the Netherlands. However, the enlargements of 2004 and 2007 strongly altered immigration flows, despite Belgium implementing transitional measures to delay workers' access from the new EU Member States to the Belgian job market. The increase in immigration from new EU Member States (mainly Poland, Romania and Bulgaria) represents the most impactful change in the Belgian immigration landscape since the end of the 1990s. Other critical recent evolutions were a decrease in

immigration from EU15 countries, a significant reduction in immigration from Morocco and Turkey, and an increase in asylum migration from Western Asia, particularly Syria, Afghanistan and Iraq (Myria 2018a).

Figure 2 Immigration, emigration and migration balance, Belgium



Note: The migration balance is the number of immigrations minus the number of emigrations. There are a couple of statistical breaks in the international migration figures.² Source: Statbel

Because of its long migration history, Belgium has one of the largest immigrant communities in Western Europe. Today, first- and second-generation immigrants together make up one-third of the population, a share that stood at 12 per cent in 2001 (Statbel 2021). First-generation immigrants account for 23 per cent of the population, and second-generation immigrants account for another 10 per cent. Figure 1-2 shows that Luxemburg, Ireland, Sweden and Austria are the only EU15 countries with a higher share of first-generation immigrants. When it comes to the relative size of the second-generation immigrant population, Belgium is also one of the top countries (see Figure 2-3).³ The immigrant population in Belgium today is mainly of European descent: 48 per cent was born in the EU, with France, the Netherlands, Italy, Germany, Poland and Romania as the leading countries of origin. Twenty-six per cent of immigrants were born in Africa, 15 per cent in Asia, 7 per cent in a European country outside the EU, and 4 per cent in

² See <https://statbel.fgov.be/nl/themas/bevolking/migraties#figures> (accessed on 30/9/2021)

³ Note, however, that the most recent Eurostat estimates (displayed in the right panel of Figure 2-3) are for 2014 and are limited to the countries that participated in the LFS 2014 ad hoc module.

America or Oceania. The most prominent third-country groups are Moroccans, Turks and Congolese (Myria 2018b).⁴

Despite its prominence as an immigrant destination, Belgium struggles in integrating immigrants into its labour market. Figures 4-7 show that – compared to other EU15 countries – Belgium stands out as immigrants have among the lowest employment rates and highest unemployment and inactivity rates, and one of the most significant gaps with the native-born. While the labour market outcomes of EU immigrants are still broadly comparable with those of the native-born, with men more exposed to unemployment but less to inactivity, the outcomes of non-EU immigrants are much worse, with high unemployment and – among women – high inactivity as well.

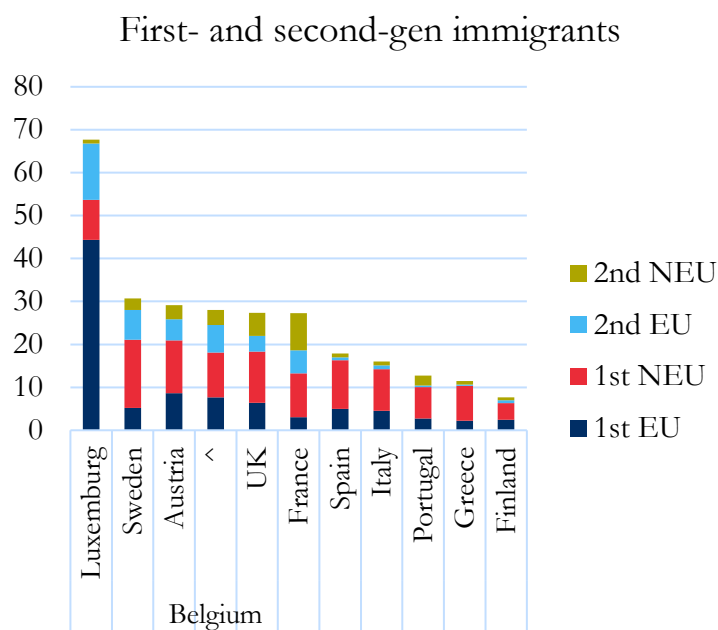
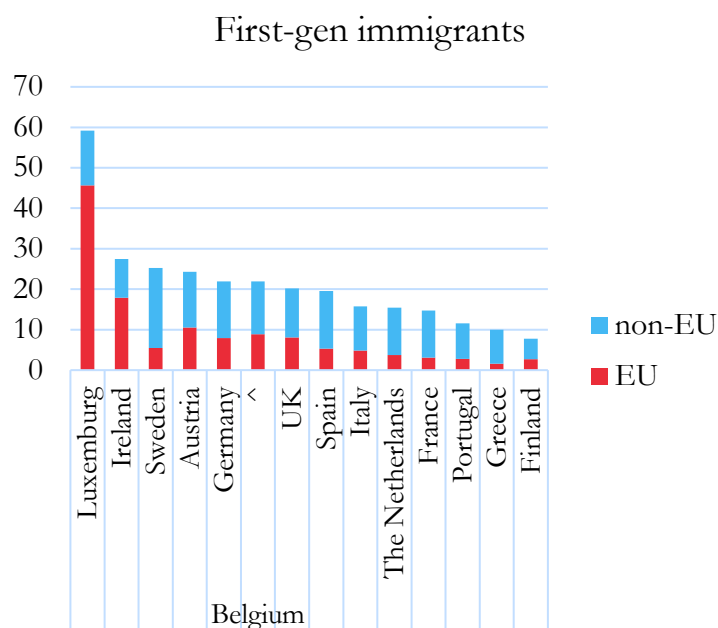
The gap in labour market outcomes between third-country immigrants and the native-born is surprisingly persistent over time. While the employment gap of EU immigrants fell markedly since 1996 and stood at six percentage points in 2019, that of third-country immigrants essentially stagnated. The slight progression made after 1996 completely sunk between 2008-2011 due to the financial crisis, which hit immigrants disproportionately (Van Dooren et al. 2014; Pina et al. 2015). Between 2011 and 2016, the employment gap levelled, and in more recent years, it decreased due to the economic upswing. As a result, the employment gap stood at 25 percentage points in 2019, the same as in 2006 (Labour Force Survey, author calculations).

In contrast to many other EU15 countries, the labour market disadvantage is largely transmitted to second-generation immigrants in Belgium (see Figure 2-7).⁵ Given that the second-generation is born, educated and socialised in the country of residence, the standard assumption is that they should fare better than their parents and have equal labour market outcomes compared to children of native-born parents. In Belgium, however, this view is far too optimistic. The gap in labour market outcomes with natives *is* more pronounced for the first generation than for the second-generation, yet intergenerational mobility is heterogeneous. The *social elevator* seems particularly ‘broken’ for second-generation immigrants with a Turkish or Moroccan background (Corluy et al. 2015; Piton and Rycx 2020). The poor labour market outcomes of *native-born* children of immigrants again stress the persistent nature of integration problems in Belgium. Related consequences of the problematic incorporation of people with a migration background into the labour market are a substantial overrepresentation in minimum income protection schemes (Liebig and Mo 2013; Carpentier et al. 2017) and a worrying household poverty incidence (Corluy and Vandenbroucke 2014).

⁴ In the two biggest Belgian cities, demographic data is proof of the permanent diverse nature: in Antwerp, 50 per cent of its population has a migration background, and 20 per cent has a foreign nationality; in Brussels, 80 per cent has a migration background and 36 per cent have a foreign nationality (Lokale Inburgerings- en Integratiemonitor 2020). Brussels is highly diverse, also due to the vast community of EU citizens working for European institutions.

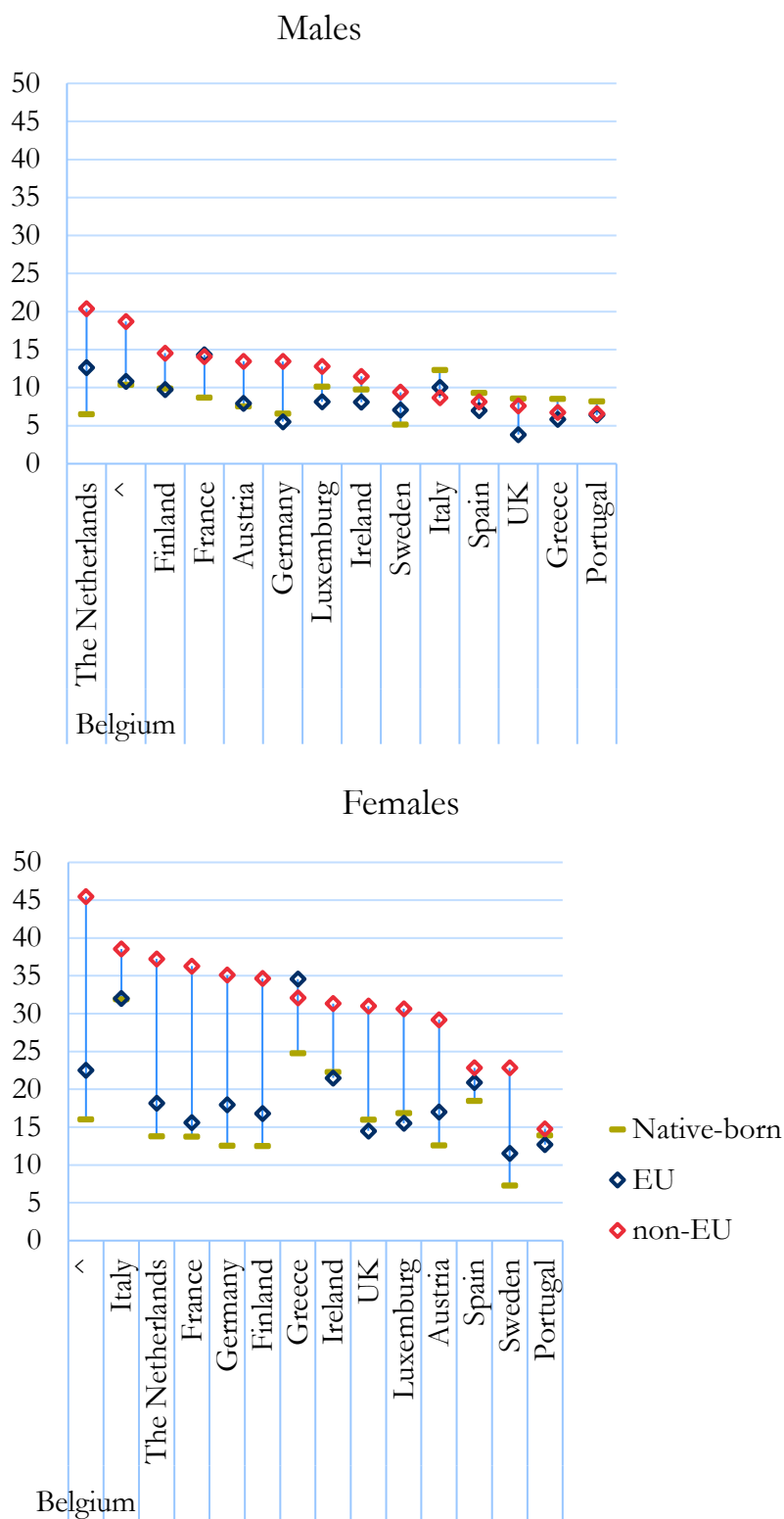
⁵ Here too, the most recent Eurostat estimates (displayed in Figure 1-6) are for 2014 and limited to the countries that participated in the LFS 2014 ad hoc module.

Figure 3 Share of the working-age population with a migration background in EU15 countries, left panel 2019 and right panel 2014



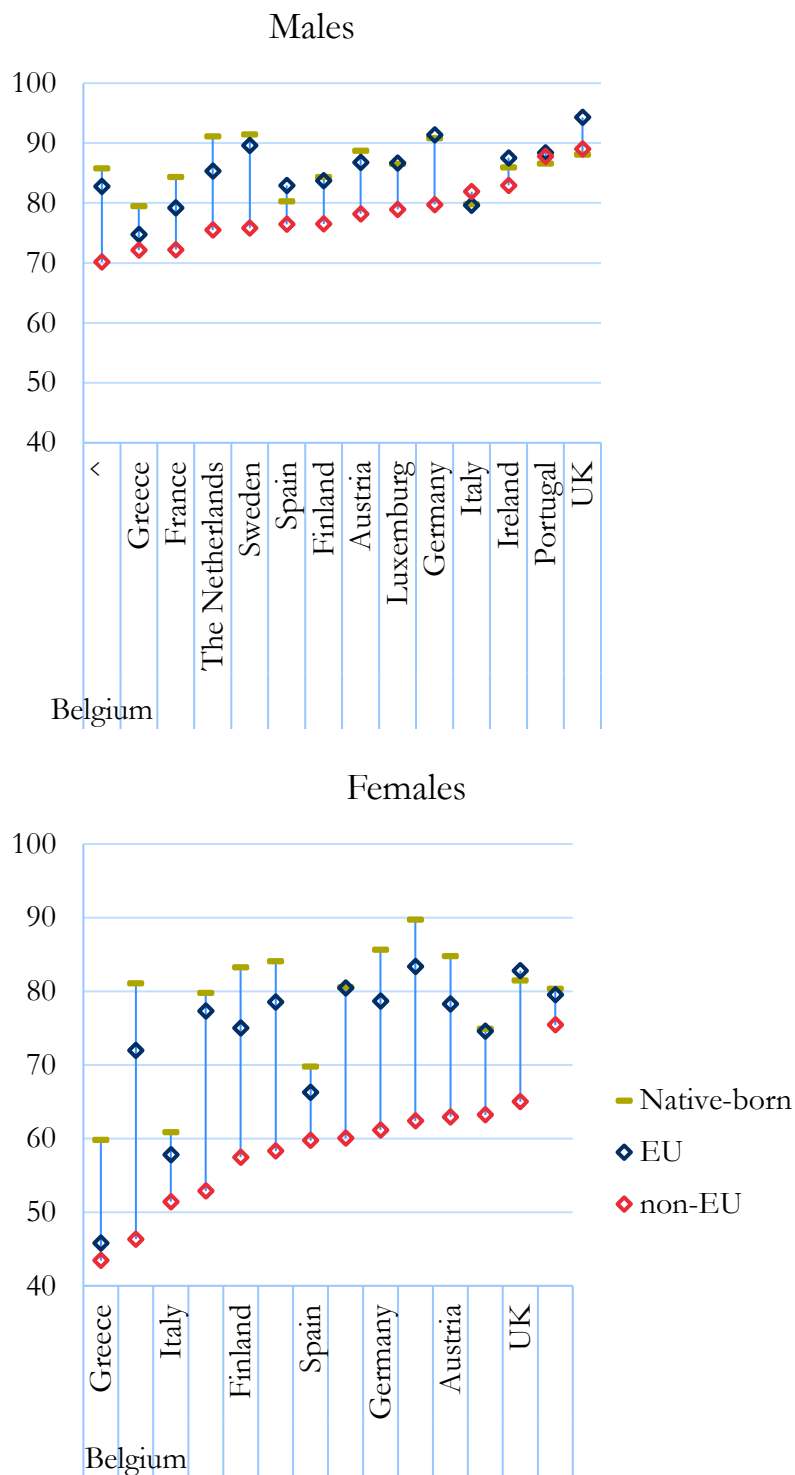
Note: First-generation immigrants are those who are foreign-born. Second-generation immigrants are those who are native-born with at least one foreign-born parent. Results are weighted using person weights from the LFS. Source: Left panel: Labour Force Survey 2019; right panel: Labour Force Survey ad hoc module 2014. Author calculations.

Figure 4 Inactivity rate by immigrant status and gender in EU15 countries, 2019



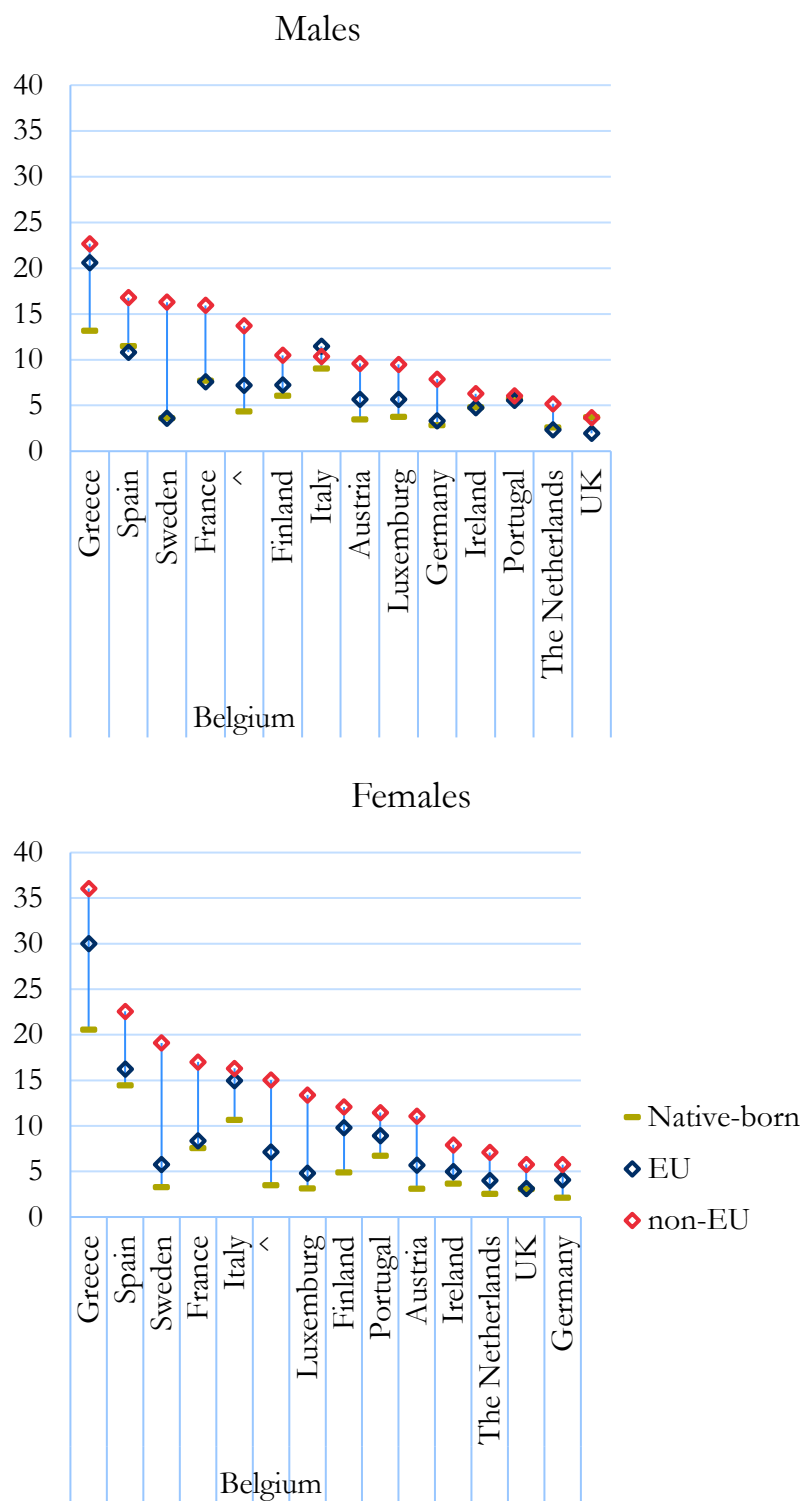
Note: Working-age population who are not students. Inactivity rate is the share of economically inactive (not employed or unemployed) persons in the total population. Results are weighted using person weights from the LFS. Source: Labour Force Survey, author calculations.

