

The effects economic integration of migrants have on the economy of host countries

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Question

What effect does the economic integration of migrants have on the economy of the host country?

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1. Summary

This rapid review synthesises the literature from academic, policy, and knowledge institution sources on the effects economic integration of migrants have on the economy of host countries. The report focuses on advanced countries that host economic migrants from Low- and Middle-income Countries (LMICs). Important conclusions from research on other type of host countries have been included at some points. In most cases, aggregated data does not make a clear distinction between countries of origin, nor does the literature distinguish regular from irregular migration.¹

Evidence suggests that international migration can boost **aggregate income (GDP growth)** in high-income host countries over the long term. One of the channels for growth is by expanding the labour force and higher wages as international migration can boost capital accumulation for migrants and natives. Another channel is that migrants increase the employment-to-population ratio in host countries, which is particularly important for countries with aging populations. Furthermore, migrants boost capital accumulation and employment through higher foreign investments, international trade and entrepreneurship. Finally, international migrants have a positive effect on aggregate income in high-income countries as they foster labour productivity, boost innovation and complementarities with native workers by increasing diversity in productive skills, leading to economic growth.

A detailed look at the literature on **the effects of international migration on wages and labour markets** shows that in principle migrants have a positive impact on wages and labour market dynamics. If migrants' skills complement those of existing workers, the impact is positive. Only when international migrants have similar skills to those of existing workers they could affect negatively employment and wages in the short term. Although existing workers in low skilled occupations are expected to face more competition from migrants, because the skills needed for those jobs are easier to acquire and are less specialised, the literature makes clear that in most cases international immigration had a positive effect on the average wages of less educated workers. The inflow of low-skilled migrants encouraged natives to upgrade their skills, taking advantage of immigrant-native complementarity to spur mobility and increase specialisation into more complex jobs, where they became more productive. Less educated existing workers experienced particularly large wage and employment gains in countries whose immigration systems favour educated immigrants, like Australia and Canada.

The literature also shows that international immigration has a positive **impact on foreign direct investment (FDI) and international trade**. Like with labour markets, the effects are most positive when there are complementarities, because immigrants lower the transaction costs for trade and investment because of their superior knowledge of home country markets, language, customs, business practices, and laws. Hence, the networks of international migration and bilateral FDI and trade are strongly and positively correlated, in particular with developing countries, where firms typically need to navigate a myriad of bureaucratic and legal hurdles. In particular, trade in services, since providing a service abroad often requires an understanding of cultural specificities that goes well beyond what is required when selling a physical good abroad.

¹ It may be assumed that the literature on economic impact of migration mainly refers to regular migration, as most data and statistics are available for these immigrants (including refugees).

A debate among scholars has emerged on the question how **entrepreneurial migrants** are. Data from the US and China shows that international migrants are more likely to start their own enterprise (in partnership or self-employed). However, other scholars do not find the same evidence in European countries. Furthermore, self-employment is often the result of discrimination and xenophobia amongst migrants. When they have a choice, migrants may often prefer wage employment to being self-employed. Therefore, migrant entrepreneurs may be very vulnerable to external shocks because they are often in entrepreneurship due to a lack in access to wage employment.

Although the literature is positive on the employment and **labour productivity effects** of international migration, the literature shows that a large entry of low-skilled immigrants over a long period, could change the sectoral specialisation of the economy, for instance toward lower-productivity sectors such as construction. Furthermore, migrants working in less productive sectors could cushion for necessary rapid economic transformation towards more competitive capital-intensive sectors. However, an overrepresentation of low-skilled migrants in low productivity sectors, without efforts and policy to integrate migrants in higher productive labour markets, could result in higher unemployment rates for migrants over time.

Thus, given their impact on the working-age population and economic activity, migrants can generate additional **tax revenues and social contributions**. However, for some migrants time is an important factor, which means for some there will be a delay before they begin making a fiscal contribution. In certain circumstances, others contribute in the short-term and medium-term through employment, but could lose out of competitive labour markets and may need recourse to welfare services and claim social benefits, health care and social assistance. These fiscal effects could be mitigated if migration increases the labour productivity, wages, and income from capital (e.g. through higher house prices) for natives. Overall, the literature concludes that host economies need a flexible labour market to adjust to changes and give migrants options to integrate faster in the labour market.

