

# The economic impact of immigration in Belgium

## Executive summary

Arnout Baeyens

David Cornille

Philippe Delhez

Céline Piton

Luc Van Meensel

In April 2018, the National Bank of Belgium (NBB) was asked by the then Minister of Finance Johan Van Overtveldt to analyse the economic impact of immigration in Belgium to substantiate debate on this issue. In order to provide a robust and complete analysis of the impact on public finances and the integration of immigrants in the labour market, the NBB relies on data from the Crossroads Bank for Social Security (CBSS) which includes all individuals present in the National Register over the period 2009-2016<sup>1</sup> and provides information on their characteristics by category (country of birth, country of birth of the parents, age, gender, level of education, Region of residence and type of household) as well as their activity status (in employment, etc), the transfers they receive from the government and their revenues from work. We know factors specific to immigrants, such as their channel of migration, their nationality and the number of years of residence.

**The aim of this report is to provide an overview of the economic impact of immigration in Belgium, distinguishing between first- and second-generation immigrants as well as between immigrants of EU<sup>2</sup> or non-EU origin.** Three distinct parts will be devoted to the analysis. The first one provides an overview of net transfers to the government depending on people's origin. The second part studies the labour market integration of immigrants and tries to explain Belgium's performance in that respect. The third and final part defines a general equilibrium model built to evaluate the aggregate economic impact of recent immigration inflows in Belgium.

Although the focus of this study is economic, any broad assessment of migration should also take into account other considerations such as human rights and international law, in particular with regard to protection for and reception of refugees.

People's origin is defined on the basis of country of birth rather than on nationality, as long-residing immigrants (as well as their parents) may have adopted Belgian nationality.

All individuals born outside Belgium are defined as "first-generation immigrants". A further distinction can be made between individuals born in another EU country and those born outside the EU.

For individuals born in Belgium a further distinction is made based on the country of birth of their parents. When both parents are born in Belgium, the individual is defined as "native". If one or both parents are born outside Belgium, the individual is assigned to the "second generation" category. The second generation can further be distinguished between EU and non-EU origins. Following the literature, the country of birth of the father is the first to be investigated to define the origin of an individual. If the origin of the father is unknown or if the father was born in Belgium, the origin of the mother is considered.

1 Given the access procedures and time needed by the CBSS to collect data, the last available year that we could obtain was 2016. This database includes all individuals present in the National Register, so immigrants without residence permits, asylum seekers, posted workers, temporary or seasonal immigrants are excluded from the analysis.

2 What we consider as EU throughout the report is EU28, before Brexit.

According to the variable described above, **69.8 % of the whole Belgian population in 2016 are identified as natives, 16.5 % as first-generation immigrants, and 13.7 % as the second generation.** The distinction between EU and non-EU immigrants is more or less evenly dispersed both among first and second generation, with a slightly higher share of non-EU immigrants (53.1 % for first generation and 52.3 % for second generation). Breaking down first-generation immigrants into more detailed groups of origin, the most represented immigrants are those born in an EU14 country (i.e. EU15 excluding Belgium) (36 %), followed by individuals born in the Maghreb (14 %), in Sub-Saharan Africa (12 %), in EU13 (new Member States) (11 %), Other European countries, EU candidate countries (including Turkey) and the Near and Middle East (6 % each), Latin America, Other Asian countries and Oceania and the Far East (3 % each). Finally, the least represented are people born in North America (1 %).

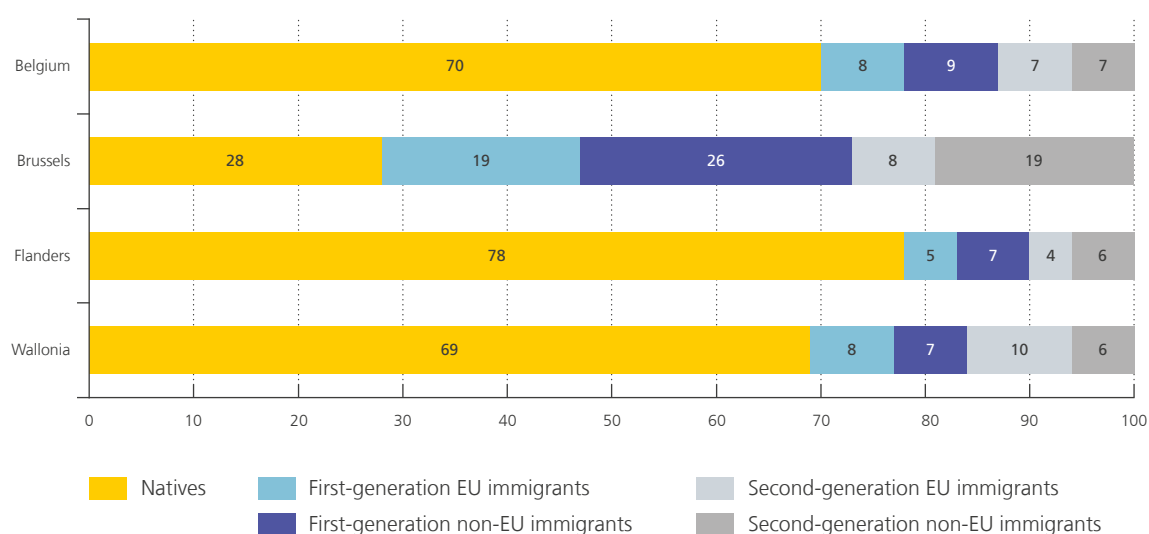
**There is considerable heterogeneity across the Belgian Regions.** Individuals with a migration background make up a much larger share of the population in Brussels (71.8 % of whom 6 out of 10 are first-generation immigrants) than in Wallonia (31.1 %, of whom a bit more than 5 out of 10 are first-generation immigrants) and Flanders (22.1 %, with 55 % from the first generation). Moreover, people living in Brussels have more often a non-EU origin and this is particularly true for the second generation (72 % of non-EU among the second generation). The reverse is true in Wallonia with a majority of EU immigrants: 55 % of the first generation and 63 % of the second generation. Flanders has an in-between position with 44 % immigrants originating from the EU and 56 % with a non-EU origin.