Figure 5 Employment rate by immigrant status and gender in EU15 countries, 2019



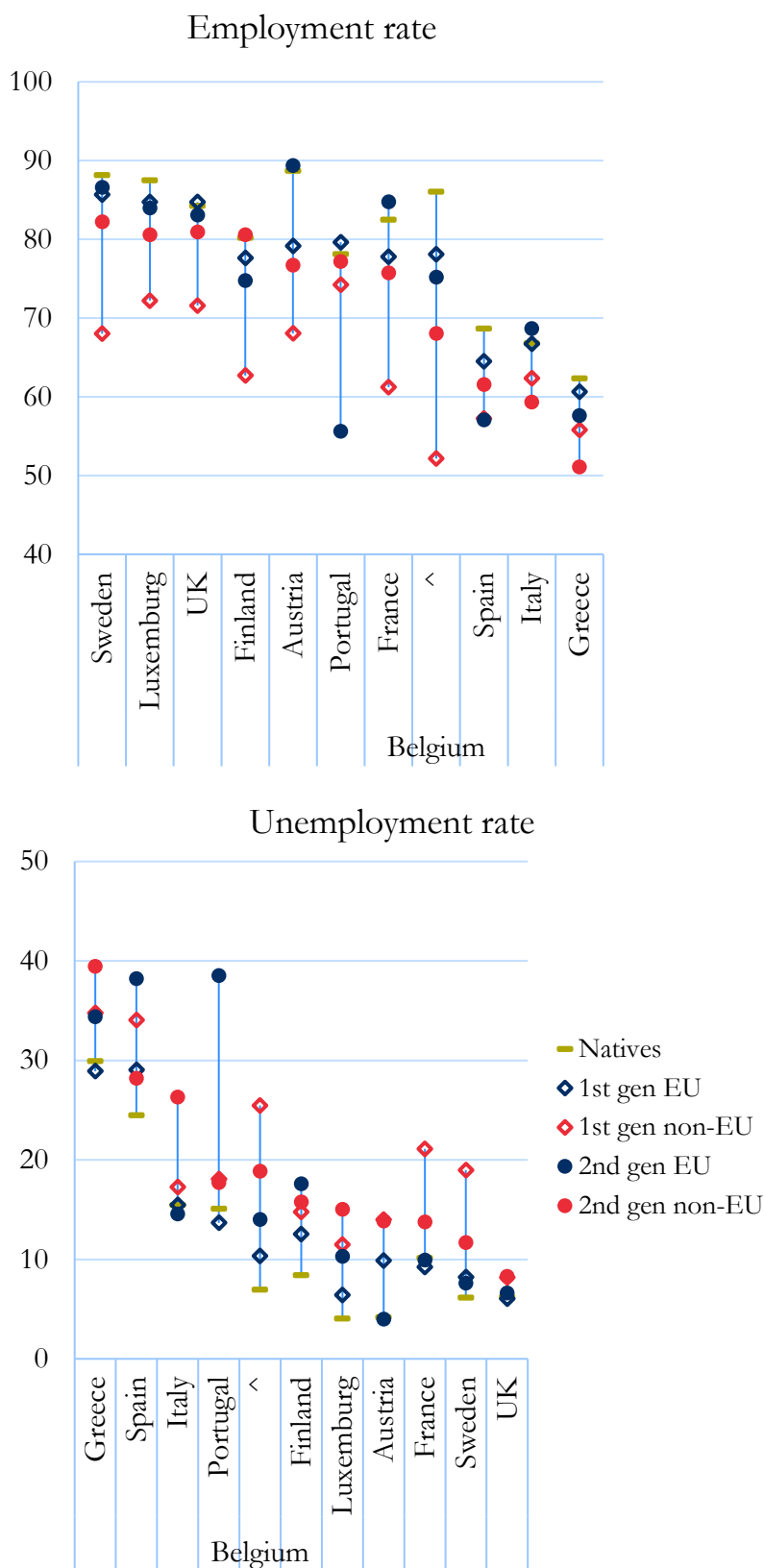
Note: Working-age population who are not students. The employment rate is the share of employed persons in the total population. Results are weighted using person weights from the LFS. Source: Labour Force Survey, author calculations.

Figure 6 Unemployment rate by immigrant status and gender in EU15 countries, 2019



Note: Working-age population who are not students. The unemployment rate is the share of unemployed people in the total labour force (employed and unemployed). Results are weighted using person weights from the LFS. Source: Labour Force Survey, author calculations.

Figure 7 Labour market outcomes by migration background in EU15 countries, 2014



Note: Population aged between 20 and 44 who are not students. Source: Labour Force Survey ad hoc module 2014, author calculations.

The fact that Belgium so persistently presents itself as one of the worst EU countries to work in for immigrants and their children is striking since it stands in stark contrast with what policy is trying to achieve. The federal and the regional policy level developed a range of measures to improve the labour market position of people with a migration background, including civic integration programmes, active labour market policies, family policies and career and diversity plans (Pina et al. 2015). These policies are not performing as expected, possibly because of contextual and institutional barriers (see Biegel et al. 2021; Kil et al. 2018; Van Lancker and Ghysels 2012; Wood and Neels 2020). Lack of (country-specific) human capital (Baert et al. 2016; Corluy 2014; Geets 2011; Kanas and Van Tubergen 2014; Kalter and Kogan 2006; Maes et al. 2019; Piton and Rycx 2020), limited social capital or institutional knowledge (Verhaeghe et al. 2013, 2015), and labour market discrimination (Baert et al. 2015; Fays et al. 2020) drive immigrant penalties in the Belgian labour market.⁶ Researchers have also emphasized the importance of path dependencies in career trajectories, which are more persistent among immigrants than among natives (Kil et al. 2017; Maes et al. 2021).

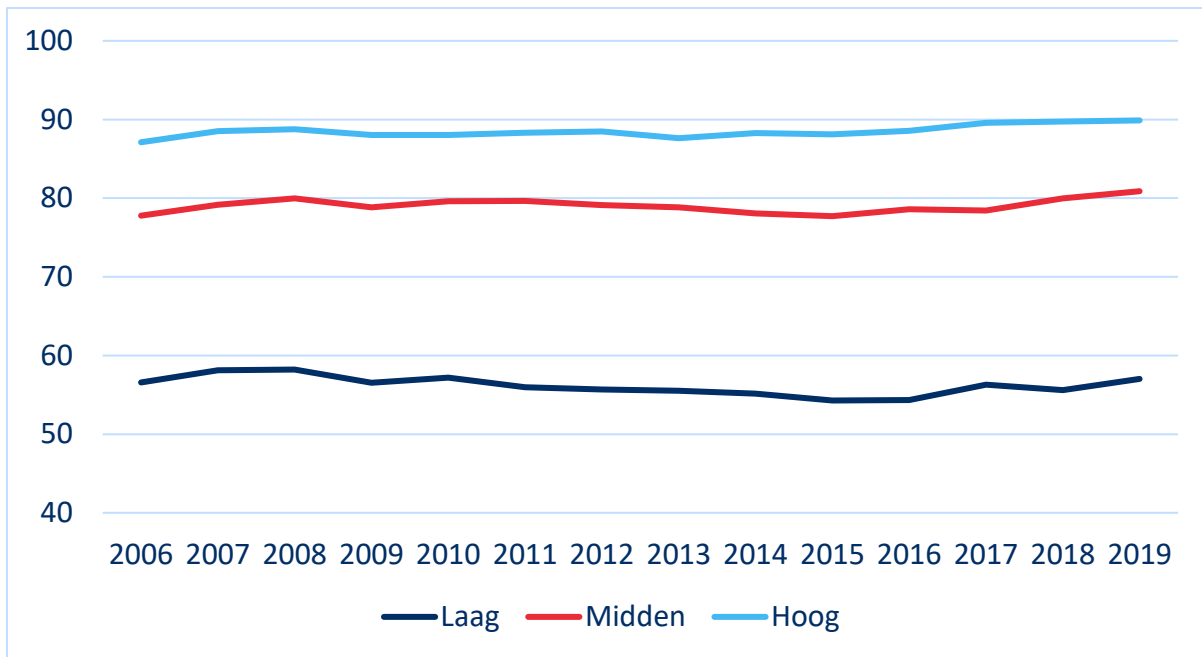
The weak economic integration of immigrants is all the more perplexing since Belgium is a bottleneck economy, with severe and long-term labour shortages in numerous professions (WSE 2019).⁷ Belgium has one of the tightest labour markets in the European Union.

However, the shortages on the Belgian labour market do not mean that Belgium does not have sufficient labour available. Belgium is struggling with *one of the lowest participation rates* in Europe. The employment rate in Belgium is 74%. In comparison, the Netherlands and Germany fluctuate around 81-82%. One of the reasons for the low participation rate in Belgium is the *large number of inactive people*. Nearly 23% of the working-age population is inactive – that's nearly 1 in 4. In addition, an important factor is *the low employment rate of the short-skilled*. Figure 8 shows that high- and medium-skilled people have an employment rate of 80% or more (high-skilled people). Short-skilled workers, on the other hand, do not reach a 60% employment rate.

⁶ A consistent finding is that human capital and other socio-demographic characteristics are undoubtedly important yet hardly sufficient to explain the differences in labour market outcomes between first- and second-generation immigrants and natives.

⁷ The Czech Republic is the only EU country with a higher vacancy rate (the share of vacancies to the total number of jobs) than Belgium. See [\(https://ec.europa.eu/eurostat/documents/2995521/11563135/3-16062021-BP-EN.pdf/139f1d45-f3f2-f83f-6895-97dd67b1b4d9?t=1623832079511#:~:text=Among%20the%20Member%20States%20for,%25\)%20and%20Spain%20\(0.7%25\)](https://ec.europa.eu/eurostat/documents/2995521/11563135/3-16062021-BP-EN.pdf/139f1d45-f3f2-f83f-6895-97dd67b1b4d9?t=1623832079511#:~:text=Among%20the%20Member%20States%20for,%25)%20and%20Spain%20(0.7%25)) (accessed on 11/10/2021).

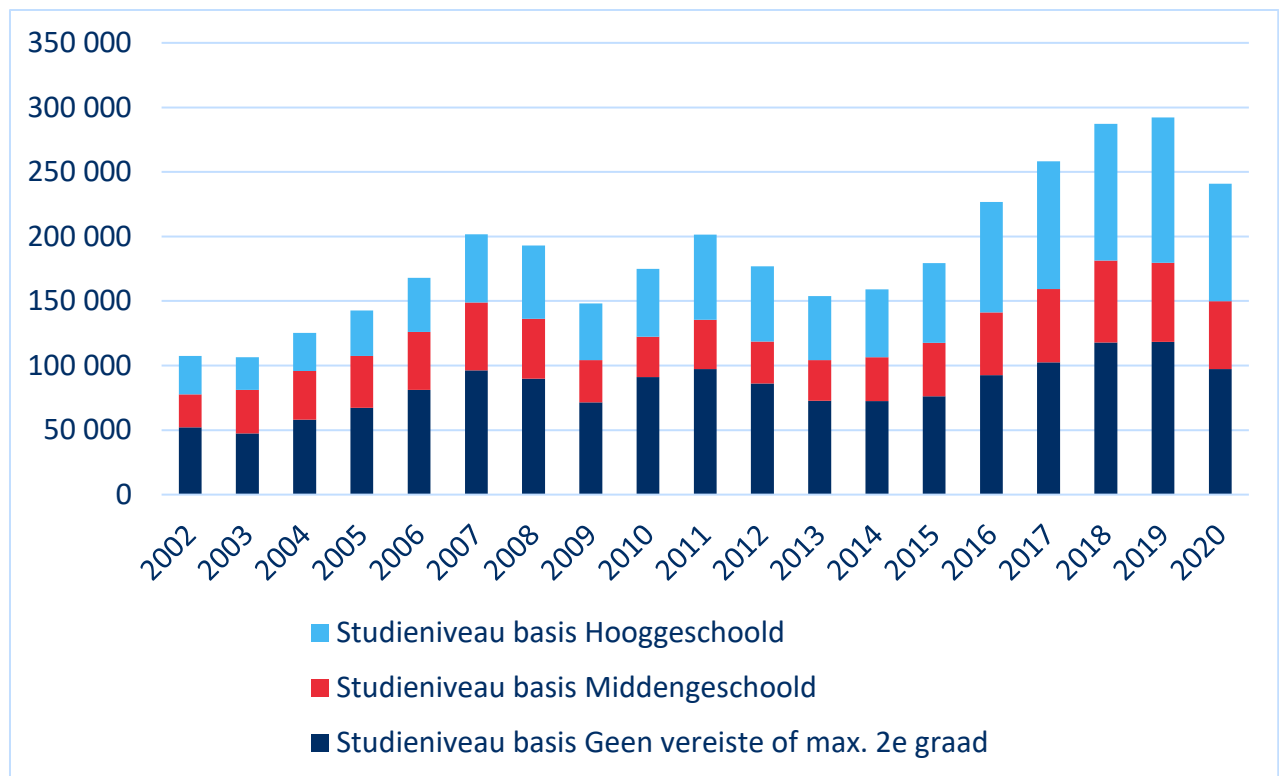
Figure 8 Employment rate by level of education, working-age population, Flanders



Source: Labour force survey – own calculations

The low employment rate of short-skilled workers in Belgium is remarkable, given the large number of vacancies for short-skilled profiles (see Figure 8 for Flanders).

Figure 9 Number of vacancies by level of education - Flanders



Bron: VDAB - Arvastat

This seems to point to strong labour supply and demand mismatches. It appears that one of the primary responses of the Belgian economy to persistent labour shortages has been to attract foreign labour through the free movement of services, which has resulted in Belgium being one of the top receiving countries for posted workers (Mussche et al. 2018). At the same time, researchers are increasingly pointing to the rigidity of the Belgian labour market – including hiring and firing rules, labour costs, minimum wages, skill preferences, and skill shortages – as an important explanatory factor for the country's relatively poor performance in integrating immigrants into the labour market (Marx 2019; Marx and Horemans 2021; McGowan et al. 2020; National Bank of Belgium 2020).

With this background in mind, the IMMILAB project analysed migrants' labour market trajectories from three angles: the individual, the family and the firm. After discussing the methodology and data used for the project (section 4), we present our results and discuss the policy implications (section 5 & 6).

4. METHODOLOGY

4.1 Data

Belgian Labour Force Survey enriched with longitudinal administrative data

For tasks 1.1 till 1.4, we used a large **longitudinal integrated dataset** linking the Belgian Labour Force Survey (BLFS) (survey years 2008-2015) with the Data Warehouse Labour Market and Social Protection (LM&SP) from the Crossroads bank of Social Security (CBSS) (1998-2017). These two datasets were merged by the CBSS on the basis of personal identifiers (INSZ codes).

The BLFS⁸ is an ongoing nationally representative quarterly household survey of the Belgian population, collecting demographic and both general and more detailed data on the employment situation, such as the quality of employment and characteristics of the workplace. An important advantage of the BLFS over Belgian social security data is that detailed information on the highest educational degree is available, which is absolutely indispensable for research on labour market integration. Additionally, the survey provides the ability to analyse underlying intentions, such as reasons for part-time work or search processes of the unemployed. Task 1.1 built on the 2008 and 2014 ad hoc modules on the labour market situation of migrants and their immediate descendants contain 11 additional immigration-related variables covering questions regarding the parental region of origin, recognition of credentials, language skills, participation in integration programs, such as job and language training, legal barriers to labour market access, and migration motives. The BLFS is based on a two-stage sample with stratification and includes about 60,000 households of which 48,000 are effectively questioned. This results in annual information on the labour market situation of about 90,000 inhabitants of Belgium of 15 years and older. The information is collected through face-to-face interviews and the sample is based on the Belgian National Registry. Although the BLFS and the ad hoc modules are representative surveys, the sample is not specifically designed to capture the foreign-born population. Nevertheless, the quite small percent point difference compared with the Belgian Census proves very high power to capture the foreign-born population. Given that the sample is drawn from the National Registry, Belgians living abroad, asylum applicants and undocumented immigrants are underrepresented, as are immigrants who lack sufficient knowledge of Dutch, English, French or German. It is worth emphasizing that nonresponse in the BLFS is very low because – in contrast to some other countries – participation is obligatory. The response rate is about 80% in the fourth quarter of 2015, and only 5% of the non-response concerns refusals to participate.

The innovative feature of our integrated dataset is the linkage of the BLFS with social security records from the Data Warehouse Labour Market and Social Protection.⁹ The LM&SP consists

⁸ See <https://statbel.fgov.be/nl/enquete/enquete-naar-de-arbeidskrachten-eak> (accessed on 14/10/2021).

⁹ See <https://www.ksz-bcss.fgov.be/nl/dwh/homepage/index.html> (accessed on 14/10/2021).

of quarterly, linked, administrative information from nearly 20 Belgian social security institutions, and provides longitudinal information on respondents' socioeconomic status over a considerable time span (1998–2017). The linked data allowed us to (quarterly) observe if and when respondents are moving between wage employment, self-employment, unemployment and different types of inactivity. The definition of these states was based mainly on an evaluation of the socio-economic position by the LM&SP on the last day of each quarter, giving priority to work over benefits. Next to its potential for longitudinal analysis, the LM&SP also allowed for an identification of second-generation immigrants, as it includes information on the country of birth of both parents. The added value of our integrated dataset lies in the fact that its longitudinal structure facilitated us to analyse, at a considerable level of detail and within a comparatively extended time window, the role of determinants such as gender, age, migration background, household characteristics, education and experience, and local economic circumstances in shaping individuals' labour market trajectories.

LIMOSA data

For our research on posting mobility (task 1.5), we made use of the Belgian LIMOSA data. In 2007, Belgium developed a compulsory online system of registration of service provision in Belgium, called LIMOSA. Every employer who wishes to post workers (and every self-employed person) to perform a temporary economic activity in Belgium must register these workers in advance. The online registration of posted workers is intended to improve labour market intelligence and combat fraud. The registering foreign employer must specify the posted worker's identity, the employer, the Belgian service user, the period and location of employment in Belgium, the sector of service delivery, and the timetable. The foreign employer or self-employed worker receives a LIMOSA-form, which posted workers must keep for the entire duration of their posting. Based on these data, we can measure posting size by quantifying the number of unique persons behind the posting registrations. The unique number of posted workers consists of the number of people that have been posted in Belgium during the year for at least one day. The LIMOSA data can be regarded as representative as there are strict (penal) sanctions for service providers if they fail to make the online registration or if workers do not have their registration proof with them at work.

Longitudinal microdata from Belgian social security registers (BASD Panel and MIA Panel)

For Task 2.1, Task 2.2 and the study on the uptake of parental leave for Task 2.3, we use two data infrastructures based on the Belgian social security and population registers. First, the Belgian Administrative Socio-Demographic Panel (BASD Panel) for the period 1999-2010 provides information on a sample of women aged 15–50 years legally residing in Belgium on January 1, 1999, using sampling fractions of 2.5% (1/40) for the female population with a Belgian nationality and 5% (1/20) for the female population with a foreign nationality. Sampled women are subsequently followed until (i) the age of 50, (ii) emigration/death or (iii) the end of the observation period on December 31, 2010. To maintain cross-sectional representativeness in the 1999–2010 period, supplementary annual samples of 15-year-olds, as well as women aged 16–50 years who settled in Belgium in the preceding year, were drawn.

For each observation year, household members of sampled women on the first of January are also included in the data.

Second, we use data from the Flemish administrative panel on Migration, Integration and Activation (MIA Panel) for the period 2005-2016. The MIA Panel provides information on a sample of individuals without a migration background (i.e. natives), individuals of Southern European origin (i.e. Italy, Spain, Portugal or Greece) and individuals of non-European origin (i.e. predominantly Turkey and Maghreb, and to a lesser extent other Africa, Asia, Oceania, and North-, South- or Central-America), aged 18-65 and legally residing in Flanders on January 1st 2005. Natives are defined as individuals whose first registered nationality is Belgian and of whom the first registered nationality of both parents is Belgian as well. An individual is considered to be of migrant origin when the person himself or one of the parents has a first nationality that is not Belgian. Individuals with a migration background who are not born in Belgium are defined as the first generation and individuals with a migration background who are born in Belgium are defined as the second-generation. Sampled individuals are followed until i) the age of 65, ii) emigration or death, or iii) the end of the observation period on the 31st of December 2016. To maintain cross-sectional representation, supplementary annual samples of 18-year-olds were drawn to guarantee the presence of the youngest age group in the data throughout the observation period. For each observation year, household members of sampled individuals on the first of January are also included in the data. The dataset is disproportionately stratified by age and migration background (i.e. overrepresentation of the younger age groups and individuals with a migration background).

Microdata from the Belgian Censuses

For the studies on the uptake of formal childcare in Task 2.3 we use longitudinal microdata from the Belgian Censuses. First, we use data from the 2001 Belgian census that covers the entire population legally residing in Belgium on 1 October 2001. The census questionnaire includes information on the uptake of formal childcare (crèche or day mothers), informal care (family or acquaintances), as well as care provided by household members, relatives and acquaintances. A linkage between the 2001 census and the 1991 Census allowed to identify grandparents in the 2001 Census: to the extent that the mothers included in our analyses were still living with their parents in 1991, the grandparents could also be identified in the 2001 census. The census data was also linked to contextual data from 'Child and Family' (K&G) and 'Birth and Childhood' (ONE) on childcare availability for children aged 0-3 at the municipality level. Second, we use data from the 2011 Belgian Census that covers the entire population legally residing in Belgium on January 1, 2011. The 2011 Census has been linked to i) longitudinal microdata on household composition and place of residence from the population registers for the period 2000-2015, ii) longitudinal microdata on income and childcare expenses from the tax return register for the period 2000-2015, and iii) municipality-level contextual data from K&G and ONE on the availability of formal childcare services for children aged 0-3 in the period 2000-2015. The indicator of parents' childcare use based on the tax return data was validated against data from K&G and ONE for each province, indicating that

tax deduction provided a valid indicator of formal childcare uptake (results available on request).