The literature on the **economic impact of refugees** shows the same effects on wages, employment, foreign investment, international trade, entrepreneurship, innovation and labour productivity as mentioned above. Evidence reinforces the consensus that the impact of immigration on average native-born workers is small and mainly positive, while for low-skilled existing workers the influx of refugees does not have detrimental negative effects. However, refugees need more time to integrate in host economies and in most cases are not allowed to work during an unsettled status. Like for all migrants, complementarities, language skills, education and linkages to migrant networks are important factors for the speed of economic integration and impact on host countries' economies. Evidence also shows that even when refugees do not participate in the labour force in the first years after arrival, and as a result increase fiscal expenditures on the short-term, their impact on the demand side of the economy is positive, resulting in higher GDP growth.

There is far less evidence in the literature on **the effects of women migrants on the economy**. Like other migrants, women migrants' economic impact depends on their skills and education. Evidence shows that low-skilled female immigrants could promote female labour force participation of native women by taking housekeeping and childcare jobs. Furthermore, poor macroeconomic or labour market conditions upon arrival tend to slow down integration especially for female migrants. Hence, challenges for female migrants, low-skilled economic migrants from low-and-middle-income-countries and refugees seem to be particularly acute; their economic outcomes are in the short term less advanced.

2. Impact on wages and employment

The importance of complementarities

Research on the impact of international migration on labour markets and wages shows it critically depends on the complementarity between the skills of migrants and existing workers, and the economic characteristics of the host country (Fry, 2014). The impacts on the labour market also differ between the short and long run when the economy and labour demand can adjust to the increase in labour supply (Ruhs & Vargas-Silva, 2018). In principle, **migrants with skills similar to those of existing workers would compete with them in the labour market and affect employment and wages, especially in the short term.** If migrants' skills complement those of existing workers, the impact could be positive (Aiyar et al., 2016).

As Ruhs and Vargas-Silva (2018) explained, it is important to distinguish between the effect of immigration on the average wage of all workers in the economy, and on the wages of different groups of workers along the wage distribution (e.g. low, medium and high-paid workers). "It is possible, for example, that immigration leads to a rise in the average wage of all workers, but to a fall in the wages of some low-paid workers" (Ruhs & Vargas-Silva, 2018, p.2). Thus, macro-economically, countries may report earnings, but individually, there can be loss of incomes for low-skilled workers in host countries (Manole et al., 2017).

In the literature, there is a **consensus that international migration has little effect on employment rates and average wages of existing workers, but that it may have short-term impacts in certain labour market segments.** Overall, the IMF (2016) showed that international migrants could contribute to labour markets through complementarities, which allow for:

- Existing workers to move into different segments of labour markets, often performing more complex tasks that promote skill upgrading and hence foster efficient specialisation;
- An increase in female labour market participation;
- More efficient market functioning, with migrants filling up occupations for which existing workers are in short supply;
- Contributions of high-skilled migrants to technological progress;
- An increase in labour demand, as migrants expand consumer demand in the short-term and investment over the medium-term.

For instance, to elaborate on the point that international migration could increase female labour market participation: in countries where labour market participation of highly skilled native women tends to be greater (e.g. Germany, Sweden, Netherlands), this correlates with the availability of lower-skilled female labour migrants (Jaumotte et al., 2016). For example, the availability of relatively low-cost workers in the services or health care sector may allow high-skilled women to enter the labour force or work longer hours, increasing productivity and their wages.

However, where there are no complementarities, some studies find a negative impact on wages particularly for low-skilled workers (for US: Aydemir & Borjas, 2011; for UK: Dustmann et al, 2013). Although not true in all circumstances, workers in low skilled occupations are expected to face more competition from migrants because the skills needed for those jobs are easier to acquire and are less specialised. In terms of employment, the extent to which declining wages in some sectors (due to an increase in the supply of low-skilled labour through international migrants) increase unemployment or inactivity among existing workers depends on their

willingness to accept the new lower wages and to move away to areas with less competition (Ruhs & Vargas-Silva, 2018).