Comparing the age distributions of origin groups, 75 % of first-generation immigrants are of working age (20 to 64 years old), while this proportion is 57 % for natives and 50 % for the second-generation. The native population is more often at retirement age (22 %, against 13 % for first-generation immigrants and only 4 % for the second-generation), where second-generation immigrants are mainly younger than 20 years old (46 %, against 21 % for natives and 12 % for first-generation immigrants). This breakdown, together with differences in employment rates presented in Part II, will have a significant influence in the public finance analysis.

### Chart 1

#### Breakdown of the population by origin and by Region of residence

(in % of the total population, 2016)



Source: CBSS Datawarehouse.

## Part I: Immigration and public finances

How to accurately measure the impact of migration on public finances has been the subject of several research projects in recent years. There is no simple answer to this, as many different factors are interconnected at macroeconomic level in a highly complex way. **The main approach followed in this part of the report adopts a partial viewpoint by analysing the extent to which immigrants contribute to government revenue and to what extent they are beneficiaries of public spending, the combination of which gives the net contribution to public finances.** This static approach is a snapshot at one moment in time and does not incorporate any indirect effects nor any dynamic effect. The model developed in the last part of the report supplements it by simulating the main macroeconomic interactions at play. But the two approaches are not directly comparable, the latter being more theoretical.

The extract from the CBSS database that has been used for this analysis proved to be very rich and made it possible to obtain rather unique results for Belgium (for which there are very few other analyses). Transfers received by individuals are estimated based on pension benefits, unemployment benefits, family allowances, health care costs, social assistance benefits, sickness benefits. Transfers paid by individuals are estimated based on social security contributions and taxes.

Net transfers are obtained by subtracting transfers received by individuals from the transfers paid by individuals to the government. However, whether these net transfers are in positive or negative territory is very much related to the different transfer components that were taken on board in this exercise (not all expenditure and revenue items are covered<sup>1</sup>), as well as by the fiscal situation in the chosen year. Therefore, the results from this exercise are presented as differences compared to the country average. A positive figure thus indicates a group for which net transfers are higher than the average. A negative figure points to a lower-than-average net contribution to public finances. An added advantage of this approach is that it yields exactly the same results as when all other public expenditure and revenue – those that are not explicitly covered in the proposed approach – are distributed equally over all residents on a per capita basis.