Structure of Earnings Survey & Structure of Business Survey, and more

The ULB-UMONS team based their empirical analysis on a combination of three large datasets. The first, carried out by Statistics Belgium, is the “Structure of Earnings Survey” (SES). It covers all firms that are operating in Belgium, employing at least 10 workers and whose economic activities fall within sections B to N of the NACE Rev. 2 nomenclature. The SES contains a wealth of information on both the characteristics of firms (e.g. sector of activity, number of employees, region, level of collective agreement) and the individuals working in these firms (e.g. gross hourly wage, education, gender, age, occupation, tenure, working time), as provided by the firms’ HR departments. The SES has been merged with a firm level-survey, namely the “Structure of Business Survey” (SBS), also carried out by Statistics Belgium. This survey provides financial information (e.g. firm-level hourly value added and gross operating surplus). The third data set is the Belgian Population Register, which contains, among other variables, information on the country of birth of workers and their parents and on workers’ date of registration in the national register. The three data sets have been merged by Statistics Belgium using workers’ national register and firms’ social security numbers.

In order to test the effect of product market competition on wage discrimination against migrants, we merged a fourth dataset to the previous ones. This fourth dataset, called Overview sector Indicators Data AGORA-MMS Project, is provided by Statistics Belgium and gathers information about sectoral competition levels faced by firms in our sample based on their 3-digit level NACE code.

In order to test the effect of a higher level of upstreamness on wages, the SES dataset has been merged by Statistics Belgium, in collaboration with the National Bank of Belgium, with a unique dataset derived from the NBB-B2B transactions dataset, developed by Dhyne et al. (2015). The latter, following the methodology presented in Antràs et al. (2012), enables us to have a direct measurement of the upstreamness of (almost) each manufacturing firm surveyed in the SES for each year. The firm-level upstreamness variable measures the steps (weighted distance) before the production of a firm j at period t meets either domestic or foreign final demand.

4.2 Methods

Longitudinal research on migrants’ labour market trajectories (Task 1)

For our research on migrants’ labour market trajectories, we used survival analysis and sequence analysis which have been frequently applied in econometric studies on immigrants’

labour market transitions (Neels, 2001; Pettit et al., 2006; Cappelari & Jenkins, 2008; Kogan, 2011, Fuller 2011, Kogan & Weibmann 2013).

In Task 1.1, we track the employment and social insurance outcomes of recent immigrants. We estimate discrete-time hazard models to analyse immigrants' entry into and exit out of the first (stable) employment spell. In all hazard models, we compare refugees with family and labour immigrants and include controls for sex, age at arrival, origin, level of education, language proficiency, region of residence and entry cohort.

In Task 1.2, we investigate whether first- and second-generation immigrants are more or less present in long-term unemployment and consequentially whether they move more or less quickly in and out of unemployment using discrete-time hazard models. The hazard rates of going from employment to unemployment and of leaving unemployment into employment are the two main dependent variables. We begin, first, with an analysis of employment loss, and examine whether first- and second-generation immigrants run a higher risk of transitioning from employment into unemployment and, if so, whether this higher risk might be explained by the type of jobs they occupy, including controls for job characteristics such as tenure, full-time versus part-time, type of contract, and industry. Next, we present an analysis of the opposite phenomenon, that is, whether unemployed immigrants and natives have divergent chances of finding employment once unemployed, after their status before unemployment and duration in unemployment are considered.

In Task 1.3, we investigate self-employment exit dynamics in a multivariate setting by estimating discrete-time hazard models. We use a competing-risk setting to distinguish survival in self-employment from exits towards wage employment, unemployment or inactivity, and include pre-entry host country labour market experiences as well as age, education, industry choice, and the local business cycle as important covariates.

In Task 1.4, we employ sequence analysis to identify patterns in labour market pathways of service voucher workers. Our sequence analysis is carried out in two steps. First, we assess the dissimilarity between each pair of sequences in the data. We define a sequence as the ordered string of labour market states. We used Lesnard's dynamic variant of the Hamming distance, which manipulates and transforms sequences until they are turned into one another by substituting one state for another. Lesnard's extension of the method is to weigh particular types of substitutions differently to reflect the time-varying probability of transitions between different states. The less likely a transition between two states at a particular time point, the higher the substitution cost. Ultimately, the dynamic Hamming algorithm generates a distance matrix of interval-level measures of dissimilarity between all the sequences in the sample, based on the combination of the number of substitutions needed to transform one sequence into another and the relative weight given to each type of substitution. Second, we perform a cluster analysis on the pairwise distance matrix to group the most similar pathways. We examined clusters at various levels of aggregation, comparing both changes in objective measures and theoretical meaningfulness of different cluster solutions, and ultimately settled on an eight-cluster solution. Our description of the pathway clusters primarily focuses on

career development, i.e., the time spent in different labour market states. Additionally, we investigate differences in wage development by cluster. The final step in the analysis is to understand how different factors might set workers upon one pathway versus another. We estimate a multinomial logistic regression model for pathway type enabling the quantification of associations between pathways and selected characteristics, holding all other observable factors constant.

Qualitative research on employers' motives to make use of posting in Belgium

For our research on posting, we also undertook some qualitative research. For our analysis of the motivation of Belgian businesses to make use of posting, we drew on data obtained from 27 in-depth interviews with Belgian sector federations, companies and other stakeholders. The interviews were carried out between April 2018 and October 2019. The research sought to cover a broad range of sectors in which posted workers are prevalent. As can be viewed from Table 4-1, our interviews included the labour-intensive sectors and sectors like petro-chemistry and tech. Ten interviewees from sector federations and 11 interviewees from individual companies took part in the research. Sector federation representatives included (managing) directors and staff from departments responsible for posting issues: Human Resources, Social Affairs and Legal Services. Company representatives included (assistant) general managers, international mobility managers, human resource managers and legal advisors. The companies ranged from small and medium-sized enterprises to large multinational organisations. Although our interviewees had distinct roles and responsibilities within their respective federations/companies, most of them were directly or indirectly responsible for posting workers. In addition to the 21 interviews across different sectors, six were undertaken to explore a more overall perspective on employer motives, with an umbrella organisation of approximately 50 employer federations, two entrepreneurial network organisations, a labour union, a law firm specialising in migration, and a social security administrator. The semi-structured interviews, which were designed keeping the existing literature on employer motives in mind, concentrated on the motives for companies in the sector to use posted workers if these motives evolved and how the interviewees see posting as part of their business and sectoral development. Most of the interviews took place at the interviewee's place of work and lasted for over an hour.

The motherhood-employment link (Task 2.1)

As previous research for Belgium indicates that migrant-native differentials already emerge before the transition to parenthood, we first examined women's labour market entry upon graduation (Task 2.0). Although these analyses were not scheduled in the initial proposal, work on Tasks 2.1 to 2.3 made it increasingly clear that accurately controlling for pre-birth labour market attachment and employment stability is vital in accurately assessing whether parenthood differentially affects employment trajectories of migrant women to natives, and whether such differential impact is associated with differential access to work-family reconciliation policies. Hence, using the MIA Panel we estimated discrete-time hazard models using a complementary log-log link function to calculate the cumulative incidence of entering

a first sustainable employment spell, operationalized as an employment spell of at least four consecutive quarters, leading to a gross monthly wage of at least 82% of the gross Belgian minimum wage and a work intensity of at least 40% of a fulltime position in the fourth quarter of the employment spell. Conditional on entry, we also examined the cumulative incidence of exit out of the employment spell (i.e. becoming unemployed or inactive). In addition, for women who effectively entered a sustainable employment spell we estimated multinomial logit models to address ethnic differentials in the characteristics of the first job in the first sustainable employment spell (type of employment, type of contract and gross wage quintile). Subsequently, we assessed whether and to what extent ethnic differentials can be explained by individual characteristics (i.e. age, level and field of education, Dutch language skills, ever contact with VDAB, cumulated quarters work experience, activity status in the previous quarter), household characteristics (i.e. number of children as well as the presence and income of the partner) and parental characteristics (i.e. income of the parents).

Subsequently, we use the BASD Panel and fixed-effects models to address changes in native and migrant origin women's working hours from 1 year before until 3 years after the birth of their first child. Since fixed-effects models only exploit variation in labour market positions within individuals over time, the analyses account for time-constant (un)observed heterogeneity between native and migrant origin women. First, a fixed-effects models were estimated separately for women who were employed and not employed 1 year before family formation, considering (i) time relative to the first birth (distinguishing quarters - 4, - 3, - 2, - 1, 0, 1, 2, 3, 4-7, 8-11) and (ii) the interaction between time and origin group (native, second-generation South-EU and second-generation Turkish/Moroccan). The fourth quarter before the birth of the first child is used as reference point, so each quarter, women's working hours are compared to their working hours 1 year before the first birth. Second, an additional set of models was estimated where women were no longer stratified in terms of their observed employment positions in the fourth quarter before the birth of their first child, but in terms of their estimated probabilities of being employed at that time. To this end, we estimated and assigned the employment probabilities of women who do not (yet) have children, but who have similar socio-demographic characteristics in terms of i) age, ii) highest educational level, iii) origin group and generation, iv) region, v) LIPRO household position, vi) the interaction between origin group and age, vii) the interaction between origin group and educational level, viii) the interaction between origin group and LIPRO position, ix) the interaction between educational level and age and x) the interaction between LIPRO position and age.

A household perspective on maternal employment (Task 2.2)

For our study on couples' gender division of paid work around parenthood we use the MIA Panel and distinguished ten types of couples considering the origin group (native, South-EU, non-EU) and migrant generation (first or second-generation) of both partners. First, we document how the division of paid work differs between native and migrant origin couples from one year before up to three years after the transition to parenthood. Subsequently, to further enhance our understanding of couples' reorganization of paid work around family formation, we estimated couple-level fixed-effects models that only exploit variation within

couples over time to assess whether the impact of the transition to parenthood on couples' division of paid work differs by migration background in couples where at least one partner was employed before the birth of the first child. More specifically, the couple-level fixed-effects models estimate changes in women's relative working hours from 1 year before until 3 years after the birth of their first child and only includes i) time relative to the first birth (distinguishing quarters - 4, - 3, - 2, - 1, 0, 1, 2, 3, 4-7, 8-11) and ii) the interaction between time and couples' migration background.

In our study on women's ALMP uptake we first calculated the cumulative incidence of entry into training among unemployed women to document differential training uptake by household composition and migration origin. Subsequently, we estimated discrete-time hazard models for each origin group separately to assess whether the timing of training uptake varied significantly by household-type, controlling for women's human capital characteristics and temporal variation in training uptake. The hazard models used a complementary log-log link function as the transition from unemployment to enrolment in training unfolded in continuous time, whereas the measurement of uptake in the MIA Panel was discrete (Singer & Willett, 2003).

The uptake of work-family reconciliation policies (Task 2.3)

For our research on parental leave uptake, we developed an individual-level indicator of eligibility using the BASD Panel and deployed it to document differentiation in mothers' eligibility by age at first birth, partnership status, migration background and educational level. Subsequently, we estimated logit models to address differences in mothers' parental leave uptake where we were able to control for mothers' eligibility and examine whether and to what extent differential eligibility can explain inequalities in parental leave uptake.

Finally, two other studies have focused on the uptake of (in)formal childcare. First, using linked microdata from the 1991 and 2001 Belgian Censuses we estimated multinomial logit models to examine childcare use and types of childcare arrangements among parents who had a young child in 2001. We distinguish four categories of childcare use: i) no childcare arrangement other than household members, ii) a formal childcare arrangement only (crèche or day mother), iii) an informal childcare arrangement only (family or acquaintances), or iv) a combination of formal and informal childcare arrangements. Subsequently, we controlled for the socio-demographic characteristics of households, women's employment opportunities, the availability of formal childcare at the municipality level, and the presence of close kin as a proxy for informal care supply. As access to childcare and maternal employment are endogenous, we use estimated probabilities of i) overall, ii) fulltime and iii) flexible employment. In a second paper, we estimated municipality-level fixed-effects logit models using 2011 Census data to address how changes in childcare availability within municipalities over time affected mothers' uptake of formal childcare. More specifically, we estimated for each origin group predicted probabilities and average marginal effects at different childcare coverage levels based on logit models including i) municipality fixed effects, ii) coverage

(quadratic specification), iii) origin, iv) the interaction between origin and municipality, and v) the interaction between origin and coverage (quadratic specification).

Wage discrimination based on the country of birth: do tenure and product market competition matter? (Task 3.1.)

To test the existence and magnitude of wage discrimination against non-EU15 workers, we follow the methodology developed by Bartolucci (2014) which boils down to estimate a wage equation at the firm level, including the percentage of hours worked by immigrants in addition to a large set of covariates and a direct measure of productivity. According to this approach, it can be concluded that migrants are subject to wage discrimination if *ceteris paribus* the regression coefficient associated with the percentage of hours worked by immigrants is significantly negative, i.e. if, for a given level of productivity, an increasing share of immigrants within firms goes hand in hand with a significant decrease in hourly wages.

We first estimate this ‘Bartolucci-type’ wage equation with pooled OLS using detailed firm-level panel data for the Belgian private sector. However, OLS estimates could suffer from potential heterogeneity and endogeneity biases. To address both issues, we relied on a GMM-IV specification in first differences with instrumental variables (Black and Lynch 2001; Dearden, Reed, and Van Reenen 2006).

Our variable of interest is meant to estimate the effect of a higher share of hours worked by migrants from outside the EU15 on firms’ average wages, controlling for a wide set of covariates. We first consider the potential heterogeneity related to workers’ region of birth and divide therefore our variable of interest into six categories of workers: Africans, North-Western Asians, Asians, Eastern Europeans, Northern and Latin Americans, and finally workers from the South Pacific region or of other origins. Second, we divide our variables of interest according to workers born outside EU15 countries by tenure: up to 4 years, from 5 to 9 years, and more than 9 years. Finally, we test whether the extent of wage discrimination against workers born outside EU15 countries depends on the degree of product market competition, as approached by four variables: i) the market share of the eight largest firms in the sector, ii) the Herfindahl-Hirschmann index (HHI), iii) the price-cost margin, and iv) the market share volatility of the four largest firms in the sector. To do so, we estimate our wage-setting equation separately for firms facing high vs. medium or low product market competition, based on four different sectoral indicators of product market competition. We assume that firms face high (medium or low) product market competition if their sectoral product market competition indicator is lower (higher) than the 33rd percentile of the corresponding indicator of the whole sample.

Over-education among immigrants: the role of demographics, time and firm characteristics (Task 3.3)

To get a better understanding of whether and how workers' likelihood of being over-educated is affected by their regions of birth, we rely on an ordered probit model. The dependent variable takes the value 0, 1 or 2 depending on whether the worker is recorded as under-, adequately, or over-educated, respectively.

Our main variable of interest is the region of birth of worker i . It includes two categories, identifying whether workers were born in developed or developing countries, respectively. To do so, we followed the United Nations' (2014) classification, which is built on basic economic conditions such as geographical location and similarities in economic structure. In order to assess the role played by workers' regions of birth more precisely, we further disaggregated immigrants from developing countries into sub-groups according to whether they were born in i) North Africa, ii) Sub-Saharan Africa, iii) the Middle and Near East, iv) Asia, v) Eastern Europe (non-EU), and vi) Latin and Central America.

Wage effects of educational mismatch according to workers' origin: the role of demographics and firm characteristics (Task 3.2.)

To analyze the effect of educational mismatch on wages, we rely on the extension of the standard Mincer equation which is the ORU (Over-, Required, and Under-education) specification developed by Duncan and Hoffman (1981), in which the years of attained education are decomposed into years of required education, years of over-education, and years of under-education.

We first estimate our model by OLS on two subsamples composed of workers born in developed and developing countries, respectively. Second, to test whether there is some heterogeneity in the wage returns to attained, required, and over-education among workers coming from developing countries, we re-estimate the three models on five more disaggregated subsamples, composed respectively of workers born in: i) Africa, ii) the Middle and Near East, iii) Asia, iv) Eastern Europe (non-EU), and v) Latin and Central America.

Does Over-Education Raise Productivity and Wages Equally? The Moderating Role of Workers' Origin and Immigrants' Background (Task 3.4.)

To examine the influence of over-education on firm-level productivity and wages, we rely on the methodological framework pioneered by Hellerstein *et al.* (1999) to estimate ORU (Over-, Required, Under-education) equations aggregated at the firm-level. More precisely, we estimate firm-level wage and productivity equations using as main explanatory variables mean years of over-, required and under-education among native and immigrant workers. Sensitivity analyses further test the moderating role of immigrants' background (e.g. region of birth, immigrant generation, age at arrival in the host country, tenure).

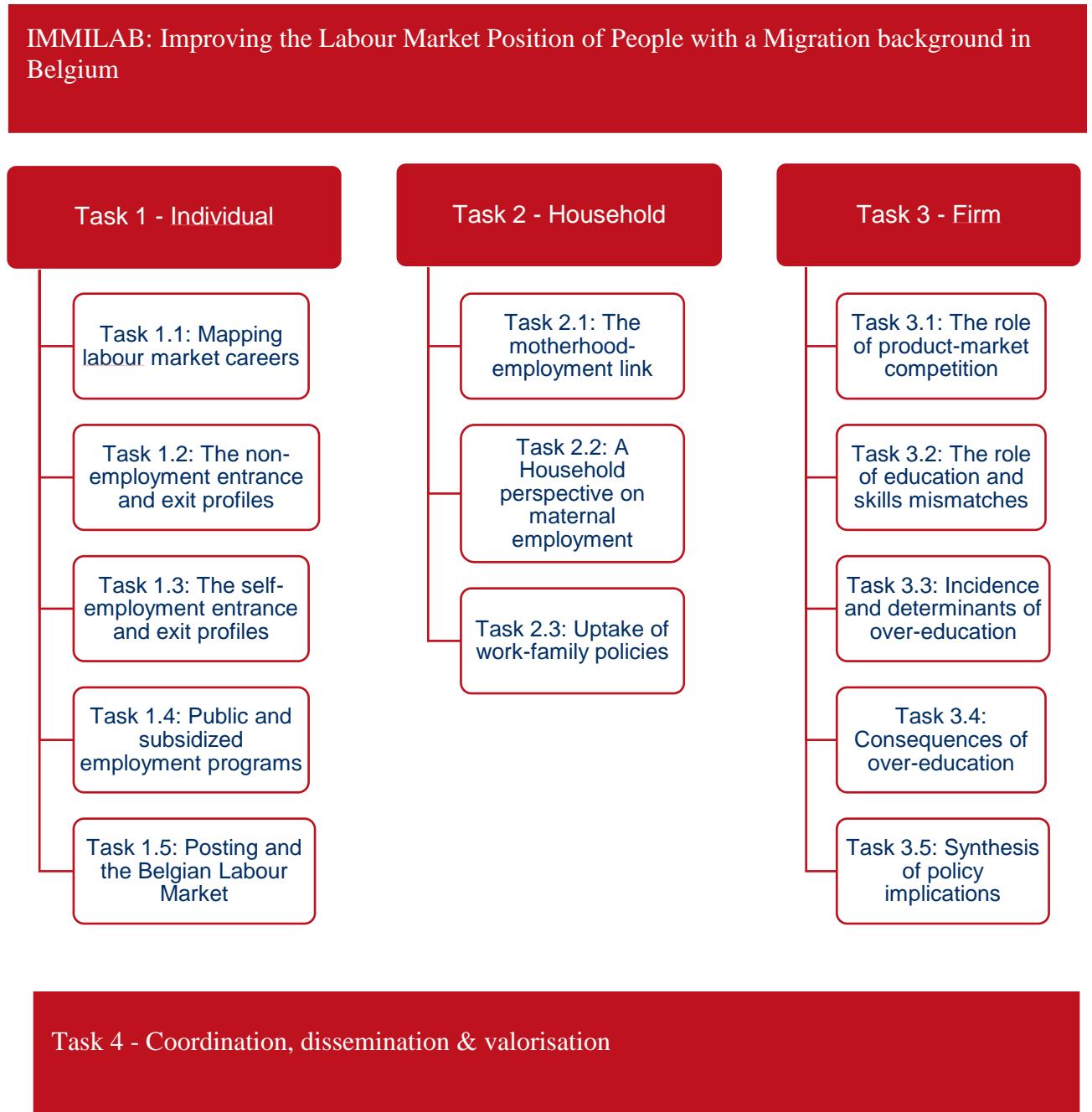
Wage Differences According to Workers' Origin: The Role of Working More Upstream in GVCs (Task 3.5)

To estimate the impact of upstreamness on wage differentials according to workers' origin, we rely on multiple cross-sectional data sets and estimate worker-level wage equations using upstreamness as main explanatory variable. This is done separately for workers born respectively in developed and developing economies. Wage equations are first estimated by OLS (at the mean of the wage distribution), then with a 2SLS estimator to control for a potential endogeneity bias. Next, because the gains associated with upstreamness could be significantly different for high- and low-wage workers and outcomes along the wage distribution could differ between workers born in developed and developing countries, we rely on unconditional quantile regressions (UQR) with block-bootstrapped standard errors (Firpo et al., 2009; Daouli et al., 2013). As a robustness test, we also apply the more conventional conditional quantile regressions (CQR) approach (Koenker & Bassett, 1978; Machado & Mata, 2005; Melly, 2005), adapted to clustered data as suggested by Parente and Santos Silva (2016).