Studies for the UK are in line with these conclusions. For example:

- Dustmann et al (2013) found positive effects for most workers in the UK, but negative effects for the lower paid; they found that a 1 percentage point increase in the ratio of migrants to non-migrants leads to a 0.6% decrease in wages for workers at the 5th earnings percentile and a 0.5% decrease at the 10th percentile.
- The Bank of England (Nickell & Saleheen, 2015) concluded that a rise in immigration had a tiny impact on overall wages – with a 10% increase in immigration – wages fall by 0.31%. However, the negative effect was greater for semi/unskilled workers in the service sector, with a 10% rise in immigration reducing wages the equivalent of 2%. The authors also concluded that there is no different impact between migrants from EU countries and non-EU countries.
- Manacorda et al. (2012) suggested that any adverse wage effects of immigration are likely to be greatest for resident workers who are themselves migrants. This is because the skills of new migrants are likely to be closer substitutes for the skills of migrants already employed in the UK than for those of UK-born workers.

The impacts of high-skilled vs low-skilled migrants

Docquier et al. (2014) showed that immigration usually had a positive effect on the average wages of less educated workers in the 35 OECD countries: whether they assume an optimistic or a pessimistic scenario. According to them, this is due to higher education levels of the OECD immigrants relative to the non-migrant natives. **Educated people are job-creating and complement less educated workers in productive activities.** Hence, higher immigration leads to more job creation and higher demand for people further down the job ladder (Docquier et al., 2014). Furthermore, they showed that **less educated existing workers experienced particularly large wage and employment gains in countries whose immigration systems favour educated immigrants**, like Australia and Canada. In other countries like Luxembourg, Ireland, the UK, and Switzerland, less educated natives gained between 2% and 5% in their wages (Docquier et al., 2014).

Peri et al. (2014) showed for the US that highly educated immigrants have contributed to the growth of the total factor productivity (TFP), which has positive spillover effects on wages for existing workers. The authors find that foreign STEM workers can explain 30% to 60% of US TFP growth between 1990 and 2010. Foreign-born workers were responsible for 80% of the growth of college-educated STEM workers in total employment in the US. A rise in foreign STEM workers by one percentage point of total employment increases real wages of college-educated existing workers by 7–8 percentage points and those of non-college-educated existing workers by 3-4 percentage points (Peri et al., 2014). Other research also showed that international immigration changes the technology used for producing (providing) certain products (services). For example, the immigration of skilled workers may encourage innovation and the adoption of more skill intensive technologies, which would affect labour demand (Ruhs & Vargas-Silva, 2018).

Labour market dynamics

Although international migration could affect some existing lower income groups negatively (or in other cases less positively), in general the political debate on international migration overstates the supply side of the labour market and understates the demand side. **International migration results in higher demands for specific services and goods, resulting in employers to increase production in some sectors, which could result in more employment** (Alesina et al., 2015; Cattaneo et al., 2015). For instance, the immigration of low-skilled workers may expand the production of certain products and services that use low-skilled labour intensively. This expansion of a certain sector could as a result increase overall demand for labour and drive wages back up. During an economic downturn, however, labour demand may respond more slowly than during times of economic growth (Ruhs & Vargas-Silva, 2018).

Furthermore, employment rates for migrants are higher in countries with low entry-level wages and less employment protection (Ho & Shirono, 2015). As country-specific skills accumulate with time in residence, the probability of being employed gradually converges to that of otherwise comparable natives, but in most cases full convergence is not observed even after over 20 years (Ho & Turk-Ariss, 2018). **The speed of employment integration varies substantially across migrants of different gender and country of origin, as well as across host countries (depending on skills, language, networks etc.)**. Moreover, poor macroeconomic or labour market conditions upon arrival tend to slow down integration, especially for female migrants (Ho & Turk-Ariss, 2018).

The evidence, as mentioned above, suggests that one reason why the labour market impacts of migrant inflows vary from place to place is due to whether or not a country has flexible labour markets that allow them to adjust. Specifically, **countries with the most rigid labour market institutions – rules that make it more costly to take on and lay off workers – saw the biggest rise in unemployment**. “The choice to protect incumbent workers made it more difficult for unemployed natives to find new jobs where they could complement rather than compete with newcomers” (Clemens & Hunt, 2017). OECD et al. (2018) argues that governments must shoulder their responsibilities by offering support for the less-educated men in their own populations as well as helping migrants to integrate.