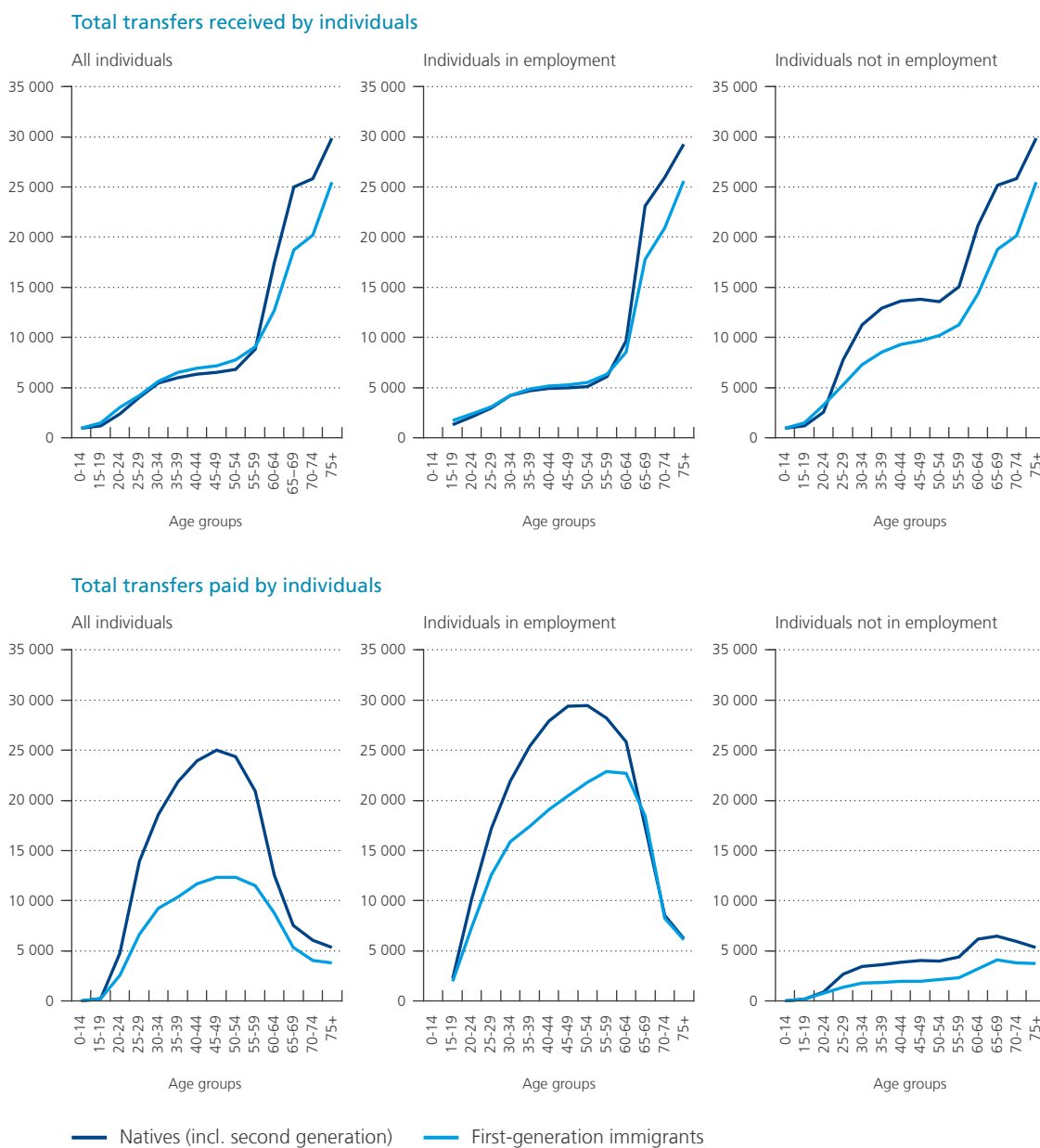
The different types of transfers, received and paid by individuals, are very closely related to age. At the aggregate level, transfers received by individuals gradually rise with age until around the age of 60, where they show a significant rise corresponding to pension benefits. Transfers paid by individuals also increase with age up to around 50 after which they start falling, reflecting to a large extent the career path of most workers. The employment rate together with wages are thus also key elements in explaining differences in transfers paid.

<sup>1</sup> It is a deliberate choice to limit the analysis to transfers paid and received by government. Transfers are by definition payments without a direct counterpart. Hence, these are purely distributive transactions. Other individualisable expenditure, such as education, is not taken into account in the analysis. From a theoretical point of view, it is impossible to define the ultimate beneficiaries of this expenditure: these are clearly students themselves, but also employers and society as a whole. Moreover, the choice to include this type of expenditure in the analysis would be problematic because of a lack of detailed information.

Chart 2

**Transfers received by individuals and transfers paid by individuals<sup>1</sup>: total, and total by activity status**

(€ per year per person in the age group)



Source: NBB calculations.

<sup>1</sup> The results obtained for the different types of transfers have been scaled by corresponding items from the general government statistics in the national accounts. They are presented in detail in the report.

The analysis conducted here indicates that the net contribution from first-generation immigrants to public finances is lower than the average, whereas the net contribution of the second generation is higher than the average and higher than the net contribution of natives.

Regarding first-generation immigrants, differences in contributions are to a large extent attributable to differences in transfers paid by individuals: comparably less taxes and social security contributions

are paid. This is a direct result of differences in employment rates between the groups. But lower average wages for people born outside Belgium also play a role. Differences from transfers received are smaller and can be traced back to the average social situation of various groups of the population. Again, access to the labour market plays an important role in these differences as employed people show similar levels of transfers received irrespective of their (broad) origin. The analysis of net transfers also provides some interesting insight into divergences between different groups of first-generation migrants. It is shown that people born outside the EU make lower net contributions than those born in the EU, a situation that can again be associated with a lower employment rate and lower average wages.

**Table 1**

**Differences in net transfers by country of origin, compared to the average for Belgium (all residents and all ages)**

(in € per capita per year, 2016, unless otherwise stated)

	Aged 20-64			Total (all ages)	p.m.	
	In employees	Out of employees	All		Employment rate (in %)	Average age
<b>First generation</b>	11 530	-8 361	1 303	-1 905	49	42
EU	14 330	-6 506	4 368	-1 224	52	44
Non-EU	9 208	-9 560	-935	-2 506	46	41
of which:						
Recent first-generation immigrants (0-5 years)						
EU	9 815	-4 661	1 189	159	40	29
Non-EU	11 630	-3 268	4 231	2 419	50	29
Second generation	7 049	-5 605	-1 674	-2 013	31	29
<b>Second generation</b>	14 943	-9 482	5 739	784	62	28
<b>Natives<sup>1</sup></b>	18 967	-10 764	10 571	296	72	44
<b>Belgium (all residents)</b>	17 375	-9 843	8 069	0	66	42

Source: NBB calculations.