To deepen our understanding of the role of upstreamness in explaining wage differences by workers' origin along the wage distribution, we also applied an extension of the Oaxaca (1973) and Blinder (1973) decomposition, based on the methodology developed by Fortin et al. (2011). Our purpose is to estimate, for each quantile of the wage distribution, which proportion of the overall origin-based wage gap can be attributed to: (i) differences in mean values of upstreamness by origin (i.e. the compositional effect or explained part) and (ii) differences in wage-upstreamness elasticities by origin (i.e. the wage structure effect or unexplained part).

5. SCIENTIFIC RESULTS

Figure 10 Schematic representation of the work packages and tasks.



In the following paragraphs, we discuss the research results for task 1, 2 and 3 respectively.

TASK 1 – INDIVIDUAL LEVEL

A closer look at the difficult integration of migrants – a study of refugees (task 1.1 &2)¹⁰

As part of our first task, we studied the initial labour market integration of refugees. Figure 11 shows that refugees tended to follow a particular trajectory. In the first years after arrival, most refugees had no connection with Belgian social security whatsoever. After entry, and hardly surprising, very few refugees were in the formal labour market. Similarly, few were dependent on social transfers. However, after this initial phase followed a rapid and robust **rise in dependency on social assistance**, the only social protection program to which refugees can have relatively rapid access in the largely contributions-based Belgian social protection system. In the third year after arrival, the share of social assistance beneficiaries reached a peak, just below 40 per cent. Entry into employment remained very low during the first years after entry. After what we could label a transition phase, which takes about four years, dependency on social assistance started to drop and **employment participation surged**. After ten years, about half of the refugees were (self-)employed. However, during this second phase, we also see an important fraction **transitioning into unemployment benefits**. At the same time, a substantial share remained dependent on social assistance or stayed inactive ten years after arrival.

Hence, our analysis showed that refugees **take significantly longer to enter the first employment spell** than economic and family immigrants. Their weak ties to the labour market made them prone to recourse to social assistance, especially in the first years after arrival. The plus side of this initial dependence on social assistance is that it allowed refugees to settle, become accustomed, develop ties, and look for work. Indeed, over time refugees caught up to some extent and the **employment gap with other immigrants decreased**. However, once refugees built up a limited employment history, they ran a greater risk of exiting their first employment spell (back) into social assistance and unemployment. The low employment rates of refugees were thus not only due to a slow integration process upon arrival but also reflected a **disproportional risk of exiting the labour market after they appeared integrated**. Hence, refugees face **double jeopardy** in the Belgian labour market. An important explanation for refugees' high exit rates was the **types of jobs** they acquired. These jobs were often insecure and unattractive. The quality of the jobs refugees got into likely put them at high risk of falling

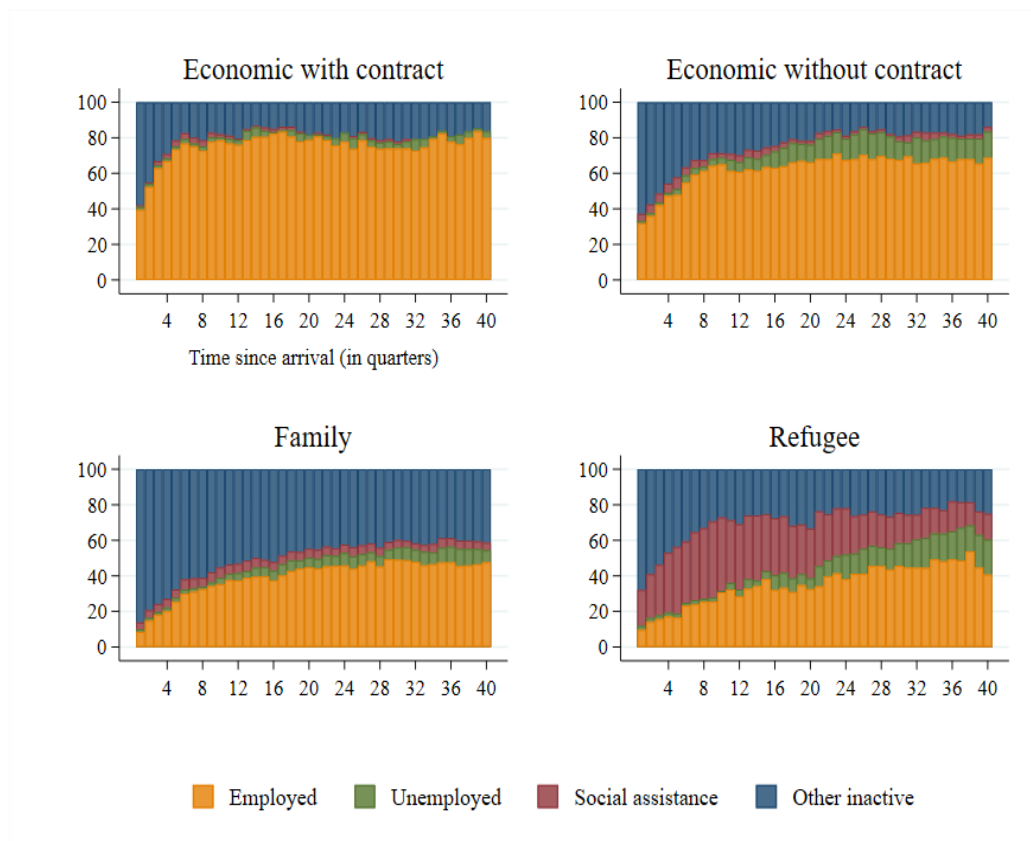
¹⁰ Lens, D., Marx, I. & Vujić, S. (2019). Double jeopardy: How refugees fare in one European labour market. *IZA Journal of Development and Migration*, 10(1).

Lens, D., Marx, I. & Vujić, S. (2018), Does Migration Motive Matter for Migrants' Employment Outcomes? The Case of Belgium. In: Timmerman, C. et al. (eds) *Migration and Integration in Flanders: Multidisciplinary Perspectives*

Lens, D. & Oslejová, J. (2018). Arbeidsmarkt-transities van immigranten in België. *Tijdschrift voor Arbeidvraagstukken*, 34/4

victim to cuts and redundancies. At the same time, poor employment prospects may have led to a slight overall utility difference between employment and non-employment, encouraging some refugees who were (or could have been) capable of supporting themselves through employment to rely on social insurance benefits instead. Importantly, our findings indicate that **family immigrants were not much better off than refugees**: their labour market entry patterns also left much to be desired.

Figure 11 Labour market careers of immigrants by time since arrival



Note: These calculations are based on the 2003-2013 arrival cohort (instead of 1998-2013) because of a break in the LM&SP data where information on social assistance has only been integrated from 2003 onwards. We limit the observation window to ten years (or 40 quarters) after arrival. *Source:* BLFS-LM&SP, author calculations.

The labour market trajectories of self-employed immigrants (task 1.3)¹¹

A similar challenge of sustainability we found for **self-employed immigrants**. In the context of immigrants' continuing unfavourable labour market outcomes in the EU, policymakers have been promoting self-employment as a **tool to enhance immigrant labour market incorporation** and as an effective solution to immigrants' socio-economic difficulties

¹¹ Lens, D. Pushed in, pushed out? Self-employment transitions of first- and second-generation immigrants. *International Migration Review*, forthcoming.

(European Commission 2016; Rath and Swagerman 2016). However, critical research on immigrant self-employment has pointed out that this optimistic view often comes from one-sided indicators, such as immigrants' self-employment rate, and that the effects of self-employment for workers are rarely considered (Hjerm 2004; Brzozowski 2017). Existing policy schemes reflect this bias by focusing almost entirely on supporting immigrants in setting up their businesses (Desiderio 2014; Solano, Wolffhardt, and Xhani 2019). Our research hence rather focused on the **need to study self-employment outcomes** by investigating the reasons behind native-immigrant **differences in exit from self-employment** to assess whether self-employment can help immigrants overcome some of the ongoing challenges they face in deeply segmented labour markets.

Our results show that both first- and second-generation immigrants were more likely than natives to become unemployed or leave the labour force after a period of self-employment. Hence, *sustaining self-employment is a more significant challenge for immigrants than for natives.*

Our results demonstrate that many immigrant groups experienced **higher exit rates than natives**, particularly among men, and that the **second-generation did not consistently outperform the first generation**. Furthermore, among natives and immigrants, female business owners were more likely than male business owners to leave self-employment. Nevertheless, exit from self-employment is only part of the story. We also considered *where workers end up after they exit from self-employment*.

Table 1 Hazard ratios exit from self-employment, males

	(A)	(B)	(C)	(D)	(E)	(F)
Time	.82***	.82***	.89***	.89***	.89***	.89***
Time square	1.01***	1.01***	1.00***	1.00***	1.00***	1.00***
Time cubic	1.00***	1.00***	1.00**	1.00**	1.00**	1.00**
1gen Western EU	.94	.98	1.03	.99	.97	.94
2gen Western EU	1.05	1.03	1.04	1.01	1	.98
1gen Southern EU	1.09	1.03	1.13	1.1	1.14	1.04
2gen Southern EU	1.58***	1.52***	1.50***	1.40***	1.38***	1.28**
1gen Eastern EU	1.27**	1.13	1.28***	1.23*	1.31***	1.19*
1gen other Europe	1.24	1.15	1.24	1.15	1.11	1.06
1gen Turkey	1.64***	1.47***	1.61***	1.41***	1.34***	1.27**
2gen Turkey	1.95***	1.72***	1.76***	1.55***	1.49***	1.42***
1gen North Africa	2.26***	2.15***	2.16***	1.94***	1.89***	1.72***
2gen North Africa	2.02***	1.86***	1.80***	1.59***	1.50***	1.37***
1gen other Africa	1.79***	1.82***	1.72***	1.64***	1.59***	1.52**
2gen other Africa	1	.98	1.01	.97	.95	.93
1gen other Asia	1.18	1.11	1.24*	1.22*	1.16	1.1
2gen other Asia	1.58**	1.49*	1.57**	1.52**	1.45*	1.38*
1gen America	1.34	1.26	1.33*	1.26	1.31	1.23
2gen America	1.07	1.05	1.12	1.05	1.01	.96
Age		1	.93**	.94**	.94**	.93**
Age square		1	1.00**	1.00*	1.00*	1.00*
Couple		1.06	1.01	1	.99	.98

Single parent	1.25***	1.26***	1.23***	1.22***	1.20**
Single	1.36***	1.35***	1.30***	1.29***	1.26***
Other household	1.24*	1.23**	1.21*	1.19*	1.17*
Low educated	1.42***	1.39***	1.40***	1.44***	1.44***
Medium educated	1.16***	1.14***	1.18***	1.21***	1.22***
Entered from wage emp		.79**	.83*	.85	.85
Entered from part-time selfemp		3.77***	3.82***	3.85***	3.85***
Entered from unemp		.93	.85	.91	.9
Entered from study		.52***	.51***	.47***	.47***
Wage experience			1	1	1.00*
Unemp experience			1.02***	1.02***	1.01***
Selfemp experience			1	1	1
Industry-spec experience			.98***	.98***	.98***
Manufacturing				1.02	1.01
Construction				.9	.9

Table continued

	(A)	(B)	(C)	(D)	(E)	(F)
Retail					1.03	1.02
Hospitality					.91	.91
Transport					1.22***	1.21***
Financial services					1.37***	1.36***
Education					1.46***	1.44***
Health and social services					1.73***	1.70***
Arts					1.11*	1.1
Unknown					1.07	1.08
Local unemp rate						1.01***
Log-likelihood	-27,627	-27,566	-27,139	-27,024	-26,963	-26,949
N person-quarters	214,777	214,777	214,777	214,777	214,777	214,777

Note: ***, **, * denote significance at .1%, 1% and 5%. Source: BLFS-LM&SP, author calculations.

Here, there are considerable discrepancies in immigrant penalties, with Turkish and North African immigrants and first-generation Eastern EU immigrants experiencing the most negative self-employment dynamics. Second-generation immigrants had better self-employment outcomes than first-generation immigrants, with higher transition rates to wage jobs and lower transition rates to unemployment and inactivity, showing that there is convergence in natives' and immigrants' self-employment patterns but that this convergence takes generations. Still, many second-generation groups were more likely than natives to end up in non-employment. Intergenerational mobility differs considerably by migration background, an outcome that points to segmented assimilation in Belgium. Especially second-generation other Africans show a better performance than their first-generation counterparts, whereas the opposite is found for Turks. Immigrant women also experienced higher exit rates than immigrant men. For most immigrant groups, women's higher exit rates are attributable to a combination of more frequent transitions into wage employment and more frequent transitions into inactivity. However, first-generation Turkish, North African, and other African women experienced a double disadvantage due to a very high tendency to leave the labour market after a period of self-employment.

Weaker attachment to the labour market preceding entry into self-employment played a crucial role in explaining why immigrants had worse self-employment exit dynamics than natives. Immigrants were less likely to move from self-employment to wage employment, in part because they were less likely to enter self-employment gradually, but instead were **pushed into self-employment** in an attempt to build a career in a partly impenetrable labour market. Lower education levels, the lack of relevant work experience, and more unemployment experience largely explain why immigrants had higher exit rates to non-employment. In other words, self-employment seems to represent an **essential fallback strategy for immigrants to avoid unemployment**, blocked mobility, and discrimination. At the same time, ‘bad’ exits from self-employment are primarily a result of a lack of success in the wage labour market. (For policy discussion see further below.)

How does subsidized employment help immigrants’ labour market integration? The case of the Belgian Service Voucher System (Task 1.4)¹²

Another potential avenue to improve the labour market integration of new migrants, is Belgium’s extensive public and subsidized employment schemes. When it comes to active labour market policy Belgium finds itself confronted with a striking paradox. The country ranks amongst the most prolific spenders on active labour market policies, with the brunt of that spending going to subsidized employment schemes. But this has not translated in high levels of employment and low levels of long-term unemployment. People with few formal qualifications remain at a high risk of structural labour market exclusion, and, as this proposal has abundantly highlighted, this is especially the case for people with a migrant background.

In our research, we focused on one of the biggest subsidized employment schemes in Belgium, i.e. the Service Vouchers Scheme (SVS). The Belgian SVS is in relative terms the biggest subsidized domestic work scheme in Europe by far (OECD, 2021). The scheme has become spectacularly popular, both for workers and client households. The number of SVS workers grew tenfold in less than 10 years, from about 15,000 in 2004 to more than 150,000 as of 2013. After 2013, the number of SVS workers continued growing at a slower pace, reaching **over 170,000 employees by the end of 2019**. The scheme gradually became an important employer of female workers in Belgium: in 2019, nearly 8% of all working women in Belgium were employed under the SVS. Almost all the employees are female (97%).

Our results show that an important share (around 44%) of the workers enters the SVS from the fringes of the labour market, either from long-term inactivity, long-term unemployment, or highly unstable employment. Seven out of ten of these vulnerable workers secure a stable career in subsidized employment in the four years following entry. Yet, not all of these workers improve on their situation, as roughly one third of them ends up back at the margins of the labour market. In this context, a particularly important finding is that young women are more

¹² Dries Lens, Ive Marx, Jarmila Oslejová, Ninke Mussche (2022), Nice work if you can get it. Labour market pathways of Belgian Service Voucher Workers, Journal of European Social Policy, R&R

likely to follow trajectories in which SVS employment does not offer a way out of exclusion or precariousness.

Our analysis additionally shows that **people enter the SVS from much less precarious situations, such as from regular employment**, often even from continuous employment trajectories (see figure 12 – redirection cluster). Medium-skilled and Belgian-born workers are most likely to develop such pathways.

Figure 12 Typology of labour market pathways (eight-cluster solution): state distribution plots



Focussing on migrant workers, we found the scheme plays ***an ambivalent role in the labour market integration process of female immigrant newcomers***. Clearly, most of the immigrant newcomers enter SVS employment after having spent a considerable amount of time in inactivity (see figure 12 – integration cluster). However, a **significant share of the newcomers – most of them born in EU12 countries – enter the scheme soon after arrival**. These immigrants might have succeeded in landing a steady non-subsidized job if the SVS had not existed. Furthermore, a substantial share of these EU labour migrants is **high-skilled**, so it is questionable whether entering the scheme is the best option for them, even if it leads to stable and secure subsidized employment. As such, there might be a risk that EU labour migrants crowd out more vulnerable groups by entering the scheme. At the same time, for a smaller group of mostly non-EU newcomers, entering subsidized employment as a first job in Belgium regularly does not ensure an effective integration into the labour market (see figure 12 – challenged integration cluster). Our findings suggest that – at least in the short-term –

the scheme is largely **unable to provide a steppingstone to other professions** for female newcomers, which is especially problematic for those who are tertiary educated.

Migrants' difficult integration and the structure of the Belgian Labour Market

The difficult integration of migrants in the Belgian labour market has many causes, both on the demand side (the socio-demographic and human capital characteristics of migrants) and the supply side (discrimination, ethno-stratification). A lot of research has already been undertaken to understand these causes (Baert et al. 2015, Corluy et al. 2015, Pina et al 2015). A third level on which we can understand migrants' plight in the labour market is the institutional side, among others the **structure of the Belgian labour market**. Belgium's labour market has a **very strong insider-outsider divide**. It is strikingly protective of those at work – the 'insiders' - it boasts extensive generally binding collective wage agreements for the total workforce, strong labour legislation protecting employees from hiring and firing hazards, and strong social-corporatist structures overseeing wages and working conditions. As a result, Belgium has among the most compressed wage distributions in the OECD area. With high minimum wages and high wage levels at the bottom of the labour market, **few people work in relatively low paid jobs**. Specific segments of the labour market that are present or growing in many rich countries remain very small or virtually non-existent in Belgium – particularly relatively low paid service sector jobs that require little formal training and that come with few additional benefits or job certainty. As an institutional *choice*, such jobs hardly exist in Belgium, meaning that there are relatively few jobs for people with low education levels or foreign qualifications that are not (yet) recognised. In other words, there is very little manoeuvring room for people outside of or at the margins of the labour market to become insiders. Immigrants **start as outsiders to the labour market and have a more challenging time conquering a durable spot in it**. They risk struggling at the margins forever.

This institutional inside-outside set-up that is detrimental to immigrants, becomes even more striking when taking into account an important development at the margins of the labour market, that is the **very high levels of inflow of posted workers into the Belgian labour market**. Whereas Belgium struggles with a large labour reserve of unemployed and inactive people, including immigrants who have difficulty becoming insiders in the labour market, at the same time, the same labour market witnesses the vast popularity of the *quintessential* outsider: the posted worker. Posted workers never become part of the Belgian labour market but remain bound by an employment contract in the sending EU Member State. They come to Belgium to **deliver temporary services but do so on a great scale**, with tremendous repercussions for some sectors of the economy. In the following paragraphs we focus on our research results on posting, to then link these with the challenges of the Belgian insider-outsider divide in the Belgian labour market.

Posting mobility exacerbating the insider-outsider divide in Belgium (Task 1.5)¹³

We studied the importance of posting for the Belgian labour market (Task 1.5). Whereas in 2010, about 104,000 posted workers were registered, this figure gradually rose to about 209,000 posted workers in 2020. In 2020, they executed around 730,000 service jobs. The number of unique posted workers to Belgium doubled over the last decade. Additionally, our research indicated that posting mobility itself is increasingly being used as a vehicle of entry by third country national (TCN) labour migrants. As a consequence of the European Court of Justice's rulings, starting with the Vander Elst case (1994), workers who are not EU citizens and who obtain a work and residence permit from an individual Member State are allowed to be posted all over the EU as posted workers. The category of TCN posted workers is the fastest (and only) growing category of posted workers in recent years. Whereas in 2010, the level of inflow stood at 3,000 TCN posted workers, this grew to 31,000 TCNs were posted from other EU Member States to Belgium in 2020, accounting for 15% of the total number of posted workers.

The Economic Importance of Posting

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The number of full-time equivalent (FTE) posted workers (supported by MYRIA)

Collaborating with our partner MYRIA, the Federal Migration Centre, we computed the *economic significance* of posted work in Belgium by calculating the number of full-time equivalent (FTE) posted workers for every year. The 212.000 workers that were posted to Belgium in 2020 stood for 105.000 full-time equivalents and, hence, accounted for around 3,2% of the total group of workers employed in Belgium. The importance of posted workers in total employment increased strongly between 2010 and 2017 – from 1,3% to 2,9% – but remained relatively stable after that. Notably, the COVID-19 pandemic did not affect the share of posting in total employment (see also Lens et al. 2021c). Unsurprisingly, considerable variation exists in the economic significance of posted work across different

¹³ Mussche, N. & Lens, D. (2019) The CJEU's Construction of an EU Mobility Regime - Judicialization and the Posting of Third-Country Nationals. *Journal of Common Market Studies*, 56(7).