Aiyar et al. (2016) found that migrants have lower participation, employment rates, and wages than natives in advanced economies. The earnings and employment gaps are pronounced in the initial years, but fall as migrants gain language proficiency and obtain more relevant job experience. Therefore, migrants from advanced economies or with better initial language skills often do better than other groups (IMF, 2016). **Challenges for female migrants, low-skilled economic migrants from low-and-middle-income-countries and refugees seem to be particularly acute; their labour market outcomes are in the short term less advanced** (Aldén & Hammarstedt, 2014). Policy on employment integration should implement diverse approaches to different migrants.

Refugees and labour market impacts

The above-mentioned outcomes are mainly from studies with a broad definition of international migration, defined as all the residents that were not born in the host country. No studies could be found that focus only on the labour effects of economic migrants from low-and-middle-income-countries to advanced economies. However, some studies look to the impact of waves of refugees during specific periods of crisis. Clemens and Hunt (2017) concluded that the evidence

from refugee waves “reinforces the existing consensus that the impact of immigration on average native-born workers is small, and fails to substantiate claims of large detrimental impacts on workers with less than high school” (Clemens & Hunt, 2017: from abstract). For example, they showed that:

- A sudden movement of over a million people from Algeria to France in 1962 raised the unemployment rate for low-skill French workers by about 0.2 percentage point.
- The Balkan refugees across Europe in the 1990s also seem to have caused a small, short-term increase in native unemployment.
- The arrival of 125,000 Cubans into Miami had no effect on unemployment and was followed by a small rise in average low-skill wages.
- The movement of Soviet refugees into Israel in the early 1990s, enough to raise the country’s population 12% in just four years, saw a substantial rise in the wages of the occupations they crowded into.

A study (Foged & Peri, 2015) on the impact of refugees in Denmark that used a national database that follows each individual over two decades, even as they change residences and jobs, found that refugees did initially displace small numbers of existing workers. However, **the inflow of low-skilled migrants encouraged natives to upgrade their skills, taking advantage of immigrant-native complementarity to spur mobility and increase specialisation into more complex jobs, where they were more productive.** The most affected natives typically ended up earning 3% more than they had before (Foged & Peri, 2015).

However, there is also evidence that the arrival of large groups of international migrants creates informal markets, which provides low wages and job insecure work. For example, the arrival of almost 2 million working-age Syrians in Turkey has had a clear effect on the informal economy in the south-eastern cities where most have congregated (OECD et al., 2018). **Women, young people and low-skilled workers in particular have been pushed out of employment through increased informal markets.** There is also evidence that Italy’s large informal economy relates to the influx of international migrants, where many migrants work in construction, cleaning and domestic service (OECD et al., 2018).

3. Impact on investment, trade and entrepreneurship

Foreign Direct Investment

Immigration and Foreign Direct Investment (FDI) are intimately related. Burchardi et al. (2017) using data on historical migrations to the US demonstrated a causal effect of the ancestry composition of US states on FDI sent and received by local firms. For the average US state, **doubling the number of individuals with ancestry from a given origin country increases by 4 percentage points the probability that at least one firm from that US state engages in FDI with that origin country.** It also increases by 7% the number of local jobs at subsidiaries of firms headquartered in that origin country. These effects persist over generations and is primarily driven by a reduction in information frictions, suggesting that immigrants pass traits to their descendants that facilitate economic exchange with their origin countries, such as social ties to family and friends or knowledge of the origin country’s language and culture (Burchardi et al., 2017).

Theory suggests that common ancestry, next to reduction in information friction, may also have a positive impact on FDI because it: (i) induces similarities in tastes for consumption, (ii) causes a

convergence in factor endowments, facilitating horizontal FDI, or (iii) provides social collateral for contract enforcement, substituting for poor institutions. However, Burchardi et al., (2017) did not find evidence supporting these other channels. According to them, common ancestry does not affect FDI in the final goods sector more than in the intermediate goods sector, does not appear to cause a convergence in the sectoral distribution of employment, and has a significantly weaker impact on FDI for countries with weak institutions. Their findings are consistent with other evidence that information is transmitted internationally through networks created by common ancestry (Arkolakis, 2010; Chaney, 2014).