1 Excluding the second generation.

A focus on the group of recent first-generation immigrants, defined as immigrants who arrived in Belgium in the last five years or less (which is also the focus of the general equilibrium analysis, see part III) indicates that, as an aggregate, their net contribution is higher than the average for Belgium, but not as high as for natives. By broad groups of country of origin, it appears that individuals born in EU countries and recently settled in Belgium make net transfers largely above the national average. The group of non-EU origin immigrants shows relatively lower contributions than the average for Belgium and the other groups, as well as a much lower employment rate.

Contrary to first-generation immigrants, the net contribution of the second generation is higher than the average and higher than the net contribution of natives. This finding clearly reflects differences in age structures between the groups. The second generation is on average younger than the native population. Assessed over the active lifetime of workers, the contribution of the second generation remains higher than the first generation, but lower than natives.

As these results are (partly) related to differences in employment rates, raising the employment rate among immigrants (and their children) is key to enhancing their contribution to public finances.

## Part II: The labour market integration of first- and second-generation immigrants

The findings presented in the public finance part depend heavily on the degree of labour market integration of immigrants. **Throughout Europe, their integration tends to be lower than for natives**; in 2019, for instance, the average gap in the employment rate between natives and first-generation immigrants amounted to 5 pp for the population aged between 20 and 64. However, within the immigrant population, there are two distinct groups: those born in the EU, on the one hand, whose employment rate is very close or even higher to that of natives in all countries. For immigrants born abroad (with a non-EU origin), on the other hand, getting into employment is much more problematic: there, the gap in the employment rate is about 9 pp on average in the EU.

**Belgium is no exception and figures among the worst performers.** It has one of the lowest employment rates for first-generation immigrants in the EU, just behind Greece and France. In 2019, 61 % of them were employed, which is almost 12 pp lower than for a person born in Belgium. While the gap is not as large for immigrants coming from another EU country (2 pp compared to natives and an employment rate of 71 %), the employment rate of non-EU immigrants was 54 %, almost 19 pp lower than for natives. Reducing the employment gap between Belgians and non-EU foreigners was part of the EU2020 strategy. However, over the last 10 years, there has been no significant improvement in that respect.

The level of education is the most often cited argument to explain the lower employment rate of immigrants. The dataset provided by the CBSS gives an overview on how the employment and participation rates of first- and second-generation immigrants vary with their personal characteristics (age, gender, level of education, Region of residence and type of household). It offers the possibility of analysing whether those characteristics can explain the gaps with respect to natives.

While the average labour market integration gap between first-generation immigrants and natives is wide by international comparison, our analysis shows that it remains large and significant even after controlling for personal characteristics, and this is especially true for non-EU immigrants. As a result, we state that they are not sufficient to explain the worse labour market outcomes of first-generation immigrants with respect to natives. Oaxaca-Blinder decompositions, enabling gaps between explained and unexplained parts to be distinguished, show that **only 18 % of the employment gap between first-generation immigrants and natives is explained by the identified characteristics (30 % for EU immigrants, 15 % for non-EU immigrants) while tested personal characteristics do not explain the participation gap for both EU and non-EU immigrants.**

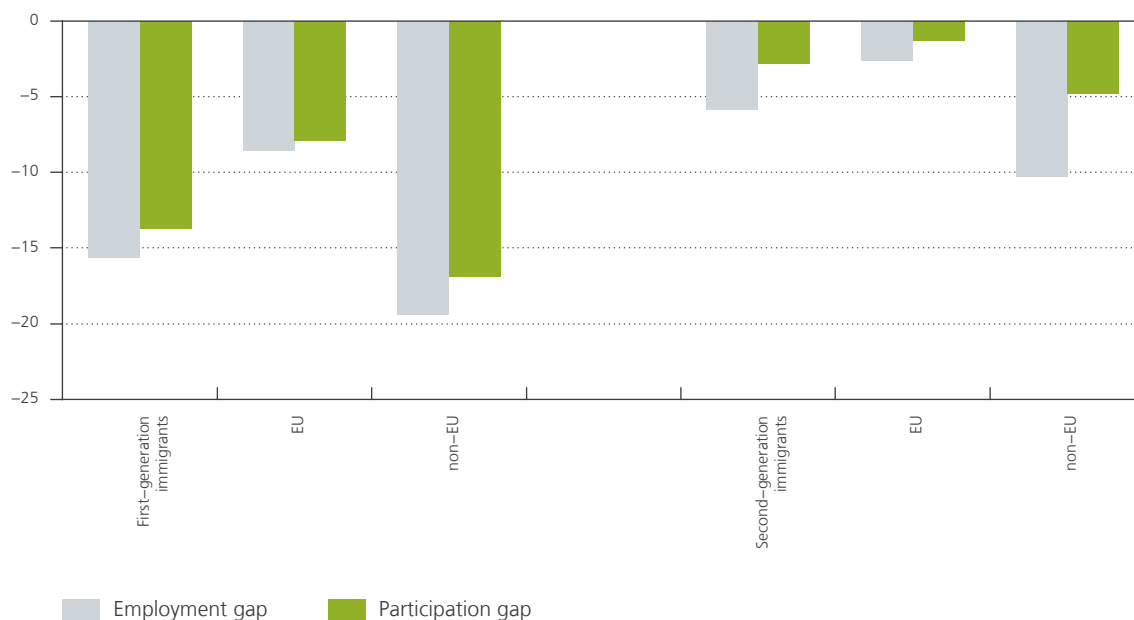
**The analysis for the second generation shows an improvement in labour market integration compared to first-generation immigrants.** Nevertheless, the gaps remain wide, with a penalty of 10 pp in employment and of 5 pp in labour market participation probability compared to natives. Differences in immigration history among EU countries make the international comparison difficult. Nonetheless, Sweden is similar to Belgium both in terms of proportions of its population being first- and second-generation immigrants and regarding the employment gap between first-generation immigrants and natives. Belgium's performance falls far short of Swedish outcomes for the second generation, meaning that there is still a margin of improvement in Belgium regarding labour market integration of second-generation immigrants.