Lens, D., Mussche, N. & Marx, I. (2021) Europe's ever-expanding labour migration circles: the role of the trans-european posting of third-country nationals. *International Migration*, 00:1-17.

Mussche, N., Lens, D. & Marx, I. (2021), The Different Faces of International Posting - Why Do Companies Use Posted Workers?, *European Journal of Industrial Relations*, Jul.2021, 1-19.

Lens, D., Mussche, N. & Marx, I. (2020). De vele gezichten van nieuwe arbeidsmigratie - Detachering en derdelanders. *Tijdschrift voor Arbeidsvraagstukken*, 36/2.

economic sectors. The construction sector is the first to stand out, as posted workers accounted for 24% of total employment in 2020. This share is likely still a conservative estimate, given that foreign employers self-report the sector of service delivery in LIMOSA. The construction sector is closely followed by the transport sector, where posted workers represented about 23% of the total labour volume. The transport sector generally registers a much lower number of posted workers than the construction sector, but the workers in the transport sector have much longer postings, which explains why the economic significance of posting is similar across the two sectors. The third and fourth sectors are electrical installation and metalwork, where posted workers accounted for 14% and 9% of total employment. Another group of sectors – including production and distribution, meat processing, agriculture, wood and furniture, petrochemistry, cleaning, and ICT – follow at a distance with posting representing between 2,6% and 4,1% of the total labour volume. In the remaining sectors, the economic significance of posted work is relatively marginal.

Motivated by the striking popularity of posting in Belgium we interviewed employers and employer organization on the reasons for using posting at such a large scale, keeping in mind the existence of a considerable labour reserve of non-employed people who could potentially do the jobs that posted workers take up. We found that many Belgian employers who use posting are involved in what we coined **Competition posting**. Labour-intensive sectors such as construction, transport, meat, food and cleaning, rely on the low labour cost of posted workers in their operations. As social security contributions are due in the sending country, posted workers tend to be significantly cheaper than local workers. The same sectors also explained the intensive use of posted work with motives such as employment flexibility, the 'good worker' attitude associated with posted workers, and skill and workforce shortages. We did find, however, that Competition posting is not the only type prevalent in Belgium. Two other types – **Specialisation posting** and **Expert posting** – are also part of the posting landscape but are often completely overlooked. Specialisation posting is found in high value-added sectors such as metal, electric installations, petro-chemistry, finance, chemistry and life sciences, and tech. Posted workers undertake temporary specialized services (such as repair and maintenance) or outsourced low-skilled routine tasks (such as cleaning and security). For these types of posting, the cost is not a driving factor. Instead, skill shortages and flexibility play a key role. Skill shortages are also a driver of Expert posting, associated with high value-added knowledge economy sectors. Here, long-term posting of high-skilled workers is used by multinationals to groom high potentials for international careers and to deploy researchers across their research facilities.

For most posting, though, low cost and flexibility combined with labour shortages have made posted workers immensely popular with businesses in labour-intensive sectors. Here we return to the issue of the inside-outsider divide of the Belgian labour market. As discussed above, resident migrants have a hard time finding stable employment and risk remaining at the margins of the labour market as outsiders. Literature pointed to many barriers that

migrants face. An excellent example of these barriers for immigrants to get jobs in Belgium is host-country language proficiency. Any academic theory on immigrant incorporation into the labour market considers host-country language skills a prime requirement. Immigrants also need to overcome other barriers, such as participation in civic integration programs and language courses, getting foreign credentials recognised, and broadening social networks. Strikingly, however, **none of the recruitment requirements seemingly demanded from 'proper' immigrants are imposed on posted workers**. People with another legal status, posted workers, do not need any of these to acquire work in Belgium. **Posted workers are the quintessential outsiders who are much more in demand on the local labour market than 'regular' immigrants who aspire to become insiders**.

The different trajectories that immigrants and posted workers have in the Belgian labour market again lay bare the deep inside-outsider problem: outsiders have become more 'employable' and attractive to companies than locally hireable workers. Recruiting posted workers, however, **perpetuates and solidifies the insider-outsider divide**. Not only have specific sectors become dependent on the continuous supply of posted labour, the extensive use of posting in labour-intensive sectors also disincentivises those sectors to adequately address real shortages in the labour supply of some professions. For years, certain occupations like welders, meat processors and truck drivers have been on the list of shortage occupations. The supply of posted workers has partially compensated for these shortages, reducing the incentive for sectors and policymakers to increase their efforts in training and education for these profiles. Hence, even though this parallel channel of cheap and flexible workers may free employers from a strongly institutionalised and regulated labour market, it allows policymakers to *delay any actual interventions to diminish the insider-outsider divide* in the Belgian labour market.

Another contradiction: the effect of posting on labour migration policy

The popularity of posted work in Belgium brings us to another contradiction. Even before the COVID crisis hit, it was clear that Belgium is effectively a bottleneck economy, dependent on the work of immigrants of *all* skill levels. Nevertheless, like other Western European countries, Belgium designed its labour migration policy to favour high-skilled workers. Through tightly regulated labour migration policies, Belgium and the other EU Member States remain masters over their territorial and labour market sovereignty: they ultimately decide who comes in and who does not. However, in practice, this is not the case. Belgium does not control who comes in and out of its labour market. In practice, **third-country nationals of all skills levels find their way to the Belgian labour market**, despite restrictions in the official channel. The EU free movement of services has become the source of the country's most rapidly growing labour migration channel. Through case-law of the European Court of Justice, third-country nationals who have a valid residence and work permit in one Member State can be posted across the EU for delivering services. Hence, 'traditional' labour migrants from outside the EU get posted without limits across the EU as mobile workers. The posting route for third-country labour migrants indeed offers new migration opportunities, *especially for low- and medium-skilled labour migrants*. It is clear that businesses, ever in need of cheap labour, are eagerly seizing

the third-country posting route opportunity. Even for high-skilled workers, the accessible intra-EU posting possibilities may offer a far more flexible formula than the still burdensome single permit regime. A double win may be at hand: good for the workers and good for business. The reality on the ground, however, may be less rosy. The cumulation of two legal statuses, one of third-country labour migrant and one of posted worker, may leave third-country workers in a **doubly vulnerable position**. Workers' dependence on their employers, associated with third-country labour migration, can be exacerbated by the total control sub-contractors exert over the posting process, which the employer initiates and manages. Often posting involves a complex chain of companies and multiple-country postings, which decreases the legal certainty for workers and clarifies where the worker's social security coverage is located. Posting is more complex to monitor than 'traditional' labour migration because of its temporary nature and lack of workers' integration into the host-country labour market. This **lack of control** may increase labour exploitation, wage uncertainty, and blurry legal migration statuses.

Having given an overview of the research results of task 1 (the level of the individual), we now turn to the research results of task 2 (the household level).

TASK 2 – THE HOUSEHOLD LEVEL

The motherhood-employment link (Task 2.1)¹⁴

To understand path dependencies in labour market trajectories and the interplay between family formation and labour force participation, we first examined women's labour market entry upon graduation as this subsequently shapes their employment trajectories around family formation as well as their uptake of work-family reconciliation policies. In contrast to the available literature that has largely focused on women's employment positions at one point in their life course regardless of their employment stability and associated income, we assessed whether there are **ethnic differentials in entering a so-called 'sustainable employment spell'**, operationalized as an employment spell of at least four consecutive quarters, leading to a gross monthly wage of at least 82% of the gross Belgian minimum wage and a work intensity of at least 40% of a fulltime position in the fourth quarter of the employment spell. The results showed that **Turkish and Maghreb** origin women (particularly of the intermediate generation) face **more difficulties in establishing themselves in the labour market compared to native women**. They are not only less likely than native women

¹⁴ Maes J., Wood J., Neels K. (2019) Early labour market trajectories of intermediate and second-generation Turkish and Maghreb women in Belgium, *Research in Social Stratification & Mobility*, 61(2019), 65-78. [Doi.org/10.1016/j.rssm.2018.11.001](https://doi.org/10.1016/j.rssm.2018.11.001).

Maes, J., Wood, J., & Neels, K. (2021). Path-Dependencies in Employment Trajectories Around Motherhood: Comparing Native Versus Second-Generation Migrant Women in Belgium. *Journal of International Migration and Integration*, 1-64. [Doi.org/10.1007/s12134-020-00801-1](https://doi.org/10.1007/s12134-020-00801-1).

to enter a sustainable employment spell, but are also more likely to exit the sustainable employment spell into unemployment or inactivity (cf. double jeopardy Task 1.1 & 2). Hence, already from the start of their career, migrant origin women display less stable employment trajectories than native women. In addition, when they effectively enter a sustainable employment spell, they are also **less likely to start in a white-collar job**, with a full-time contract or with a wage similar to natives.

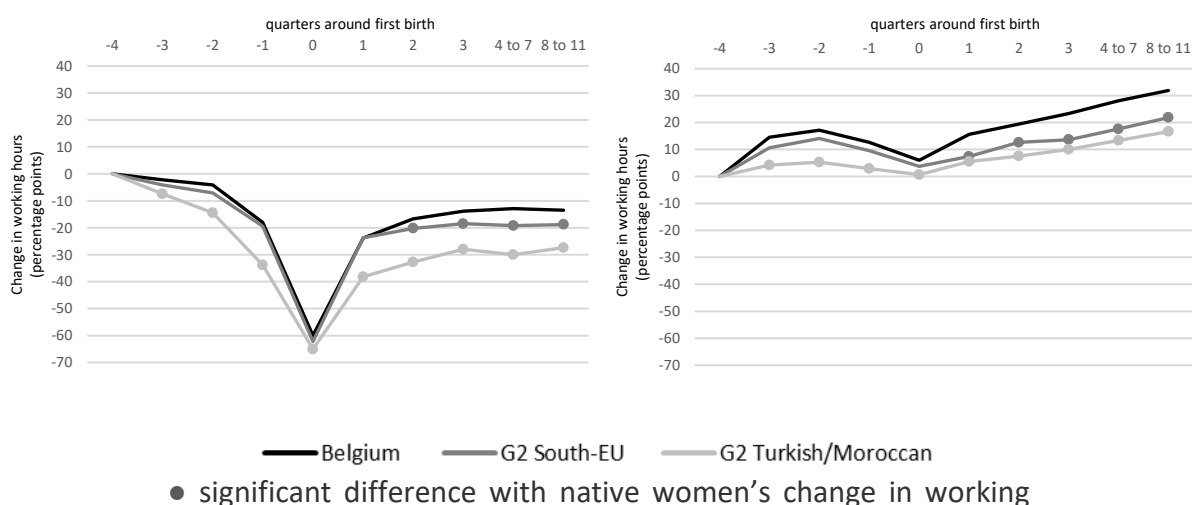
Although migrant-native differentials diminish after controlling for individual, household and parental characteristics, **substantial gaps remain**. Consistent with earlier studies, we find that level of education can only partially explain migrant-native differentials in entering and exiting a first sustainable employment spell, as well as the characteristics of the sustainable employment spell. Our results further demonstrate that women of Turkish or Maghreb origin, and particularly of the intermediate generation, **more often started family before having entered a sustainable employment spell**, which partially explains ethnic differentials in entering sustainable employment. In addition, whereas native women enter a sustainable employment spell often directly after education, migrant origin women are more frequently looking for a job or employed without fulfilling the conditions on stability, income and work intensity, suggesting that the labour market consists of insiders on the one hand who enjoy greater job stability, and outsiders on the other hand who tend to move from one temporary contract to another.

The differential stability that seems inherent to labour market trajectories of migrant women compared to natives in the Belgian context, is also key to understand the seemingly **differential effect of family formation on women's labour market trajectories**. Using longitudinal microdata from social security registers, we addressed whether migrant-native differentials exist in women's employment trajectories around the transition to parenthood, and to what extent these can be explained by the differential pre-birth labour market attachment of migrant origin and native women. Stratification of women's employment trajectories around parenthood in terms of their observed pre-birth labour market positions seems to suggest that the birth of a first child has a stronger impact on the labour market participation of migrant origin women than is the case among native women, with the largest difference for Turkish or Moroccan origin women (Figure 13). Employed second-generation migrant women reduce their working hours to a larger extent compared to natives, whereas women who were not employed before the birth of their first child were found less likely to substantially increase their working hours. This pattern may, however, reflect the differential employment stability that seems typical of women with a migration background in the Belgian labour market rather than a differential impact of parenthood on women's employment trajectories. The fact that there is already a stronger decrease in the three quarters preceding the first birth in the working hours of second-generation Turkish/Moroccan women among women who were employed 1 year before motherhood (Fig. 13a) and a stronger increase in the working hours of native and second-generation South-EU women among women who were not employed (Fig. 13b) seems to provide empirical support for this line of thought.

Figure 13 Change in working hours around first birth compared to working hours one year before first birth by origin group

A. Women who were employed 1 year before first birth

B. Women who were not employed 1 year before first birth

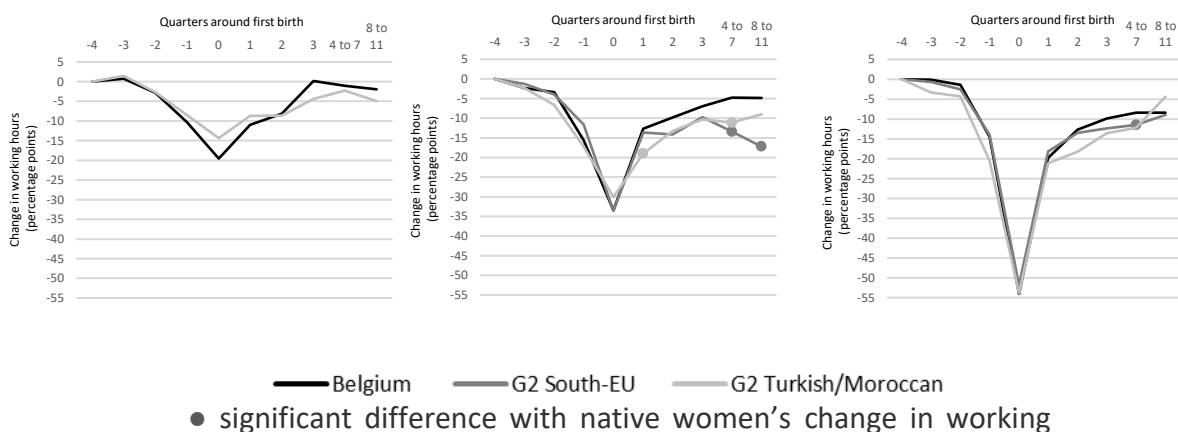


Source: BASD Panel, 1999-2010, calculations by authors.

When comparing women's employment trajectories around parenthood and distinguishing women with low, medium or high pre-birth employment opportunities, results show that migrant-native differentials in the adjustment of working hours after the birth of the first child are largely explained by the **differential pre-birth labour market attachment** of native and migrant origin women. As an indicator for women's pre-birth labour market attachment, we use estimated employment rates of women who do not (yet) have children, but otherwise have similar age and socio-economic characteristics. Estimated pre-birth employment rates offer a more representative and robust indicator of women's pre-birth labour market attachment than observed pre-birth employment positions measured at any specific time point as the latter disregard variation in employment stability, which differs between migrants and natives. Using an indicator that is robust to differential stability in pre-birth employment trajectories, we find no migrant-native differentials among women with low pre-birth employment rates and only limited differentials among women with medium and high pre-birth employment rates (Figure 14). This indicates that there is a **strong path-dependency of employment trajectories around parenthood for migrant women and natives alike**, but that **second-generation** migrant women generally have a **lower pre-birth labour market attachment** than native women which accounts for the frequently observed migrant native differentials in maternal employment.

Figure 14 Change in working hours around first birth compared to working hours one year before first birth by origin group and pre-birth employment rates

A. Women with low pre-birth employment rates* (0-0.33) B. Women with medium pre-birth employment rates (0.33-0.66) C. Women with high pre-birth employment rates (0.66-1)



* Among women with low pre-birth employment rates, G2 South-EU women are excluded from the analysis due to the small sample size (N: 10).

Source: BASD Panel, 1999-2010, calculations by authors.

Furthermore, our results indicate that **women's pre-birth wage potential also conditions changes in their working hours after the transition to parenthood**. However, migrant-native differentials in women's pre-birth wage potential appear to be less pronounced among women with similar pre-birth employment rates and additionally controlling for women's pre-birth wage potential therefore results in (almost) no change in the difference with native women's employment trajectories after the transition to parenthood. This suggests that it is mostly the differential pre-birth labour market attachment that accounts for the migrant-native gap in employment trajectories around the transition to parenthood, which may reflect the rigidity of the Belgian labour market consisting of insiders and outsiders. Finally, additionally controlling for the migration background and pre-birth employment rates and pre-birth wage potential of women's partners resulted in virtually no further change in migrant-native differentials.

A household perspective on maternal employment (Task 2.2)¹⁵

Our research on couples' gender division of paid work around the transition to parenthood indicates that the majority of **native** couples adopt an equal division of paid work, but that **gender inequality in paid work increases after the birth of the first child**. While men's work intensity remains stable, women significantly reduce their work intensity after the transition to parenthood. Comparing native couples' gender dynamics around family formation with those of couples where at least one partner is of migrant origin, this study shows that combining an account of couples' division of paid work before the onset of family formation with a perspective focusing on changes in couples' division of paid work during family formation provides a more thorough understanding of variation by migration background in couples' employment around parenthood. Combining both perspectives, we identified four patterns of gender dynamics in the division of paid work around the transition to parenthood. First, migrant origin couples whose pre-birth division of paid work as well as gender dynamics around family formation are similar to native couples (i.e., South-EU origin couples). Second, migrant origin couples where women's pre-birth relative work intensity is largely similar to native couples, but where gender inequality in paid work increases to a significantly stronger extent after first childbirth (i.e., mixed non-EU origin couples consisting of a native woman and a non-EU origin man). Third, migrant origin couples who exhibit a stronger degree of gender inequality in paid work before family formation than native couples, but no significant differences with native couples with respect to changes in the division of paid work after the transition to parenthood (i.e., mixed non-EU origin couples with a migrant origin woman as well as non-EU origin couples consisting of a first-generation woman and a second-generation man). Fourth, migrant origin couples who display a higher degree of gender inequality in paid work before first childbirth than native couples and also a significantly stronger increase in gender inequality after family formation (i.e., first and second-generation non-EU origin couples as well as intergenerational non-EU origin couples with a second-generation woman and first-generation man). Research for majority populations has - in line with micro-economic theories - identified that the **relative distribution of labour market characteristics (e.g., earnings) within couples, shapes couple-level gender dynamics in the employment-fertility link as well as the fertility-employment link**. Future research on couple dynamics in migrant households should therefore use longitudinal microdata to examine i) how women's pre-birth relative labour market characteristics within couples differ between native couples and migrant origin couples, and ii) whether and to what extent these differences can explain variation in couples' gender dynamics around family formation by migration background.

In a second study, we additionally explored the association between women's household composition – more specifically the presence and the origin of the partner and the presence

¹⁵ Maes, J., Wood, J., Marynissen, L., Neels, K. (in review) The gender division of paid work over family formation: variation by couples' migration background. *Advances in Life Course Research*.
Flechner, T. K., Neels, K., Wood, J., & Biegel, N. (2022). Exploring Women's Uptake of Active Labour Market Programmes: The Role of Household Composition Across Migrant Origin Groups. *Social Inclusion*, 10(2), 117-131.

of children - and the **uptake of occupation-specific training amongst unemployed women with varying migration origins**, differentiating between first- and second-generation migrants, and between non-migrant origin, Southern European and Turkish or Moroccan origin groups. From a comparative perspective, Belgium (Flanders) is a top-ranked OECD economy in terms of ALMP spending (OECD, 2021). At the same time, women of migrant origin are **less likely to participate** in those training programs which have been identified as the most effective in stimulating employment (Wood & Neels, 2020). Our results indicate that, even when we control for previously identified determinants of training uptake such as the human capital of unemployed women, training uptake in most groups varies significantly by household composition. More specifically, the results show that women with a partner of non-migrant origin show higher cumulative uptake of the most effective training programs than women with a migrant origin partner or single women, and that the presence of children in the household reduces women's training participation. Furthermore, household composition is found to be a stronger differentiating factor in uptake for migrant origin women than for non-migrant origin women. These results indicate that more research is required to address how partners' relative labour market positions within households shape the uptake of training and to what extent these relative positions differ between native and migrant origin households.