Also consistent with other evidence, Burchardi et al. (2017) showed that the effect of ancestry on FDI is highly concave (as all the relevant information is gradually exhausted), weaker if many people from the same or neighbouring origins live in the surrounding area (as relevant information is more likely to have already percolated), and stronger for destinations that are more ethnically diverse (indicative of a hub-effect). Also consistent with this view, the effect of ancestry is stronger for more distant and ethnically diverse countries (where information is plausibly harder to acquire). Hence, Burchardi et al. (2017) concluded that **FDI is found to follow the paths of historical migrants as much as it follows differences in productivity, tax rates, and education.**

The complexity and significance of the migrants' network for FDI is also shown in other studies. For example, Garas et al. (2017) found that **the networks of international migration and bilateral FDI are strongly and positively correlated.** More interestingly, Garas et al. (2017) found for OECD countries that centrality in the international migration network boosts bilateral FDI between any two countries. Hence, they conclude that bilateral FDI between any two countries is not only affected by the presence of migrants from either countries, but also by the number of their total inward-migration links (connectivity in the international migration network). Garas et al. (2017) suggest that this indirect network effect may be driven by learning processes of new investment preferences by immigrants from 'third party' origins. Other studies show the same outcome: more immigrants coming from 'third party' origins may imply more openness and foster learning processes about investment patterns and therefore stimulate more bilateral capital exchanges (Fagiolo & Mastrorillo, 2014).

Refugees and FDI:

Mayda (2017) examined the impact of refugees in the US after resettlement on FDI. She concluded that a 10% increase in the number of refugees initially placed in a given commuting zone within the US increases FDI from their country of origin by 0.19%. Refugees often keep close ties with family and friends in their countries of origin. Therefore, **they can stimulate FDI inflows by providing information on local (US) business opportunities in a given location.** In addition, refugees can help overcome problems of imperfect contract enforcement – not all aspects of business interactions can be regulated by a contract, in which case tight communities such as refugees' networks provide an informal way to monitor business interactions and reduce risks (Mayda, 2017).

Finally, **refugees themselves can bring financial assets to the US (either their own or friends' and relatives')** and use them to invest in the country. For example, entrepreneurial refugees may take their business with them when they leave their origin country. The role of foreign capital to fund these businesses is also noted by a report for the US Small Business Administration (Fairlie, 2012). It highlighted that: "The most common source of start-up capital for

immigrant-owned businesses is personal or family savings with roughly two-thirds of businesses reporting this source of start-up capital” (Fairlie, 2012). Migrants and refugees are also more likely to finance their businesses with business investment from family/friends, which may be located in their home country.

Lemmon (2017) showed for Turkey that 28.8% of foreign-partnered companies were founded directly by Syrian people or Syrian nationals in partnerships. There were differences by gender for Syrian women launching small-scale food businesses, and Syrian men moving their larger enterprises from home (Lemmon, 2017). Similarly, Yoshioka (2017) concludes that in Turkey “over the past five years Syrian refugees have set up over 4,000 businesses, bringing with them US\$220m in capital and making up over a quarter of all new foreign-owned firms established annually.”

International trade

Genç (2014) gives an overview of the evidence of 48 studies that link international trade with international migration. He concluded that **there is a causal positive relationship between migration and international trade**. A 10% increase in the stock of immigrants can boost trade by an estimated 1.5% on average.² Almost no studies have found a negative impact. Similarly to FDI, **immigrants can lower the transaction costs for trade because of their superior knowledge of home country markets, language, customs, business practices, and laws**. Furthermore, transaction cost effects are expected to affect both exports and imports and a common feature of the studies is that they all implicitly assume that immigration affects trade, not the other way around (Genç, 2014).

This direct trade-stimulating impact is likely to be greatest when the host and home countries have very different cultures, languages, and institutions, and when alternative sources of information are lacking, for example as informal trade barriers become more significant. Immigrants may lower such frictions through their knowledge of their home country's language, regulations, market opportunities, and informal institutions. Immigrants can decrease the costs of negotiating and enforcing contracts by drawing upon their trusted networks, thereby deterring opportunistic behaviour in weak institutional environments. **Migrants are thus typically expected to facilitate bilateral trade mostly with developing countries, where firms typically need to navigate a myriad of bureaucratic and legal hurdles**. Parsons (2012) showed this by dividing the world into the relatively affluent North and poorer South, the data shows that migrants affect significantly Northern exports to the South. Parsons (2012) explains this that:

- In general countries of the North export more differentiated products, while countries of the South more often export homogenous commodities;
- Informational barriers are likely highest in trade between those regions (Parsons, 2012).