A much larger part of the gap is explained by personal characteristics of second-generation immigrants than what we found for first-generation immigrants. **Almost half of the employment and participation gaps between second-generation immigrants and natives is explained by their differences in personal characteristics.** While almost three quarters of both gaps can be explained for second-generation EU immigrants, the proportion is only one third for non-EU immigrants.

Chart 3

### Penalty in employment and participation probabilities compared to natives for first- and second-generation immigrants

(in percentage points (margins of the Probit model), people aged between 20 and 64 years, annual data from 2009 to 2016, based on a Probit model with time fixed effects controlling for gender, Region of residence, age, level of education, type of household)



Source: CBSS Datawarehouse, NBB calculations.

Although our analysis shows an increase in the explained part for second-generation immigrants, **it does not mean that the gap with respect to natives is justified**. In fact, while lower level of education among second-generation immigrants explains a larger part of their differences in labour market integration compared to natives, they do not have the same opportunities in educational attainment. This was made explicit by Danhier and Jacobs (2017), who find that Belgium has the lowest level of equity in terms of origin in its schooling system among OECD countries and also a high level of segregation based on school performance.

Besides personal characteristics, other factors specific to immigrants can provide an insight into why they have more difficulties than natives in entering the labour market and finding a job. First, the **channel of migration used by immigrants affects their labour market outcomes**. In Belgium, the main channel of migration recorded in administrative data is family reunification (41%), followed by work (27%) and international protection or regularisation (21%). Almost half of non-EU immigrants, came through family reunification procedures, while this is only the second channel of migration for EU immigrants, for which work is, with 49%, the main registered channel of migration. Our estimates show that **individuals migrating through family reunification or international protection channels are 30 pp less likely to have a job than labour migrants and 34 pp less likely to get into the labour market**.

A second explanatory factor for better labour market integration is the nationality of individuals. Our findings show that, **other things being equal, a first-generation immigrant with Belgian nationality is 9 pp more likely to be employed than a first-generation immigrant with foreign nationality**. The difference is 10 pp regarding the probability of being active. This finding could be partially explained by the fact that individuals applying for Belgian citizenship are also those better integrated or wanting to stay for a longer period. However,



when comparing differences in employment probabilities among EU versus non-EU immigrants, results show that nationality acquisition is a significant advantage for non-EU immigrants. EU immigrants, on the contrary, already benefit from advantages linked with EU membership and are thus less likely to apply for Belgian nationality.

Thirdly, **recognition of diplomas and skills gained abroad by first-generation immigrants is essential to their chances of getting a job**, as it tackles the problem of information asymmetry between potential employers, who do not know if the diploma is equivalent to host requirements, and immigrants. This issue is particularly true for non-EU immigrants for whom recognition is not as easy as what the Bologna system allows for immigrants who studied in an EU country.

The fourth explanatory factor refers to human capital acquisition (increasing with the number of years of residence): a growing literature suggests that **immigrants' proficiency in the host country language is key to their social and economic integration**. A social network also plays a crucial role in facilitating entry to the labour market. However, the quality of this network is essential to avoiding getting only limited, lower-paid job opportunities. Mentoring projects could help to connect newcomers with natives.

Fifth and finally, **although discrimination is prohibited, it remains a reality for people of foreign origin when applying for a job**. Based on experiments involving sending fictive CVs to employers with identical characteristics but different names, economic literature provides evidence of such hiring discrimination based on ethnic origin. Discrimination has different sources. On the one hand, it can be due to preferences ("taste-based discrimination"): members of the mainstream majority want to avoid interacting with workers from the minority. On the other hand, the reason can lie in "statistical discrimination": owing to asymmetric information on the candidate's productivity, the employer examines the statistics on the average performance of the group to which the candidate belongs in order to estimate his/her productivity. The literature is not unanimous on which effect dominates, so both reasons may play a role.

So far, the analysis has not come up with enough evidence to completely understand the worse labour market outcomes for immigrants compared to natives and why Belgium's performance is so bad in this respect. Based on a new dataset including EU countries over the period 2006-2019 and merging information from different sources, an econometric analysis tests 25 explanatory variables<sup>1</sup>, including personal characteristics, for employment and labour market participation gaps between first-generation (non-EU) immigrants and natives.