The uptake of work-family reconciliation policies (Task 2.3)¹⁶

With respect to Task 2.3, three papers have addressed the uptake of work-family reconciliation policies. First, we examined differences in mothers' parental leave uptake by age at first birth, partnership status, migration background and educational level. The Belgian parental leave system is strongly commodified as eligibility is strongly conditioned on stable employment. As a result, differential employment stability implies differential eligibility for uptake. Our results show that a **considerable share of mothers fail to meet the eligibility criteria** at any point during the follow-up period and that these women are therefore **structurally excluded from taking up parental leave as a result of the Belgian policy design**. The group of women who find themselves excluded from parental leave uptake consists disproportionately of very young, single, and lower educated mothers, as well as mothers with a migration background, and particularly first-generation migrants. As many people find themselves at the **intersection of disadvantaged positions** (e.g., having a first-generation migration background and being low educated), the observed gradients in eligibility for parental leave are likely to work cumulatively and lead to the structural exclusion of a group of parents that is disadvantaged in multiple respects. Furthermore, differential eligibility can account for a large part of the age and educational gradients in parental leave use, as well as

¹⁶ Marynissen, L., Wood, J., & Neels, K. (2021). Mothers and Parental Leave in Belgium: Social Inequalities in Eligibility and Uptake. *Social Inclusion*, 9(2), 325-337. [Doi.org/10.17645/si.v9i2.3834](https://doi.org/10.17645/si.v9i2.3834)

Biegel, N., Wood, J., & Neels, K. (2021). Migrant-native differentials in the uptake of (in) formal childcare in Belgium: The role of mothers' employment opportunities and care availability. *Journal of Family Research*. doi.org/10.20377/jfr-463

Maes, J., Neels, K., Biegel, N., Wood, J. (in review) Formal childcare uptake of native and second-generation parents in Belgium: does increasing local childcare availability narrow migrant-native uptake gaps? *Genus*.

differences by migration background. Differential eligibility cannot (fully) account, however, for lower parental leave use by single mothers and mothers with a Moroccan or Turkish migration background. The latter suggest that, even when eligible, leave uptake may not be practically feasible for specific groups of parents, meaning that other factors such as benefit height, flexibility in the uptake of leave schemes, workplace cultures, or other normative factors may also shape the take-up of parental leave.

In a second paper, we considered the **uptake of formal and informal childcare among native and migrant origin women**. In the Belgian context of supply shortages in formal childcare and long waiting lists, access to childcare depends on parents' employment, since priority rules frequently favor parents with stable employment trajectories and predictable demand for childcare. Our results show that migrants, and particularly **non-European migrants, were less likely to use a childcare arrangement than natives**; and that these differences extended into the second-generation. When childcare was used, migrants with a European background were, on average, more likely to use formal childcare, whereas non-European migrants were more likely to use informal care. While differences in socio-demographic characteristics, employment opportunities, the **availability of formal childcare at the local level and the availability of close kin partially explain migrant-native differentials in childcare use**, these differentials are shown to persist for specific groups even after controlling for these factors, and particularly for Turkish women. Overall, our results highlight **the precarious position of Turkish and Moroccan mothers** and indicate that formal childcare is much less accessible to parents with a lower socio-economic position and a low labour market potential.

Finally, in a third paper, we also investigated the **effect of changes in local childcare availability** in the period 2010-2014 on the uptake of formal childcare among native Belgian mothers and second-generation mothers of Southern European, Maghreb and Turkish origin. In line with the previous study, we find that second-generation migrant mothers are less likely to use formal childcare than native mothers and that the uptake gap is most pronounced among Maghreb and particularly Turkish origin mothers. Our results indicate that all origin groups are **more likely to use formal childcare at higher coverage levels**, but that the impact of a 1 percentage point increase in childcare coverage within municipalities on mothers' childcare uptake varies by migration background. For native mothers, increasing local childcare coverage has a positive effect on their childcare uptake, which is strongest at lower childcare coverage levels. The same overall pattern can be found among Maghreb origin mothers, but the positive effect is stronger compared to native mothers, thus reducing migrant-native uptake gaps at higher coverage levels. Since this is only a slightly stronger positive effect, considerable uptake gaps remain nevertheless. With respect to Turkish origin mothers, we find that increasing local childcare availability has almost no impact on their childcare uptake at low coverage levels, but that the positive effect becomes larger and stronger compared to native mothers at higher coverage levels. Hence, the uptake gap with native mothers initially increases, but becomes again smaller when childcare places become more widely available within the municipality. Further, our results show that although Southern European mothers become more likely to use formal childcare when local childcare availability increases, the uptake gap with native mothers remains unchanged since there is

no differential effect of increasing local childcare coverage. While this study is a first indication that **increasing local childcare availability can narrow uptake gaps between native mothers and second-generation Maghreb and Turkish origin mothers**, more research is required to disentangle the underlying mechanisms behind these varying effects of increasing local childcare coverage by migration background and the persisting migrant-native uptake gaps.

Having given an overview of the research results of task 2 (the family level), we now turn to the research results of task 3 (the firm level).

TASK 3 – THE FIRM LEVEL

Wage discrimination based on the country of birth: do tenure and product market competition matter (Task 3.1)?

Our estimates, while controlling for year dummies, human capital variables (i.e. education, tenure and age), gender and job characteristics (i.e. the share of fixed-term, apprenticeship and interim contracts, of part-time workers, and of blue-collar workers), firm characteristics (i.e. region, sectoral affiliation, size in full-time equivalent, and firm-level collective agreement) and added value, show that **an increase in the share of hours worked by non-EU15 workers has different impacts on mean wages depending on their region of birth**. More precisely, our results show that four out of the six subgroups of **migrant workers are paid significantly less than equally productive workers born in EU15 countries**. Wage discrimination ranges respectively between –17.5% against Asians, –12% against Eastern Europeans, –7% against Africans, and –5.9% against workers born in South Pacific. In contrast, a positive and significant wage differential is found in favor of Americans, this result being driven by Northern Americans. Furthermore, we also find that the coefficient for North-Western Asians is not significant.

Then, controlling for the average level of workers' tenure within their firms, our results estimate a wage discrimination of 6% against migrant workers (born in non-EU15 countries) with up to 4 years of tenure in comparison with all native workers. In contrast, no significant wage discrimination seems to remain against non-EU15 workers with more than 4 years of tenure, which supports that **wage discrimination vanishes with tenure**, as suggested by the statistical discrimination arguments.

For our sample of firms operating in highly competitive markets, our estimates show that the coefficient for the share of hours worked by non-EU15 workers is not statistically significant with three out of the four competition indicators used, meaning there is an absence of wage discrimination when competition is higher. But for **firms facing medium or low competition**: our results show **substantial wage discrimination** against non-EU15 workers in all models, ranging from 6% to 9% depending on the considered competition indicator.

Over-education among immigrants: the role of demographics, time and firm characteristics (Task 3.3.)

The marginal effects from our ordered probit regressions indicate that **workers born in developing countries (especially in Asia and North Africa) are much more likely to be over-educated** than their opposite numbers born in developed countries. Moreover, our results show that this gap in over-education is entirely driven by tertiary-educated workers. Put differently, it is among tertiary-educated workers from developing countries that the likelihood of being over-educated is found to be particularly critical. Gender-based differences in immigrants' penalties, in contrast, are found to be quite modest overall. The likelihood for women born in developing countries to be over-educated is indeed found to be only slightly higher than for their male counterparts.

Our results further show that **workers' years of tenure have a significant moderating effect on the probability of over-education** for immigrants born in developing countries. This moderating effect is compatible with a statistical discrimination story. In other words, it supports the hypothesis that asymmetrical information on those immigrants' true productivity diminishes as years of tenure increase. However, other explanations may probably be put forward (including taste-based discrimination or unobserved differences in terms of preferences and actual skills) as **immigrants from developing countries with 10 or more years of tenure still encounter a significant penalty**. Next, our estimates show that citizenship acquisition is also associated with a significantly improved outcome among immigrants born in developing countries. This is particularly interesting considering Belgium's relatively liberal immigration policy over the period under investigation.

Finally, regarding the role of firm characteristics, results show that workers born in developing countries are **significantly less likely to be over-educated when employed in bigger firms**. This finding appears to be consistent with arguments according to which larger firms would have more efficient HRM practices, a wider range of occupations facilitating the relocation of workers in case of educational mismatch, and more resources devoted to diversity management (Konrad and Linnehan 1995; Carrington *et al.* 2000; Lallemand *et al.* 2007). Our estimates also suggest that firm-level collective agreements are associated with significantly improved education-job matches, especially among immigrants from developing countries. This outcome supports earlier findings for the Belgian economy suggesting that stronger collective bargaining leads to better working conditions for immigrants from low-wage countries (Kampelmann and Rycx 2016; Grinza *et al.* 2020).

Wage effects of educational mismatch according to workers' origin: the role of demographics and firm characteristics

The estimates from our regressions, based respectively on the Mincer (1974), Verdugo and Verdugo (1989), and Duncan and Hoffman (1981) specifications, first highlight that the **returns to (attained, required, and over-) education are significantly higher for workers born in developed countries** than for those born in developing countries. In addition to having lower

educational credentials on average, workers from developing countries are thus also found to benefit less from their investments in education. These results can be explained, at least in part, by the problem of transferability of human capital that particularly affects people from developing countries. However, **wage discrimination** on the basis of origin is also likely to be part of the explanation, as an Oaxaca-Blinder (1973) decomposition shows that, although this issue is prevalent among both over- and adequately educated workers, it is more acute among the former.

Second, our results show that **the wage return to a year of over-education is positive but lower than that for a year of required education**. This implies that over-educated workers suffer a wage penalty compared to their well-matched former classmates (i.e. workers with the same level of education employed in jobs matching their education level). However, the magnitude of this wage penalty is found to vary considerably according to workers' origin. Indeed, all else being equal, the estimates show that the penalty is much greater for workers from developing countries, and in particular for those born in Africa or in the Middle and Near East, than for those from developed countries. Regardless of workers' origin, our estimates further indicate that the **wage penalty associated with over-education is higher for workers who: i) are tertiary educated, ii) are male, iii) have more seniority in employment, iv) are employed in smaller firms, and v) are covered by a company collective agreement**. Yet, they also show that, whatever the considered moderating variable, the wage penalty associated with over-education remains higher for workers born in developing countries.

More specifically, focusing on the role of education, we find that the over-education wage penalty is the **highest among tertiary educated workers born in developing countries**. This finding, which is in line with Kler (2007) and Chiswick and Miller (2009b), could be illustrated, for example, by the case of an immigrant from Syria who has obtained a master's degree in law in her/his home country but is not able to have it recognized in Belgium. Accordingly, she/he may be forced to apply for a low-skilled job such as builder, cleaner, or truckdriver, that is, for a job for which she/he will not be very competent, experienced, and/or motivated. This will, in turn, generate a substantial over-education wage penalty, i.e. a substantial wage gap with respect to what she/he could have earned if she/he had been well matched. This is especially true because our results also show that higher educated workers from developing countries who are able to find a job matching their education and are thus not confronted with a problem of degree recognition have almost similar returns to their degrees than higher educated workers from developed countries.

Next, regarding the moderating role of gender, our results suggest that the **over-education wage penalty is more pronounced for men than for women**, and especially for men from developing countries. Therefore, we do not support the hypothesis of a double over-education wage penalty for women from developing countries. We rather conclude that the over-education wage penalty for women from developing countries is closer to that of women from developed countries. Regarding the role of tenure, our results highlight that the loss experienced by over-educated workers, particularly those born in developing countries, compared to what they could have earned had they been well-matched, increases with the

number of years spent with their current employer. This finding, which is difficult to reconcile with the predictions of the statistical discrimination theory, most likely follows from the fact that, in Belgium, high-skilled jobs are characterized by pay scales that provide for significantly higher pay increases with seniority than lower-skilled jobs (Kampelmann *et al.*, 2018a).

Finally, regarding the role of firm characteristics, the results suggest, on the one hand, that the **wage penalty associated with over-education is higher in smaller firms**, especially for workers from developing countries. This result supports the hypothesis of less transparent and effective HRM practices in small firms, particularly in terms of evaluation, promotion, and compensation (Lallemand and Rycx 2006; Lallemand *et al.* 2007; Cornelissen and Jirahn 2012), which would reduce the returns to education in these firms and potentially foster origin-based discriminatory behaviours. On the other hand, our estimates suggest that firm-level agreements foster workers' returns to education, regardless of their origin, provided that the workers occupy jobs matching their education level. In contrast, the wage penalty associated with over-education appears to be less of an issue for unions. Indeed, our results suggest that the effects associated with origin and collective bargaining add up, so that the wage penalty associated with over-education turns out to be the highest for workers born in developing countries and covered by a firm-level collective agreement. Given that Jacobs *et al.* (2021a) found that workers' probability of being over-educated in Belgium is lower in the presence of a firm-level collective agreement, especially for immigrants born in developing countries, our results suggest that trade unions prefer prevention over cure when dealing with over-education.

Does Over-Education Raise Productivity and Wages Equally? The Moderating Role of Workers' Origin and Immigrants' Background

This paper provides first evidence of the impact of over-education, among native and immigrant workers respectively, on firm-level productivity and wages. Relying on the methodological framework pioneered by Hellerstein *et al.* (1999), we estimate ORU (over-, required, and under-education) equations aggregated at the firm level. Our results first show that a **higher incidence of over-education, among both natives and immigrants, is associated with improved firm-level productivity and wages**. However, they also indicate that these productivity gains and wage premia are significantly higher for natives than for immigrants.

Second, irrespective of workers' origin, we find that **over-education has a greater impact on firms' productivity than on wages**. Over-education is thus found to generate a positive gap between productivity and wages, so that – in view of their productivity – over-educated workers appear to be underpaid. However, our estimates show that this underpayment induced by over-education is larger for natives than for immigrants. More precisely, since the differential in productivity gains associated with over-education between natives and immigrants outweighs the corresponding wage premium differential, we conclude – based on OLS and dynamic GMM-SYS estimates – that over-educated native workers are in fact underpaid to a greater extent than their over-educated immigrant counterparts.

Our sensitivity analyses reinforce and refine this conclusion. Indeed, they first highlight the moderating role of immigrants' region of origin and generation, showing that the **underpayment of over-educated workers** is respectively: i) the **highest among natives**, somewhat lower among immigrants from developed countries, and the **lowest among immigrants from developing countries**; and ii) **higher among second-generation immigrants** than among first-generation immigrants. Through a sensitivity analysis, we also assess the role of the age of first-generation immigrants at their arrival in the host country. For those who arrived in Belgium before (or at) the age of 18, we find that the productivity gain associated with an additional year of over-education outweighs the corresponding wage differential, indicating that the underpayment hypothesis can still be validated. For those who arrived after their majority, the result is different: our estimates suggest that they are paid significantly more than their well-matched colleagues despite being equally productive. Accordingly, we conclude that they are relatively overpaid.

Our last sensitivity test, focusing on the role of tenure, is also of particular interest. It highlights that our benchmark results, according to which over-educated native workers are more underpaid than their immigrant counterparts, hold true only for low to moderate levels of tenure. Among **over-educated workers with at least 10 years of tenure, the results are reversed: the underpayment (i.e. productivity-wage gap) is found to be larger for immigrants than for natives**. The reason is that, although tenure-related productivity gains are much higher for over-educated immigrants, it is the over-education wage premium of natives that increases more rapidly with years of tenure.

Wage Differences According to Workers' Origin: The Role of Working More Upstream in GVCs

First, OLS estimates show the impact of upstreamness on wages of all workers, regardless of their origin, and depending on whether they were born in developed or developing countries, respectively. After controlling for a wide range of covariates, we find that the **regression coefficients associated with upstreamness are significantly positive**, amounting to 0.021 and 0.020 for workers born in developed and developing countries, respectively. As these coefficients are not statistically different from each other, they suggest that if a firm's upstreamness increases by one step (i.e. if a firm moves one step further away from the final consumer), wages increase by about 2% on average, regardless of the workers' origin.

Second, 2SLS estimates again show that **upstreamness has a positive and significant impact on workers' wages**. However, we now also find that the elasticity between wages and upstreamness is significantly higher for workers born in developed countries than for those born in developing countries (0.036 versus 0.029). However, endogeneity tests suggest that OLS estimates should be preferred to those obtained by 2SLS.

Next, whereas the OLS results indicate that the impact of upstreamness is not significantly different between the two populations at the mean value of wages, the UQR and CQR estimates reveal substantially larger differences according to workers' origin when considering the whole wage distribution. Indeed, for workers born in developed countries, the UQR (CQR) coefficients associated with upstreamness are found to increase by almost 100% (50%) along the wage distribution, from 0.016 (0.017) at the 25th percentile of the wage distribution to 0.031 (0.025) at the 75th percentile, these estimates being statistically different from each other. For workers born in developing countries, the pattern is much flatter: the UQR (CQR) estimates remain almost unchanged between the 25th percentile and the median, standing at around 0.014 (0.013), and then rise to 0.018 (0.017) at the 75th percentile of the wage distribution. The gap in the wage-upstreamness elasticity by origin thus increases along the wage distribution: it is small at the 25th percentile (around 22%), moderate at the median (around 41%), and much more pronounced at the 75th percentile (around 60%). In sum, our results show that the gains from upstreamness are unequally shared among workers: most of the gains are captured by workers born in developed countries, and in particular by those at the top of the wage distribution. In contrast, workers born in developing countries, regardless of their earnings, benefit much less from being employed in firms positioned higher up in the value chain.

To deepen our understanding of the role of upstreamness in explaining wage differences by workers' origin along the wage distribution, we applied an extension of the Oaxaca (1973) and Blinder (1973) decomposition, based on the methodology developed by Fortin et al. (2011). Overall, we find that **origin-based differences in wage premia associated with upstreamness explain a significant part of the wage gap** between workers born in developed and developing countries at the bottom and, even more so, at the top of the earnings distribution. As wage structure effects are often considered to reflect discrimination (i.e. factors unrelated to differences in endowments/productivity), our results suggest that the gains from upstreamness are shared unfairly, to the detriment of workers born in developing countries, especially those that are higher up in the wage distribution.

6. MAIN CONCLUSIONS AND POLICY RECOMMENDATIONS

Having presented the research results, we now turn to the question how these results can inform policy to improve the labour market situation of migrants in the Belgian labour market.

Refugees need more targeted support for durable integration into the labour market

Concerning the labour market integration of refugees, our analysis shows that refugees take significantly longer to enter the first employment spell than economic and family immigrants. Over time refugees catch up to some extent and the employment gap with other immigrants decreases. However, once refugees have built up a limited employment history, they run a greater risk of exiting their first employment spell (back) into social assistance and unemployment. Hence, **refugees face *double jeopardy* in the Belgian labour market.**

Although rapid entry into the labour market is likely of great value for refugees and other immigrant newcomers, our findings suggest that it is important **not to put too much emphasis on the *rapid* aspect of integration.** For a substantial proportion of refugees and other immigrants, entry into their first employment did not work out. Such immigrants frequently settled on precarious jobs that likely did not meet their economic or occupational aspirations and made them particularly vulnerable to economic downturns, paving the way for an early labour market exit. These findings are essential because the objective of ensuring fast labour market entry for immigrant newcomers is high on Belgium's social and political agenda. Rather than a race to a (first) job, refugees and other immigrant newcomers need ***more targeted support such as skill recognition, further upskilling and (on-the-job) training to find adequate employment and develop sustainable labour market careers.***

Policy makers should do more to support immigrant entrepreneurship

A similar gap in human capital is reflected in the weaker performance of self-employed immigrants. Our above findings suggest that human capital is a crucial factor influencing the sustainability of immigrant self-employment. Consequently, policy interventions targeted at (potential) immigrant business owners should incorporate ***human capital development by upgrading business and other skills through training, counselling, and mentoring.***

Policymakers might also encourage immigrant workers to pursue self-employment in **secondary occupation** before starting a business full-time – a strategy that many natives use successfully. By entering gradually into self-employment, workers preserve the possibility of falling back on wage employment if the business proves to be nonviable. Future studies should nevertheless evaluate the relative success of a gradual start-up strategy for immigrants in more detail, since starting a side-business requires stability in one's working career – a luxury many immigrants do not enjoy.

A critical question for policymakers, then, is to what extent they should *encourage* self-employment among immigrants. Our findings shed critical light on policymakers' eagerness to promote self-employment to enhance immigrant labour market integration. Even with (targeted) policy interventions, struggling at the margins with inadequate human and financial capital in highly competitive markets may be challenging to sustain for immigrant business owners. Focusing on the 'survivability' of immigrant self-employment may not be the most appropriate focus for policymakers, especially if wage employment is a better alternative for unemployed and newly arrived immigrants in the longer term.