² Genç (2014) found that for all the different cases he found in the literature, the overall mean of the immigration elasticity of exports was found to be 0.17, with that of imports very close to it at 0.16. This means international migration increases a bit more the export than import for a host country. Recent data with better and more immigration data than past studies yield similar results (Genç, 2014).

However, Genç (2014) concluded that there is no convincing evidence that the impact of immigrants on trade is greater for trade with developing countries than for trade with countries general.

Some studies suggest that the trade-inducing effect of immigrants is particularly strong when the first migrants from a particular origin country arrive and that **the impact becomes smaller once a sizable migrant community has been established** (Genç et al., 2013). For imports into the host country this can be explained with the immigrant preference effects, which are expected to boost only imports to the host country because they arise through the consumption channel as a result of immigrants' demand for the products from their home countries. It is also possible that demand for such goods increases among the host population as well, through a demonstration effect influencing the preferences of native-born residents. Over time, however, a countervailing immigrant substitution effect might also occur if the number of immigrants is high enough for domestic firms to start producing those products (Parsons, 2012).

Even after controlling for other factors, there are differences between countries in the immigrant elasticities of imports and exports. Differences in immigration and trade policies of host countries may cause this variation, like (Genç, 2014):

- The trade facilitation effect of immigrants is lower for homogeneous goods, for which the immigrant preference effect is expected to be less.
- There is some evidence that inclusion of the income per capita variable in the model increases the estimated impact of immigration on imports.
- A distance variable is found to do the same for exports.
- The use of variables that account for geography (such as whether countries are landlocked or remote) removes some of the effect of migration on trade.
- A trade agreements variable reduces the immigrant elasticity of imports but not that of exports significantly.
- Accounting for migrants' duration of residence or home country generally makes no difference.

A related, but indirect link may also exist. **Ethnic minorities living outside their home countries create formal and informal networks to which both the host country and home country have access.** These co-ethnic networks may promote trade by providing market information and supporting contractual enforcement. This network effect is in particular a strong mechanism to overcome informal international trade barriers. A study of Germany's trade found that the most efficient migrant networks originate from African or Middle-Eastern countries rather than from EU countries (Behncke, 2014). This is consistent with the view that the presence of migrant business networks is less relevant when countries already have commonalities.

Parsons and Vézina (2014) showed in a case study how this has worked for the Vietnamese immigrants to the US. Following the lifting of trade sanctions with Vietnam in 1994, the share of US exports going to Vietnam was higher and more diversified in the states with larger Vietnamese populations. They found that states with larger Vietnamese populations, measured in either levels or as shares of state populations, total migrant stocks or Asian migrant stocks, are associated with greater exports to Vietnam, whether expressed as shares of state GDP or total exports, or as the share of industries with positive exports, i.e. the extensive margin. The results are robust to controlling for income per capita, remoteness from US customs ports, and export structure, suggest that a 10% increase in the Vietnamese network raises the ratio of exports to

Vietnam over GDP by 2%, and the share of total exports going to Vietnam by 1.5% (Parsons & Vézina, 2014).

Firm-level data for Portugal shows that larger stocks of emigrants increase the likelihood of exports within the firm. If a firm serves a market, the presence of emigration stocks is an important driver of how much it sells there (Bastos & Silva, 2012)). Data from Denmark for 1995–2005 shows a robust positive impact of the employment of foreigners on export sales. At least 1.2% higher export sales could be found per additional immigrant employee (Hiller, 2013).

Parsons (2012) mentioned that an international examination of the trade-migration nexus at the product level is absent from the existing literature, which is needed fully understand the mechanisms underpinning the trade-migration nexus.

Trade in services:

Most research focuses on trade in goods and the link between immigrants and trade in services is almost unexplored. However, Ottoviano et al. (2015) stated that “due to the customer-specific information required for the provision of services this link may be particularly important”.³ Ottoviano et al. (2015) used data from the UK that showed the dominant role of business services and royalties and licensing agreements in both imports and exports. These are services that require a significant amount of country-specific and institution-specific knowledge. Consistent with the conclusions on the link between immigration and FDI and trade in goods, Ottoviano et al. (2015) found that these effects are stronger when the trading partners are more culturally and institutionally dissimilar. They conclude that **relative to trade in goods the transaction cost reduction that occurs through immigration may be particularly important for trade in services**, since providing a service abroad often requires an understanding of cultural specificities that goes well beyond what is required when selling a physical good abroad.