Results show that **education is a key factor in explaining employment and labour market participation gaps between first-generation immigrants and natives but not the only one**. When focusing on non-EU immigrants results are less robust. On the one hand, a high level of education (based on self-reporting) is less beneficial for a non-EU immigrant, probably because of the diploma recognition issue. On the other hand, a low level of education is less detrimental for them. One explanation could be that they are more active in low-skilled sectors and are more inclined to accept lower wages than natives. This boosts their chances of getting a job compared to natives.

The over-representation of immigrants, especially non-EU immigrants, in low-paid jobs is also reflected in the results obtained for net replacement income rate. **A high replacement rate in the event of unemployment increases the effect of the unemployment trap and the effect is more pronounced for (non-EU) immigrants who are entitled to unemployment benefits**.

Regarding employment protection in regular contracts, our findings support the view expressed in the literature that **a higher level of protection reduces the gap in labour market integration between immigrants**

<sup>1</sup> Those variables are: personal characteristics of immigrants (age, gender, high or low level of education), history of migration (share among the population), economic environment (unemployment rate), labour market features (employment protection legislation (EPL), public employment, self-employment, job tenure, union density, net replacement rate, labour market policy measures) and integration policy indicators (12 MIPEX sub-indicators).

**and natives.** Immigrants, who are usually less aware of employment protection regulations, are also less likely to claim their rights, and this makes it cheaper for employers to hire immigrants than natives.

Labour market rigidities, such as a high level of job tenure, make it more difficult for not yet active individuals to enter the labour market, because of lower turnover among firms. **A higher level of union density also widens the gap with natives** in terms of both employment and labour market participation. A higher level of union density tends to favour established workers (insiders) rather than unemployed people or new entrants (outsiders) and immigrants are over-represented among outsiders.

Because of their low time variability, results on migrant integration policies should be considered with caution. Nevertheless, some interesting findings show up from the analysis. Activation policies to get people into work and general support for better access to the labour market tend to accentuate the employment and participation gaps between immigrants and natives. Those types of policies rarely reach immigrants unless they specifically target them, whereas they are efficient for natives, who therefore benefit from them. **In order to significantly improve labour market outcomes of immigrants, targeted policies tend to be more efficient.**

**Access to education is significantly and positively associated with the labour market integration of immigrants compared to natives, and this result is true for all types of immigrants.** Design of educational policies specifically targeted to immigrants is also beneficial. But the positive impact disappears when looking at employment of non-EU immigrants. Non-EU immigrants are temporarily kept away from the labour market to upgrade their skills, so that the insignificant effect on the employment rate could be counterbalanced by a positive impact on the quality of their jobs.

**Policies designed to encourage immigrants to stay in the country for a longer period tend to reduce the employment and labour market participation gaps with respect to natives.** In that respect, the most powerful tool is easier access to permanent residence, while the other indicators, family reunion and access to nationality, do not always provide significant results.

Finally, **anti-discrimination policies are efficient in reducing the labour market integration gap between immigrants and natives** when we consider total first-generation immigrants. **However, the positive impact is less clear for non-EU immigrants.** As for activation policies or education policies, anti-discrimination policies might not target immigrants enough, as those policies are often designed in common with other potential characteristics leading to discrimination such as gender, age, handicap, etc.

Those results provide a consistent explanation of Belgium's relatively poor performance in integrating immigrants into the labour market. **Compared to the average of the countries analysed, Belgium is slightly less likely to have high-educated immigrants and more likely to attract low-educated foreigners. Its labour market rigidities could also be an explanatory factor. In addition, few policies are specifically designed to help immigrants find a job.** However, some policies, in which Belgium performs much better, should favour the labour market integration of immigrants, namely, easier access to permanent residence, wider access to education, targeting needs in that respect and strong anti-discrimination policies; for the latter two, some improvements are nevertheless still possible compared to best performer, in particular regarding education policies.

## Part III: A general equilibrium analysis of immigration in Belgium

The two first parts of the report sketch a portrait of immigration in Belgium, the position of immigrants on the labour market and their contribution to public finances. The third and last part shifts the focus to **estimating the aggregate impact of recent immigration on the economy** with specific attention paid to the effect on natives<sup>1</sup> and previously established immigrants and taking into account direct and indirect effects. The estimated impacts include demographic effects of immigration as well as aggregate effects on employment, unemployment and participation rates, on wages, on net income, on welfare and on GDP and GDP per capita.

To achieve this goal, **a general equilibrium model has specifically been developed**. To assess the impact of immigration, a baseline scenario is constructed by calibrating the model to the Belgian economic situation and by excluding immigrants who arrived in Belgium in the last five years (defined hereafter as recent immigrants). Next, the economic impact of immigration is computed by comparing this baseline scenario (without recent immigration) with a situation where recent immigrants are included again (distinguishing between EU and non-EU origins).<sup>2</sup>

First, immigration affects the economy through the composition of the population. **Demographically speaking, recent immigration has led to a population growth of 2.7 %, spread equally between EU and non-EU immigrants**. The inflow has consisted chiefly of young individuals. The stock of retired immigrants almost fully consists of immigrants who arrived more than five years earlier. The recent wave of immigrants therefore reduces the share of retired people in the population. **Recent immigrants are slightly more likely to be high educated<sup>3</sup>** than the native population in Belgium, (this is true for the recent inflow of EU immigrants and to a lesser extent for non-EU immigrants) and previously established immigrants.