In any case, policymakers must ensure that **(targeted) policies to encourage immigrant self-employment do not obscure the need for more elaborate labour market integration policies**. General policies to improve the labour market performance of immigrants, desirable in any case, will have a significant positive impact on immigrant self-employment, not least through reducing the share of immigrants who become business owners out of necessity. In this context, the policy suggestions to prioritize human capital development among immigrant business owners and encourage immigrants to enter self-employment gradually have the advantage of enhancing immigrants' wage employment opportunities, should they fail in self-employment.

The similarity between the plight of refugees and the plight of self-employed immigrants is remarkable: both groups' employment trajectories indicate that *keeping immigrants in the labour market* is a considerable challenge in Belgium. More needs to be done to provide a long-term career perspective to immigrants. Immigrants *need more targeted support to become insiders if the Belgian labour market* remains as inhospitable to outsiders as it is today.

Make Service Vouchers more inclusive for the prime target group – women at the margins of the labour market many of whom are migrant

Focussing on migrant women, our research on the Service Voucher System indicated that the system misfires to a considerable extent. Conceptualised as a scheme to integrate women at the margins of the labour market (and to support work-life balance for families already in the labour market), **the SVS scheme does less for resident migrant women (and women in general at the margins of the labour market) than it could do.**

A considerable number of SVS workers (around 43%) come from steady non-SVS jobs, which is clearly at odds with the original objective of offering a steppingstone to those condemned to a life at the margins of the labour market. It was never the intention of policy makers that people would switch from jobs yielding tax revenues and social security contributions to jobs that are heavily subsidized exactly because they cater to people with few alternative options jobwise. That raises the question whether SVS jobs are simply not too attractive. One could argue of course that a job can never be 'too good' but if the consequence is that **the prime target group is crowded out** then policy is facing a dilemma. There is certainly anecdotal evidence that SVS companies prefer to hire workers with established employment histories.

These people are simply regarded as more productive, reliable, and attuned to the rhythm and demands of formal employment.

Hence, a strong case could be made for **stricter entry criteria or lower subsidization levels**. Given the high current subsidization level it could be argued to restrict access to service jobs to those coming in from (extended) spells of unemployment or inactivity. One could even contemplate barring entry to those with advanced levels of education unless perhaps they have demonstrable difficulties obtaining a steady non-subsidized job, as in the case of immigrants. At the same time, it would make sense to provide **continuous education and (language) training to lower skilled (immigrant) SVS workers to enhance their chances for upward mobility**.

We still need labour migration - Create alternative inflow possibilities for workers

Despite the sizeable labour reserve, Belgium is currently a bottleneck economy and needs extra manpower. Even more so when we consider the considerable population ageing and huge replacement rate we face. Steunpunt Werk, for example, projected a replacement rate of workers aged 50+ to stand at about 390,000 in the Flemish region only for the period 2024-2029 (Steunpunt werk 2022).

Belgium and its regions have an established system of work permits (now called single permits) that is especially geared towards enabling high-skilled inflow. Our research shows us, however, that companies equally make use of low and medium skilled labour through posting. Even third country nationals are now being posted across the EU based on the free movement of services. Since the free movement of services is regulated at the EU supranational level, **the sovereign nation-state has lost its say on the entry of third-country posted workers**. Without any democratic debate, at the European or the Belgian level, the labour migration regime has undergone a major qualitative shift. In contrast to the official promotion of high-skilled migration in the war for talent, the actual influx has become very broad, now covering low- and medium-skilled migrant workers whom traditional labour migration systems would otherwise block. There is *a hole in fortress Europe*, and it brings in the much-needed labour of all skill levels. Moreover, it is happening beyond the control of Member States. Third-country posting is an EU sanctioned surrender of labour mobility to market forces and the demand for cheap, low-skilled labour, **implying a loss of control for host Member States on an increasingly popular but at the same time possibly precarious form of labour mobility**.

Member States were not enthusiastic about this loss of their sovereignty, some Member States imposed conditions for the influx of posted third-country nationals. However, the European Court of Justice has always annulled any barrier imposed by a Member State on third-country national posted workers. For example, in 2004, the Court of Justice ruled that Luxembourg unduly restricted the free movement of services by imposing a work permit

(Hatzopoulos, 2010, p. 46).¹⁷ Similarly, the Court of Justice ordered Germany (2006) to require third-country nationals posted workers to be employed by the service provider for at least one year before they were granted an entry and work visa.¹⁸ In 2006, the Court ruled that this was contrary to the free movement of services. It also condemned Austria (2006), which required posted workers to carry both an entry visa and an "EU posting confirmation".¹⁹

From a policy perspective, however, Member States with a high inflow of third-country nationals posted workers, such as Belgium, **could pursue an attempt to control the inflow of temporary third-country work by introducing other avenues of labour inflow**. There is a relatively successful example of this in Germany called the '*Western Balkans Regulation*', introduced in 2016. The Regulation allows a smooth labour influx of citizens from the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Emergency Macedonia and Serbia). The reason for the experiment was the asylum crisis of 2015. Germany was confronted with a large number of asylum applications from the Western Balkan countries, whose citizens had virtually no chance of asylum (after that the crisis swelled via the Balkan route with people from Syria). The debate resulted in the introduction of pathways that allow people to enter the German labour market legally, without having to take the asylum route (Bither and Ziebart 2018).

The Western Balkans Regulation was the result. The regulation, also known as section 26.2 (§26.2) of the labour law,²⁰ essentially opened up the labour market for nationals of the six Western Balkan countries, without imposing minimum skills or qualification requirements. The only two conditions are a valid job offer by an employer in Germany, and a standard labour market survey conducted for the German Public Employment Office (IAB 2020). In September 2020, Germany extended the scheme until 2023. A new quota of 25,000 people per year has been set, based on the number of people who signed up under the scheme in 2019. Employers still have to prove that they cannot find local employees for the job and that the terms of employment are of a certain minimum level (Centre for Global Development, 2021). What the regulation makes clear is that **alternative channels for temporary migration can be designed effectively**, with a focus on the needs of the labour market. The fact that the Western Balkans Regulation also works with employment contracts already concluded also makes the system dynamic and focused on concrete needs of the labour market.

Posting is diverse - Acknowledge different types of posting in EU regulations

Finally, on the subject of posting, it needs to be stressed that the different types of posting are not reflected in the (recently revised) EU regulations on posting. Due to the **perceived ubiquity of Competition posting** (low cost, flexibility, labour shortages) and its association with social dumping, the concept of posting has been reduced solely to this form of posting in

¹⁷ Zaak C-445/03 *Commissie/Luxemburg, gedetacheerde werknemers I* [2004] Jurispr. blz. I-10191

¹⁸ Zaak C-244/04, *Commissie/Duitsland*, Jurispr. 2006, blz. I-00885

¹⁹ Zaak C-168/04, *Commissie/Oostenrijk, gedetacheerde werknemers* [2006] Jurispr. blz. I-9041.

²⁰ Beschäftigungsverordnung

the perceptions of policymakers and other stakeholders. All political and legislative content of the revision of the Posted Workers Directive was introduced to control Competition posting, such as the principle of the 'same pay for the same work at the same place' and a time limitation for postings up to 12 months. However, the limitations on all postings put unjustified limits on **Expert posting and Specialisation posting**. We argue that future EU regulations should distinguish between the different types of posting by differentiating between Competition posting occurring in risk sectors such as construction and Specialisation posting (specialised high skilled services as well as services in routine tasks) and Expert posting (high skilled posting to groom high potentials for international careers and to deploy researchers across their research facilities occurring in non-risk sectors). In other words, the **EU should diversify regulations accordingly, for example, by reserving limitations on posting to the risk sectors.**

Differential employment stability is key to understanding migrant-native differentials in the impact of parenthood on women's employment trajectories

In a context of accelerated population ageing and shrinking working age populations, the successful labour market integration of migrant origin groups is gaining importance in European countries. The low labour force participation rates of women with a migration background, and particularly migrant women with children, suggests that increasing activity rates in these groups could potentially alleviate the expected shortages of labour supply in the Belgian labour market associated with accelerating population ageing, but at the same time raises questions on the interplay between family formation and women's labour force participation in migrant households. A related question is whether the design of the work-family reconciliation policies that are currently in place (e.g. parental leave systems and childcare) are effective to increase activity rates of women with a migration background, or whether these policies in contrast aggravate migrant-native differentials in female employment over the life course around family formation as a result of still being strongly commodified.

Our results indicate that the employment trajectories of migrant origin women - particularly women of Turkish or Moroccan origin – are less stable from the onset of their career than is the case among native women. **This employment instability is due to lower probabilities of entering stable employment, in tandem with higher probabilities of exiting stable employment compared to natives.** The instability of employment trajectories that already emerges before the start of family formation has in turn proven key to understand migrant-native differentials in employment trajectories around family formation: **migrant-native differentials in employment trajectories around the transition to parenthood can (largely) be traced back to women's differential pre-birth labour market attachment.** As a result, it is vital to **support the labour market entry of migrant origin women and to equalize labour market outcomes prior to childbearing to avoid a further exacerbation of differential employment outcomes after the onset of family formation.** With respect to labour market entry, our results showed that substantial migrant-native gaps remain in the probability of entering a sustainable employment spell even when controlling for individual (i.e. human

capital and previous employment experience), household (i.e. number of children and partner income) and parental characteristics (i.e. income), indicating that other factors and barriers play a role. As a result, in line with previous research, further investments in improving women's knowledge of the labour market (e.g. navigating available job opportunities and/or effective activation programs) and improving the information available to employers on women's productivity (e.g. statistical discrimination) may prove instrumental in reducing migrant-native differentials in early career outcomes (Wood & Neels, 2020).

Commodified family policies misfire for migrant origin women: differential employment stability entails differential access to work-family reconciliation policies

Our analyses indicate that a differential stability of employment trajectories also generates differential eligibility for work-family reconciliation policies. Regarding parental leave, eligibility requires continuous employment with the same employer for at least 12 months in the 15 months preceding the application. Our results show that differential stability of employment trajectories creates differential eligibility that can largely account for migrant-native gaps in parental leave uptake. As a result, relaxing eligibility criteria in terms of required employment spells prior to application could result in improved access to parental leave schemes for workers suffering employment instability. Regarding formal childcare, instable labour market trajectories make it difficult for parents to anticipate future childcare demands, while childcare agencies must guarantee minimal occupancy rates, often leading to preference for parents with stable employment trajectories and predictable demand for childcare, despite guaranteed availability of a minimum number of childcare places for minority groups. Again, our results indicate that **differential employment probabilities account for lower uptake in some origin groups and migrant generations**. In the Belgian labour market context characterized by insiders and outsiders, commodified family policies that strongly condition access to work-family reconciliation policies on stable employment create differential access for native and migrant origin women by design. Family policies that primarily support women who are firmly established in the labour market (e.g. long waiting lists, priority access for women with stable employment or schemes explicitly conditioning on the stability of pre-birth employment trajectories) perpetuate the precarious employment positions of migrant origin women by implicitly raising additional barriers to combine family formation with continued labour force participation. **These findings suggest that less restrictive or universal access to flexible and affordable family policies which minimize incompatibilities between different life domains are likely to support (migrant origin) women with a low labour market attachment to combine motherhood with spells of employment**. In this respect, limited socio-economic and migrant-native differentials in the uptake of family policies in Sweden have been related to universal access to formal childcare and parental leave (Sainsbury, 2019).

Development of evidence-based family policies requires the structural integration of longitudinal microdata spanning different life domains

The longitudinal register-based data infrastructures deployed in the IMMILAB-project illustrate the importance of being able to adopt a longitudinal and path-dependent life course perspective in research and policy development regarding labour market trajectories of migrant origin women. Considering path-dependencies in women's employment trajectories, the interdependencies with their family trajectories and subsequent interactions with the design of family policies have been shown to constitute important conditions to first understand differences between the employment trajectories of native and migrant origin women, and to subsequently allow policy development that can effectively enhance the labour force participation of migrant origin women. A **structural integration of the register-based microdata** into effective longitudinal research designs – ideally combining information on educational careers and prior labour market trajectories, enrolment in language, civic integration and active labour market programs as well as uptake of work-family reconciliation policies - is needed to continuously monitor the labour market trajectories of women with a migration background around family formation and evaluate the uptake and effects of universal work-family reconciliation policies on the labour market outcomes of women with a migration background.

Improve the quality of the match between the demand and supply of skills in the labour market

To sum up, in addition to the fact that the situation of immigrants is significantly less enviable than that of natives in terms of access to employment (Piton and Rycx 2021), when employed, our estimates show that **they are also more likely to be over-educated than their native counterparts** (Task 3.3). Moreover, once over-educated, immigrants are found to face a **higher wage penalty** than their native counterparts, when compared to workers with the same level of education in jobs that match their education, and to perceive a lower wage premium, when comparing to workers with the same jobs matching their education (Task 3.2). These results can be explained, at least in part, by the problem of transferability of human capital, especially when the host and home country contexts differ significantly, and/or by potential discrimination against them. Moreover, when we analyse the productivity-wage gap associated with over-education, our results show that tenure plays a crucial role in determining which of the two groups of over-educated workers – natives or immigrants – is the most underpaid (in comparison to well-matched workers doing the same jobs). During the first years of their employment in a company, **over-educated natives turn out to be more underpaid than their immigrant counterparts. However, the result is gradually reversed as tenure increases:** i) the productivity gains are greater for over-educated immigrants, and ii) the wage increases are more pronounced for over-educated natives. Among workers having at least 10 years of tenure, over-educated immigrants are indeed found to be more underpaid than their native counterparts. Task 3.4 therefore provides an understanding of the actual underpayment of over-educated workers – in light of their productivity – with respect to their well-matched colleagues doing the same job.

Next, our results show that, despite Belgian anti-discrimination legislation, a **substantial part of the observed wage gaps between native and foreign-born workers can be explained by discrimination** (Task 3.1). We also find that the extent of wage discrimination differs significantly by worker origin and decreases both with increasing seniority and when product market competition is encouraged. These results are consistent with taste-based discrimination but also with statistical/monopsonistic discrimination theories. Our estimates (Task 3.5) further suggest that the rents generated by more upstream firms are unfairly distributed between workers born in developed and developing countries, especially at the top of the earnings' distribution. In other words, it seems that the unexplained part of the origin-based wage gap associated with upstreamness reflects, at least partly, non-productive factors. This could be related to the power and authority associated with certain higher-level occupations, which are more likely to be held by high-wage workers born in developed countries (Cattaneo et al., 2015). A complementary interpretation is that, for a given occupation, workers born in developing countries are less likely to engage in wage negotiations with their employers (Tomaskovic-Devey et al., 2015) or to leave firms with unfavourable wage practices due to their poorer knowledge of the labour market (Hirsch & Jahn, 2015). Ethnic segregation and/or discrimination in performance-related pay might also be part of the explanation (Fang & Heywood, 2010). Interestingly, these arguments echo the estimates of Task 3.1, showing that workers born in developing countries generate rents in the Belgian private sector and that these rents derive from the fact that these workers earn less than those born in developed countries at any given level of productivity.

In light of these results, several recommendations can be formulated. First, **policy makers should take steps to improve the quality of the match between the demand and supply of skills in the labour market**. This would reduce the overall native-immigrant wage gap, as suggested in the literature (Chiswick and Miller 2008, 2010a; Nielsen 2011; Joona et al. 2014; Schwientek 2016; Jacobs et al. 2021b). It would also avoid reductions in job satisfaction resulting from over-investment in education and thus prevent increased turnover in firms (e.g. Tsang et al. 1991; Hersch 1991). By enabling a better match between workers' level of education and jobs' educational requirements, we could also improve the overall productivity of the economy and the well-being of individuals.

Accelerate the procedures for recognition of diplomas

To improve the quality of the match between labour supply and demand, policy makers should **try to reduce the problems of information asymmetry**. In this respect, significant efforts should be made **to accelerate the current procedures for the recognition of diplomas and certificates obtained by immigrants in their home countries**. As pointed out by the OECD (2017b), part of the strategy to achieve this goal includes the right for all immigrants to have their qualifications (including their prior labour market experience) assessed rapidly by an official authority, ideally prior to their arrival in the host country. Fast recognition procedures are beneficial for employers who may want to fill shortages (e.g. bottleneck vacancies) quickly. They are also appreciated by immigrants because these procedures are likely to improve employers' information about their true human capital and productive capacity, which in turn

should reduce statistical discrimination, and hence wage discrimination, especially at the beginning of foreign-born workers' career in the host country. In addition, through the recognition of their qualifications, immigrants should be able to increase the return on their investments in education by deploying their skill potential, i.e. by finding jobs better suited to their skills.

To reduce asymmetric information, **immigrants' knowledge of the host country's labour market characteristics probably also needs to be improved**, especially regarding the typical educational requirements for different types of jobs and the associated minimum working conditions. To compensate, at least in part, for the fact that their networks are generally less effective than those of the native-born, **immigrants should also be better informed about (i) all possible job opportunities that match their skills and (ii) vocational training programs, notably offered by public employment services, that could improve their occupational mobility**. One additional way to decrease asymmetric information is to implement new wage transparency policies (for more details see e.g. OECD 2021). These procedures are likely to improve workers' information and bargaining power, which should reduce monopsonistic discrimination leading to over-education and wage discrimination.

Policymakers could also work to improve the match between the supply of and demand for skills in the labour market by ensuring that public employment services facilitate the matching of employers and job seekers. As shown in Task 3.3, firm size and collective agreements are associated with improved job matches. On the one hand, larger firms generally have a broader range of occupations and tend to have more transparent and efficient human resource management practices, so that matching workers' educational attainments with job educational requirements should be easier at the time of recruitment. On the other hand, with the presence of firm level collective agreements, trade unions present themselves as advocates of fair working conditions for vulnerable groups, also having a positive impact on job matching. This could be all the more relevant at the national level as public employment services have a wider range of occupations than (large) firms and benefit from a centralized screening of workers' education and skills. In addition, policy makers should encourage public employment services to protect the rights of (more vulnerable) workers in the hiring process, which should improve their working conditions and thus their matching in jobs corresponding to their skills.

Improve educational opportunities of students with a migrant background in Belgium

Another policy implication arising from our results (see Task 3.4) is that **students, especially those with a migrant background, do not enjoy equal educational opportunities in Belgium**. Given that second-generation immigrants are born, educated, and socialized in the host country, it is not surprising to find that the return to their years of over-education (in terms of productivity) is closer to that of natives. However, the fact that second-generation immigrants are still far from closing the gap with natives is, however, striking and can be understood notably in light of the study Danhier and Jacobs (2017), who point out, based on the PISA survey, that the **level of equity in terms of origin in the Belgian school system is one of the**

lowest among industrialised countries. To address these problems, the **promotion of diversity in each school should be strengthened.** Indeed, the Belgian educational system is characterized by large differences in the level of education between schools, which are strongly linked to the social origin of the children (and their parents). Diversity would equalize the level of education in each school but also increase the knowledge of other cultures, thus decreasing statistical and/or taste-based discrimination. Furthermore, in order to fight against inequalities, **children and/or young people in difficulty should be better supported individually, through a more personalized and accessible system of assistance for success, rather than being directly redirected to lower quality schools and/or technical or vocational schools.**

Make employment protection legislation more flexible

Additionally, **employment protection legislation should probably be made more flexible.** Indeed, strict labour market regulations can make it difficult for employers to rotate staff to address job mismatches. In addition, we observe that over-educated workers are underpaid in light of their productivity, and that this underpayment increases significantly for immigrants as the length of their employment relationship within a firm increases. This may be the result, **in addition to taste-based discrimination, of strong wage rigidities,** which prevent wages from automatically adjusting to their higher productivity. This result is compatible with the theoretical arguments supporting the existence of a “wage compression effect” (Cardoso 2010; Kampelmann et al. 2018), i.e. a situation in which the distribution of wages by level of (required and over-) education is more compressed than the corresponding education-productivity profile. More precisely, these results are in line with the literature on social norms and the hysteresis of the wage structure, fairness theories, and especially arguments that labour market regulations, such as minimum wages and collective bargaining, reduce wage inequalities by pushing the earnings of low-educated workers upward and capping wage increases for more highly (over-) educated workers (Cahuc and Zylberberg 2014; Kampelmann et al. 2020).

Fight stereotypes to help reduce wage discrimination

Policies fighting stereotypes and asymmetrical information are also likely to be helpful in reducing wage discrimination against migrants. Our results, documenting the moderating role of workers’ years of tenure, suggest indeed that **statistical/monopsonistic discrimination contribute significantly to explaining why immigrants earn less than natives at any given level of productivity.** Moreover, consistent with the prediction of Becker's (1964) taste-based discrimination model, our results suggest that policies fostering product market competition might also be efficient in reducing wage discrimination against immigrants.