At the same time, Ottaviano et al. (2013) concluded that **immigrants reduce imports of intermediate services as they substitute for work that is otherwise performed by workers in their home country and then imported**. In other words, domestic firms may be faced with the decision to hire a local immigrant worker from a particular country or, instead, to ‘offshore’ that work to foreign workers in that country and import the finished product.

Ottaviano et al. (2015) found that for the UK a one percentage point increase in immigrants from a particular country into a local labour market leads firms in that area to export 6% to 10% more services to that country (a bilateral effect). **They found that this effect is driven primarily by export growth among firms already serving the market rather than by new firms entering the market**. Furthermore, this effect is strongest for services that are intensive in the use of language and legal expertise while it is not significant for the export of technical services. These findings are consistent with the view that for services in which the cultural content plays an important role, immigrants are an effective channel of services-trade creation.

Parsons and Vézina (2014) also showed that many Vietnamese businesses provided information and business services to US multinationals wishing to do business in Vietnam and help them navigate through a multitude of legal hurdles. For example, the first companies that established

³ Cited from Ottoviano et al. article on the VOX website (June 2015): <https://voxeu.org/article/immigration-trade-and-productivity-services>

long-distance telephone and flight services to Vietnam after 1994, drastically reducing information barriers between the two countries, were founded by Vietnamese migrants.

Entrepreneurship

There is a perception that international migrants are more entrepreneurial than the native population. Proponents of this view mainly point to the successes of migrant entrepreneurs in China and the US. For example, in China, 25% of immigrants are self-employed and involved in trade with their country of origin (Giulietti et al. 2012). In the US, longitudinal data shows that approximately 25% of US entrepreneurs (defined as the top initial earners in a new business) are immigrants to the US (Pekkala Kerr & Kerr, 2016). In total, between 35% and 40% of new US firms have at least one immigrant entrepreneur connected to the firm's creation (Pekkala Kerr & Kerr, 2016). Data from start-ups backed by venture capital (VC) firms and entrepreneurs seeking high-growth opportunities showed that immigrant entrepreneurship is somewhat stronger for VC-backed firms, with 31% of VC-backed founders being immigrants (Pekkala Kerr & Kerr, 2016). Furthermore, immigrant founders launch firms that are smaller than native-founded firms (average employment in firms founded exclusively by immigrants is 4.4 workers, compared to 7.0 workers for firms launched exclusively by natives). However, when the founders are mixed, the average is significantly higher with 16.9 workers (Pekkala Kerr & Kerr, 2016).

The main argument in the literature on migrants and entrepreneurship is, that migrant entrepreneurs may be less risk averse (Neville et al. 2014), be more able to spot opportunities for new businesses (Hart & Acs, 2011), have access to supplementary sources of support, training and financing - as often migrants increase their educational level and/or gain new skills, save more money and extend their social network while living abroad (de Haas, 2006; OECD, 2008). However, as Naudé et al. (2017) show the empirical evidence is not strong. Most standard government sources that are publicly accessible can only tell something about immigrant self-employment, which leaves a big question mark around job creation and economic growth. For instance, an OECD (2010) review finds that migrant entrepreneurship, measured by self-employment rates, is more common than non-migrant entrepreneurship in only 13 out of 25 countries in the OECD.

Moreover, **in the countries with larger immigrant populations, such as Germany, Italy, Spain, Switzerland and The Netherlands, migrants are much less likely than natives to be self-employed** (OECD, 2010). The only study to compare start-up rates (early entrepreneurial activity) amongst migrants and non-migrants across countries is the 2012 Global Entrepreneurship Monitor (GEM). It finds that rates of early entrepreneurial activity (start-up rates) are similar between migrants and non-migrants and that start-up rates of migrants are just as heterogeneous across countries as that of non-migrants (Vorderwülbecke, 2012).

Based on existing evidence, it does not seem like migrant entrepreneurs face significant other challenges than non-migrants - apart from discrimination, which is a significant factor (Nauré et al., 2018). Migrants often face discrimination in formal labour markets, which then drives them into (necessity) self-employment. Rising xenophobia has been found to push disproportionate numbers of migrants with limited English proficiency into self-employment in the USA (Mora & Davila, 2007).