**The aggregate wage effect of immigration appears to be close to zero, but the impact is not equally spread among individuals**. While wages of natives rise slightly (0.4 %), the impact is clearly negative for incumbent immigrants (–2 %). Following the principles of complementarity and substitution over skill, age and origin in the production function, a larger labour supply of young, high-skilled immigrants leads to higher labour demand and wages for complementary labour (i.e. low-skilled, older people and natives), while depressing the wages of more substitutable labour, especially previously established young and high-educated immigrants.

The modelling of a simplified public sector reveals that the public finance impact of immigration constitutes an important addition to the wage effect of immigration. The computed rise in government expenditure (+2.2 %) is lower than the population growth (+2.7 %). This implies that **the recent wave of immigrants imposes a below-average burden on government expenditure, mainly thanks to the young age of immigrants**. Therefore, the tax base increases by 3.4 %. Since the tax base rises more sharply than government expenditure as a result of recent immigration, and the government is assumed to be keeping a balanced budget, the income tax rate comes down, by 0.6 pp. Although using different methodologies and not being directly comparable, the positive net government contributions observed in the general equilibrium model are in line with the positive net transfers found in the first part of the report for recent waves of immigration.

The cut in the income tax rate leads to a positive net income effect for all working people, reducing or reverting the net wage cut for individuals substitutable to recent immigrants and pushing up the net wage of complementary workers. **On average, net income per person increases by 0.7 %**.

1 Those we consider here as natives include second-generation immigrants because of data availability.

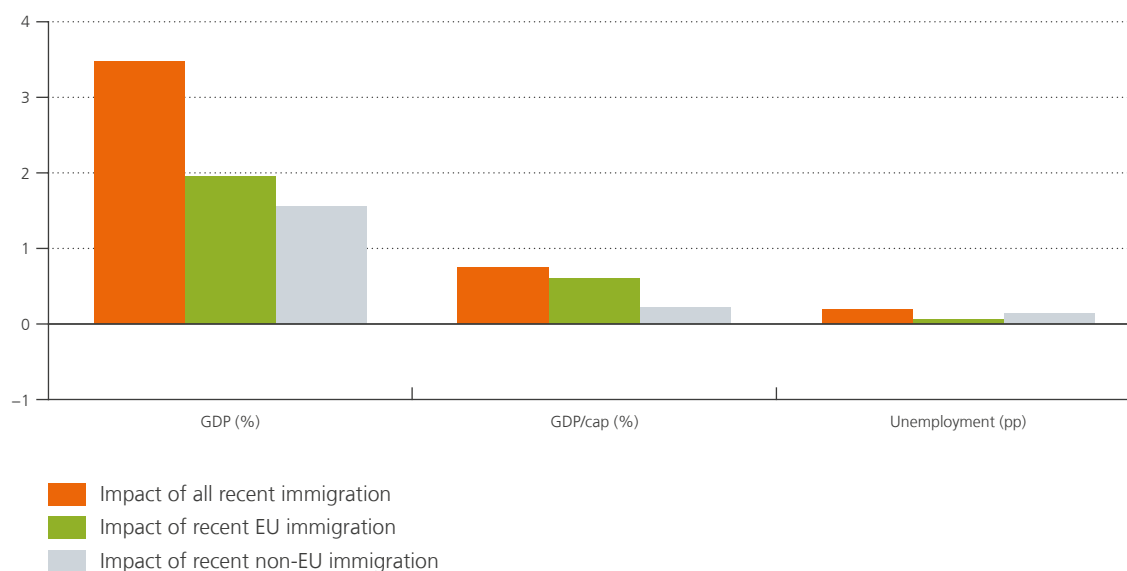
2 Note that for this type of analysis, we need to define different scenarios in order to compute the gap between the baseline scenario (without inflows of immigrants over the last five years) and the estimated scenario (including inflows of immigrants over the last five years). We cannot assess the total economic impact of the entire history of immigration in Belgium.

3 More recent immigrants are generally more likely to be highly-educated, mainly because of temporary migration for high-skilled workers. Moreover, merging low-educated with medium-educated (which is needed to avoid even more complexity in the model and because elasticities of substitution to calibrate the model are available only for the chosen definition of the two groups) hides the higher proportion of low-educated immigrants in Belgium.

## Chart 4

### Aggregate impacts of recent immigration

(in percent or percentage points)



Source: NBB calculations.

The decision to join the labour market or not is driven by the net income of individuals once employed. People losing net income (i.e. low-skilled immigrants aged 20-34 years and high-skilled immigrants aged 20-49 years) reduce their labour market participation, while people seeing their net income grow step up participation. **Even though most of the population raise their participation on the labour market, the aggregate participation change remains small.** This is driven by the higher share of immigrants in the population because, although their participation rate increases, it is still significantly lower than that of natives.