Ultimately, our results – notably by quantile and along global value chains - show that a substantial part of observed wage differentials between EU-15 and non-EU15 workers remains unexplained after controlling for differences in productivity, and that the magnitude of wage discrimination against migrants heavily depends upon their countries of birth. These

unexplained differences might result from various factors, such as social capital, preferences and discrimination. Various initiatives have been recently taken by the Belgian authorities to strengthen the fight against discrimination based on place of birth. For instance, the law of January 2018, inserted in the Belgian Criminal Code, enables social inspectors to rely on anonymous test methods, including “mystery calls” and fake CVs, to establish whether employers are in breach of anti-discriminatory policy. At the same time, there have been some initiatives to help employers address the challenges of workforce diversity. Brussels’ Public Employment Service (Actiris), for instance, offers free assistance for recruitment and human resource management to companies willing to increase the diversity of their workforce in the capital region. While all these initiatives certainly indicate that combating discrimination against ethnic minorities is a priority in Belgium and that concrete steps are being taken, the effectiveness of these measures (and the potential need to develop new ones) remains to be investigated in future research.

7. DISSEMINATION AND VALORISATION

The topic of the labour market integration of people with a migration background has not only received considerable attention in academia, but it has also been the subject of fierce policy debates. The aim of the IMMILAB project was therefore to carry out analyses which are also able to better inform public actors. Throughout the project duration we have shared our findings among both academic and policy circles as well as the wider public. We have attended and presented on numerous academic national and international conferences, workshops, seminars, etc. We have also organised two events ourselves in the framework of the project, which were open to all interested persons: a mid-term workshop in October 2018 and a final conference in June 2022. Based on their work carried out for the IMMILAB project four persons were able to complete their PhD: Dries Lens and Julie Maes at the University of Antwerp (2022), Valentine Jacobs (2022) at the ULB and Valentine Fays at the University of Mons. As the list below shows the results of our project have also been published in many renowned peer-reviewed journals as well as publications to the wider public. Our work was also presented in numerous conferences

8. PRESENTATION AT CONFERENCES

Dries Lens - 6-7 April 2018, poster session 'How do refugees integrate into the Belgian labour market?', in International Conference on Demographics, Immigration, and the Labour Market, Centre for European Economic Research ZEW, Nurnberg.

Dries Lens - 25-27 June 2018, paper presentation 'Is quick formal access to the labour market enough? Refugees' labour market integration in Belgium.', Conference, European Society for Population Economics, University of Antwerp, ESPE, (forthcoming)

Dries Lens - 3-4 July 2018, 'Last in, first out? Employment dynamics of first- and second-generation immigrants in Belgium.', PhD workshop Migration & Integration, Hertie School of Governance, Berlin, (forthcoming)

Dries Lens - 5-6 July 2018, 'How posting shapes a hybrid single European labour market', Workshop Migration and Refugees from a Global Labour Market Perspective, Centre for Interdisciplinary Research, Bielefeld University.

Mussche Ninke - 6 April 2018, 'The CJEU's construction of an EU mobility regime - How posting of Third Country Nationals surpasses national labour migration', presentation on the CEMIS closing Conference – University of Antwerp - "Migration at Work: Opportunities, Imaginaries & Structures of Mobility".

Jarmila Oslejová - 19 April 2018, 'Labour market trajectories of immigrants in Belgium', International Franqui Chair - Class of Excellence – University of Antwerp.

Jacobs V. - 12/2018: La 3ème journée de la recherche 2018 de la Fédération Wallonie Bruxelles, "La suréducation selon le pays de naissance des travailleurs : le rôle de l'éducation, du genre, de l'ancienneté et de la naturalisation", Brussels, Belgium.

Wood J. - 25-27/06/2018: European Society for Population Economics Conference, *Entry into a sustainable employment spell for intermediate and second-generation Turkish and Maghreb women in Belgium*, Antwerp.

Maes J. - 26-28/06/2018: The Migration Conference, *The transition into a first spell of sustainable employment for intermediate and second-generation Turkish and Moroccan women in Belgium*, Lisbon.

Maes J. - 10-12/09/2018: BSPS 2018, *Entry into a sustainable employment spell for intermediate and second-generation Turkish and Maghreb women in Belgium*, Winchester.

Maes J. – 28/11/2018: Dutch Demography Day 2018, *The motherhood-employment link for native and migrant origin women*, Utrecht.

Fays V. – 12/2018: La 3ème journée de la recherche 2018 de la Fédération Wallonie Bruxelles, “Discrimination salariale envers les migrants - De l'importance du pays de naissance et de la concurrence sur le marché des produits”, Brussels, Belgium.

Jacobs V. – 12/2018: Joint PhD Day VUB-ULB (Fac. SBS-EM), Université Libre de Bruxelles, “Over-education according to workers’ country of birth: The Role of education, gender, tenure and naturalisation”, Brussels, Belgium.

Dries Lens, w/ Ninke Mussche and Ive Marx - 28-30 August 2019, paper presentation ‘Double jeopardy: How refugees fare in one European labour market?’ at: SIRIUS Conference ‘Integrating migrants, refugees and asylum seekers into European labour markets: enablers and barriers’, Glasgow

Dries Lens - 27-29 June 2019, paper presentation ‘Pushed or pulled out? Survival dynamics of self-employed immigrants and natives in Belgium’ at: Conference of the Society for the Advancement of Socio-Economics (SASE), New York City

Ive Marx, Dries Lens, Ninke Mussche, 7 October 2019, presentation for Federation of Belgian Enterprises, Title: Werkgeversmotieven voor het gebruik van posting, Organisation: VBO-FBE

Ive Marx & Dries Lens, 6 February 2020, presentation for Forum Expatriate Management, Title: Werkgeversmotieven voor het gebruik van posting, Organisation: FEM

Dries Lens, 28-31/08/19, SIRIUS conference Integrating migrants, refugees and asylum seekers into European labour markets: enablers and barriers, Title : Double jeopardy: How refugees fare in the Belgian labour market , Organisation: GCU, Glasgow, UK

Jarmila Oslejova, 10/2/2020, CSB lunch seminar, Title : Citizenship premium for immigrant employment: comparison across two citizenship regimes in Belgium, University of Antwerp

Dries Lens, 27-29/06/19, SASE conference, Title: Pushed or pulled out? Survival dynamics of selfemployed immigrants and natives in Belgium, in: The New School, New York, US

Jarmila Oslejova, 5-7/9/2019, ESPAnet conference 2019: Social Citizenship, Migration and Conflict - Equality and opportunity in European welfare states, Title : Citizenship premium for immigrant employment: comparison across two citizenship regimes in Belgium, Organisation: Stockholm University, Stockholm, SE

Dries Lens, 25/02/20, UCSIA studiedag: Van migratie naar arbeidsmarktintegratie, Title: Arbeidsmarkttransities van immigranten in België, Organisation: UCSIA, Antwerp, Belgium

Jarmila Oslejova, 28-31/08/19, SIRIUS conference Integrating migrants, refugees and asylum seekers into European labour markets: enablers and barriers, Title : Citizenship premium for immigrant employment: comparison across two citizenship regimes in Belgium, Organisation: GCU, Glasgow, UK

Dries Lens, 21-22/06/19, Global Labour Migration Network conference, Title: Europe's Ever Expanding Mobility Patterns Posting, Third-Country Nationals And The Single European Labour Market, Organisation: International Institute of Social History, Amsterdam, the Netherlands

Dries Lens, 21/11/19, 23e Congrès des économistes, The many faces of economic migration: posting and labour migration compared, Organisation: CEME, Charleroi, Belgium

Jarmila Oslejova, 10-11/06/2019, YEM Young Economists' meeting 2019, Title : Employment and wage returns to citizenship for immigrants across two naturalization regimes in Belgium Organisation: Masaryk University, Brno, CZ

Dries Lens, 05/03/20, Workshop Posting of workers: Where are we now and where are we heading? Title: Diversifying origins of posting & motives for the use of posting, Law faculty KUL, Leuven, Belgium

Dries Lens, w/ Ninke Mussche and Ive Marx, paper presentation 'Europe's ever expanding mobility patterns – posting, third-country nationals and the single European labour market' at:

- Dulbea Workshop on Migration and the Labour Market, Brussels, 5 April 2019
- Global Labour Migration Network conference, Amsterdam, 20-22 June 2019
- Congrès des économistes (Demain, quel marché du travail?), Charleroi, 21 November 2019

Jarmila Oslejova & Gerlinde Verbist, paper presentation 'Employment and Wage Returns to Citizenship for Immigrants Across Two Naturalization Regimes in Belgium' at:

- Young economists' meeting, Brno (CZ), 10-11 June 2019
- SIRIUS Conference 'Integrating migrants, refugees and asylum seekers into European labour markets: enablers and barriers', Glasgow, 28-30 August 2019
- ESPANET Conference 'Social Citizenship, Migration and Conflict - Equality and opportunity in European welfare states,' Stockholm, 5-7 September 2019

Fays V. – 03/2019: Seizième journée de collaboration scientifique entre les écoles doctorales en gestion de l'Université Paris I-Panthéon-Sorbonne et de l'Université Libre de Bruxelles, "*Wage discrimination against migrants: how much do country of birth, tenure and product market competition matter?*", Paris, France.

Jacobs V. – 04/2019: DULBEA workshop on ‘Migration and the Labour Market’, Université Libre de Bruxelles, “*The Heterogeneous Effects of Workers’ Countries of Birth on Over-education*”, Brussels, Belgium.

Jacobs V. – 05/2019 - 16th Belgian Day for Labour Economists, Maastricht University, “*The Heterogeneous Effects of Workers’ Countries of Birth on Over-education*”, Maastricht, the Netherlands.

Fays V. – 09/2019: 31st Conference of the European Association of Labour Economists, “*Wage discrimination based on the Country of Birth: Do tenure and product market competition matter?*”, Brussels, Belgium.

Jacobs V. – 10/2019: Mid-term conference on Improving the Labour Market Position of People with a Migration background in Belgium, SERV, “*The Heterogeneous Effects of Workers’ Countries of Birth on Over-education*”, Brussels, Belgium.

Fays V. – 10/2019: Mid-term conference on Improving the Labour Market Position of People with a Migration background in Belgium, SERV, “*Wage Discrimination Based on the Country of Birth: Do tenure and product market competition matter?*”, Brussels, Belgium.

Jacobs V. 11/2019: Data4Research, SPF Economie, “*The Heterogeneous Effects of Workers’ Countries of Birth on Over-education*”, Brussels, Belgium.

Jacobs V. & Fays V. – 11/2019 : Le 23^e congrès des économistes – Quel est l’avenir du marché du travail ? “*Migration, Discrimination Salariale et Sur-éducation : l’impact de l’hétérogénéité des travailleurs*”, Charleroi, Belgium.

Maes J. – 16-17/05/2019: - Conference on ‘children in migrant or ethnic minorities: demographic and social processes in a comparative perspective’, *The motherhood-employment link for native and migrant origin women*, Max Planck Institute, Rostock.

Maes J. – 9-11/09/2019: BSPS 2019, *The gendered division of paid labour around parenthood among native and migrant origin couples*, Cardiff.

Biegel N. – 9-11/09/2019: BSPS 2019, *Migrant-native differentials in the uptake of childcare arrangements in Belgium – availability of informal and formal childcare provisions (poster)*, Cardiff.

Maes J. – 10/10/2019: Mid-term conference on Improving the Labour Market Position of People with a Migration background in Belgium, SERV, *Werk-gezinstrajecten: een vergelijking van vrouwen met en zonder migratieachtergrond in België*, Brussels.

Fays V. – 01/2020 : EconWorld2020@Porto Conference, “Wage discrimination against migrants: how much do country of birth, tenure and product market competition matter”, Porto, Portugal.

Fays V. – 01/2022 : LERA@ASSA 2022, “Wage Differences According to Workers' Origin: The Role of Working More Upstream in GVCs”, on-line.

Maes J. – 15-16/09/2020: BPS 2020, *The gender division of paid work over the transition to parenthood: variation by couples' migration background*, online.

Maes J. – 2/11/2021: NIDI Brown Bag Seminar, *Formal childcare uptake of native and second-generation parents in Belgium: do local childcare expansions narrow migrant-native uptake gaps*, online.

Maes J. – 24/11/2021: Dutch Demography Day 2021, *Formal childcare uptake of native and second-generation parents in Belgium: do local childcare expansions narrow migrant-native uptake gaps*, online.

Maes J. – 14-15/3/2022: MigrantLife Symposium, *A multistate life course perspective on migrants' labour market trajectories*, online.

Maes J. – 29/6-2/7/2022: EPC 2022, *Formal childcare uptake of native and second-generation parents in Belgium: do local childcare expansions narrow migrant-native uptake gaps*, Groningen.

Flechner T. K. – 29/6-2/7/2022: EPC 2022, *Household characteristics and ALMP uptake in Belgium*, Groningen.

9. PUBLICATIONS

9.1 PEER-REVIEWED PUBLICATIONS

Biegel, N., Wood, J., & Neels, K. (2021). Migrant-native differentials in the uptake of (in) formal childcare in Belgium: The role of mothers' employment opportunities and care availability. *Journal of Family Research*. doi.org/10.20377/jfr-463

Flechner, T. K., Neels, K., Wood, J., & Biegel, N. (2022). Exploring Women's Uptake of Active Labour Market Programmes: The Role of Household Composition Across Migrant Origin Groups. *Social Inclusion*, 10(2), 117-131.

Fays, V., B. Mahy, F. Rycx, and M. Volral. 2021. "Wage discrimination based on the country of birth: do tenure and product market competition matter?" *Applied Economics* 53 (13): 1551-1571.

Jacobs, V., B. Mahy, F. Rycx, and M. Volral. 2021. "Over-education among immigrants: the role of demographics, time and firm characteristics", *Applied Economics* 53 (1): 61-78.

Lens, D., Marx, I. & Vujić, S. (2019). Double jeopardy: How refugees fare in one European labour market. *IZA Journal of Development and Migration*, 10(1).

Lens, D. & Oslejšová, J. (2018). Arbeidsmarkt-transities van immigranten in België. *Tijdschrift voor Arbeidvraagstukken*, 34/4

Lens, D. Pushed in, pushed out? Self-employment transitions of first- and second-generation immigrants. *International Migration Review*, forthcoming.

Lens, D., Mussche, N., & Marx, I. (2021). The different faces of international posting: Why do companies use posting of workers?. *European Journal of Industrial Relations*.

Lens, D., Marx, I., Oslejšová, J. and Mussche N. (2022), Nice work if you can get it. Labour market pathways of Belgian Service Voucher Workers, *Journal of European Social Policy*, minor revision

Maes J., Wood J., Neels K. (2019) Early labour market trajectories of intermediate and second-generation Turkish and Maghreb women in Belgium, *Research in Social Stratification & Mobility*, 61(2019), 65-78. Doi.org/10.1016/j.rssm.2018.11.001.

Maes, J., Wood, J., & Neels, K. (2021). Path-Dependencies in Employment Trajectories Around Motherhood: Comparing Native Versus Second-Generation Migrant Women in Belgium. *Journal of International Migration and Integration*, 1-64. Doi.org/10.1007/s12134-020-00801-1.

Maes, J., Wood, J., Marynissen, L., Neels, K. (in review) The gender division of paid work over family formation: variation by couples' migration background. *Advances in Life Course Research*.

Maes, J., Neels, K., Biegel, N., Wood, J. (in review) Formal childcare uptake of native and second-generation parents in Belgium: does increasing local childcare availability narrow migrant-native uptake gaps? *Genus*.

Marynissen, L., Wood, J., & Neels, K. (2021). Mothers and Parental Leave in Belgium: Social Inequalities in Eligibility and Uptake. *Social Inclusion*, 9(2), 325-337. [Doi.org/10.17645/si.v9i2.3834](https://doi.org/10.17645/si.v9i2.3834)

Mussche, N. & Lens, D. (2019) The CJEU's Construction of an EU Mobility Regime - Judicialization and the Posting of Third-Country Nationals. *Journal of Common Market Studies*, 56(7).

Lens, D., Mussche, N., & Marx, I. (2021). A hole in the wall of fortress Europe: The trans-European posting of third-country labour migrants. *International Migration*. doi.org/10.1111/imig.12867

Lens, D., Mussche, N. & Marx, I. (2020). De vele gezichten van nieuwe arbeidsmigratie - Detachering en derdelanders. *Tijdschrift voor Arbeidsvraagstukken*, 36/2.

9.2 OTHER ACADEMIC PUBLICATIONS

Jacobs, V., F. Rycx, and M. Volral. 2021. "Does Over-Education Raise Productivity and Wages Equally? The Moderating Role of Workers' Origin and Immigrants' Background ." IZA Discussion Paper, No. 15074, Bonn.

Lens, D., Marx, I. & Vujić, S. (2018), Does Migration Motive Matter for Migrants' Employment Outcomes? The Case of Belgium. In: Timmerman, C. et al. (eds) *Migration and Integration in Flanders: Multidisciplinary Perspectives*, 2: 245.

9.3 WORKING PAPERS

Fays, V., B. Mahy, and F. Rycx. 2021. "Wage Differences According to Workers' Origin: The Role of Working More Upstream in GVCs". IZA Discussion Paper, No. 14696, Bonn.

Jacobs, V., F. Rycx, and M. Volral. 2021. "Wage Effects of Educational Mismatch According To Workers' Origin: The Role of Demographics and Firm Characteristics." IZA Discussion Paper, No. 14813, Bonn.

Lens, D., Marx, I., Oslejová, J. and Mussche, N., Can we steer clear of precariousness in domestic service work? Exploring labour market pathways of Belgian Service Voucher workers, Antwerp, Herman Deleeck Centre for Social Policy, University of Antwerp, 2021,38 p.

9.4 PHD THESES

Valetine Jacobs, 2022. "Essays on the determinants and consequences of over-education according to workers' origin", jointly supervised (co-tutelle) by F. Rycx (ULB) and M. Volral (UMONS) at ULB and the University of Mons, Belgium. Other members of the jury: B. Mahy (UMONS), I. Tojerow (ULB), D. Verhaest (KU Leuven) and G. Vermeylen (UMONS). PhD awarded on February 21, 2022.

Valentine Fays, 2023. "Essays in Labour Economics and Migration", jointly supervised (co-tutelle) by B. Mahy (UMONS) and F. Rycx (ULB) at ULB and the University of Mons, Belgium. Defense scheduled in 2023.

Dries Lens , 2022 "Is labour migration hurting migrant labour? - Empirical investigations for the case of Belgium.", supervised by Ive Marx (University of Antwerp), Defence 12 May 2022

Julie Maes. Work-Family Trajectories of Native versus Migrant Origin Women, supervised by Karel Neels and Jonas Wood (University of Antwerp), Defense scheduled in September/October 2022

1 doctoral thesis in progress:

Pineda-Hernandez, P. 2025. "Essays in Labour Economics and Migration", jointly supervised (co-tutelle) by F. Rycx (ULB) and M. Volral (UMONS) at ULB and the University of Mons, Belgium. Defense scheduled in 2025.

PhDs partially involved in the Immilab project (specific deliverables):

Naomi Biegel. Childcare arrangements: the determinants of (in)formal childcare supply and demand, supervised by Karel Neels (University of Antwerp), Defense scheduled in September/October 2022

Tair Kasztan Flechner. Uptake and effectiveness of ALMP training programmes among first and second-generation migrants in Belgium, supervised by Karel Neels and Jonas Wood (University of Antwerp), Defense scheduled in 2023

9.5 PUBLICATIONS TO THE GENERAL PUBLIC

Fays V., V. Jacobs, B. Mahy, F. Rycx and M. Volral. 2019. "Migration, discrimination salariale et sur-éducation: l'impact de l'hétérogénéité des travailleurs." Actes du 23e Congrès des économistes belges de langue française.

Fays V., V. Jacobs, B. Mahy, F. Rycx and M. Volral. 2020. "Migration, discrimination salariale et sur-éducation: l'impact de l'hétérogénéité des travailleurs." *Dynamiques régionales* (9): 57-72.

Fays V., B. Mahy and F. Rycx. 2020. "Upstreamness, Wages and Workers' Origin: A Review of the Literature." *Reflets et Perspectives de la vie économique* LVIII (2-3): 105-114.

Lens, D., Marx, I. & Mussche, N. (2021) De effecten van de COVID-19 pandemie op arbeidsmigratie en –mobiliteit, *CSB Bericht* 21/03.

Lens, D., Marx, I. & Mussche, N. (2020) De initiële effecten van de COVID-19 pandemie op de Belgische arbeidsmarkt - opkomende ongelijkheden, *CSB Bericht* 20/07

Mussche, N., Lens D. & Marx I. (2020) Arbeidsmigratie en –mobiliteit in België. Diverse stromen en uitdagingen, *CSB Bericht* 20/01.

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Biegel, N., Wood, J., and Neels, K. (2021) "Migrant-native differentials in the uptake of (in) formal childcare in Belgium: The role of mothers' employment opportunities and care availability." *Journal of Family Research*.

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