Once employed, immigrants have a higher separation rate: either being dismissed, because of information asymmetry between employers and immigrants on their skills at the time of hiring and revealed productivity once hired or because immigrants decide to resign due to their return to their home country. This means that despite a larger potential labour supply, firms evaluate the cost of posting a new vacancy as higher than before and thus tend to create less jobs. Conversely, with wages reduced for incumbent immigrants, hiring them is less costly, so that the job creation incentive increases. Overall, it appears that both effects cancel each other out so that **the average impact on established immigrants is very close to zero.** For natives, wage growth is not sufficient to overcome the lower risk of separation compared to immigrants, so they have a lower unemployment rate.

Combining unemployment effects both for incumbent immigrants and natives with the inflow of newcomers (having greater difficulty on average in finding a job), **the aggregate unemployment rate is pushed up by 0.2 pp.**

Individuals positively evaluate consumption of a larger amount of goods (if their income rises) but also from consuming a larger variety of goods. The model assumes that each firm produces one variety of good. Because of the increase in net income in the economy and the higher number of employed people, more retailers can enter the market so that a larger variety of goods are produced. **This means that the welfare of individuals increases by more than the rise in net income (+1.2 % compared to 0.7 %).**

Summing up results from the different impact channels, **recent immigration has a positive impact on GDP, pushing it up by 3.5 %**. The effect is positive for both origins with a 2 % increase from EU immigration and a 1.5 % rise from non-EU immigration. Evidently, immigration also induces an increase in the population. Nevertheless, it still leads to a 0.7 % rise in GDP per capita.

It is important to stress that these findings are robust for changes in the value of exogenous parameters (elasticity of labour supply, elasticity of substitution between age and origin groups; elasticity of substitution between goods). Although the precise value of the wage, income or welfare changes differs, the interpretation of outcomes is similar.

Finally, alternative impact channels such as productivity gains, innovation or barriers to international trade and investment are also likely to provide a positive estimated economic impact of immigration. Relaxing assumptions (i.e. allowing natives to optimise their skill set to complement immigrants after an inflow of new immigrants or imposing a progressive tax rate) should also increase the positive economic effects of immigration obtained by the model. **The results presented here should be viewed as lower bound estimates of the economic impact of immigration in Belgium.**

## Main messages

The aim of this report is to provide an overview of the economic impact of immigration in Belgium, distinguishing between first- and second-generation immigrants as well as between immigrants with an EU or a non-EU origin. Although the focus of this study is economic, any broad assessment of migration should also take into account other considerations such as human rights and international law, in particular with regard to protection for and reception of refugees.

According to CBSS data, in 2016, 69.8 % of the whole Belgian population was native (born in Belgium with both parents born in Belgium), 16.5 % first generation immigrants, and 13.7 % second generation.

The analysis of the impact of immigration on public finances indicates that the net contribution of a working-age individual to public finances at a certain moment in time primarily depends on his/her labour market position: it is positive for people in employment and negative for people not in employment. The age structure of different groups also play a significant role. The net contribution from first-generation immigrants to public finances is on average lower than that from natives. Differences in contributions are to a large extent attributable to differences in transfers paid by individuals: comparably less taxes and social security contributions are paid by immigrants. This is a direct result of differences in employment rates between the groups. But lower average wages for people born outside Belgium also play a role. Based on 2016 data, the net contribution of the children of first-generation immigrants (the second generation) to public finances is on average higher than that of natives, mainly because of their younger age structure. Raising the employment rate among immigrants (and their children) is key to enhance their contribution to public finances.

Nevertheless, Belgium is among the worst performers in the EU in integrating immigrants into the labour market. In 2019, 61 % of them were employed, which is almost 12 pp lower than for a person born in Belgium. Personal characteristics only explain 18 % of this gap. The second-generation improves its labour market integration and a larger part of the gap with natives can be explained (46 %), education opportunities appear to be their main disadvantage. The migration channel is not neutral for labour market outcomes. People migrating through family reunification or international protection are 30 pp less likely to have a job than labour migrants. Citizenship acquisition, recognition of diplomas and skills, proficiency in host country language(s) and discrimination clearly influence migrants' integration. The poor performance of Belgium in this area is found to be due to the level of education of immigrants but also to rigidities of the Belgian labour market and the fact that few policies are specifically designed to help immigrants find a job.

A theoretical model, calibrated to Belgium, shows that immigration inflows over the last five years had a positive impact on GDP, pushing it up by 3.5 %. The effect is positive for both EU and non-EU origins with a 2 % increase from EU immigration and a 1.5 % rise from non-EU immigrants. Moreover, no detrimental effects of immigration are found for natives in terms of wages, unemployment, participation, net income or welfare. Previously established immigrants, more substitutable by newcomers, are more likely to be negatively affected, something which is confirmed by the academic literature on the subject. The positive aggregate impact of immigration depends on the labour market integration of immigrants. A higher employment rate will be associated with a larger increase in GDP and GDP per capita.