That discrimination and xenophobia foster self-employment amongst migrants is thus acknowledged (Nauré et al., 2018). When they have a choice, migrants may often prefer wage employment to being self-employed. This conclusion is supported by the empirical patterns of

migrant self-employment in the OECD (OECD, 2010) as well as studies from, e.g., Germany which find that it is more likely for less educated migrants to be self-employed than for higher educated migrants (Constant & Zimmermann, 2006). As a result, **migrant entrepreneurs may be very vulnerable to external shocks because they are often in entrepreneurship due to a lack in access to wage employment** (Brixy et al., 2013). Neville et al (2014) findings that migrant entrepreneurs often perform worse than non-migrants, suggest they indeed face more difficulties. Using performance measures such as sales growth and profits from new Canadian start-ups, Neville et al. (2014) find that migrant enterprises are not generally better performing than those of non-migrants and that very often immigrant-owned firms underperformed. **Only in the case of migrant firms that export do they find superior performance, suggesting that these migrant firms may have better international networks** (this is in line of what was written above).

A number of countries have launched schemes to attract immigrant entrepreneurs as a way to further economic growth. For example, Chile's Start-Up Chile programme pays overseas entrepreneurs to come visit for six months as a way to build global bridges and foster an entrepreneurial culture at home. A 2016 EU conference examined existing initiatives to stimulate migrant entrepreneurship and the added value of potential European level actions.⁴ It highlighted that effective and targeted business support schemes have an important role to play in supporting migrant entrepreneurs. This was followed by the Commission starting four specific capacity building projects for migrant entrepreneurs in 2017.⁵

4. Impact on productive sectors, innovation and GDP growth

High-skilled vs low-skilled migrants

The macro-economic relevance of international migration is measured as the changes in output per capita in host countries (GDP growth per capita). **Evidence suggests that migration could indeed have a positive impact on output per capita in host countries.** However, such analysis is complicated by the fact that some of the pull factors driving migration can bias the findings — for example, if migrants settle in countries experiencing high GDP growth, it would be easy to conclude that migration is “causing” that growth (IMF, 2016). To circumvent this complication, Alesina et al. (2015) and Ortega and Peri (2014) use a gravity model to disentangle the effects of migration driven by push factors. In a cross-sectional setting, they find a large positive impact of migrants on output per capita in recipient countries. They relate this to a positive impact on employment, capital accumulation, and labour productivity from mainly high-skilled international migrants, which not only increases productivity on its own, but also fosters diversity in the labour force.

Manole et al. (2017) argued that for **the receiving countries, migration results in higher productivity through innovation and complementarities, leading to economic growth.** The study showed that an increase in the number of migrants by 100,000 leads to a 0.84% increase in the GDP per capita of the receiving country. Noja et al. (2018) came to the same conclusion

⁴ See for more information: https://ec.europa.eu/growth/smes/promoting-entrepreneurship/we-work-for/migrants_en

⁵ See for more information: https://ec.europa.eu/growth/smes/promoting-entrepreneurship/we-work-for/migrants_en

for EU countries, but added that although there is a difference between asylum seekers/refugees and economic immigrants, the first also tend to generate positive effects upon the labour market slightly increasing the employment rate and labour productivity.

Jaumotte et al. (2016) estimate that a 1 percentage point increase in the share of migrants in the working-age population can raise GDP per capita over the long term by up to 2%. This result is economically significant. They find that migration has a positive and significant impact on labour productivity. In addition, they find no relationship between the long-term growth in the capital-to-labour ratio and the change in the stock of migrants, consistent with investment adjusting over time to a larger pool of potential workers. Moreover, **migration has a positive effect on the incomes of both the top earners and of those of the rest of the population, although the impact of high-skilled migrants is larger for top earners.**

According to estimates from the IMF, by the end of 2017 GDP in Austria, Germany and Sweden - three countries which have received large numbers of refugees per capita - will have been boosted by 0.5%, 0.3% and 0.4%, respectively (Aiyar et al., 2016). In Germany, by far the largest recipient in absolute terms, refugee-related expenditure amounted to more than EUR 20 billion in 2017 (Aiyar et al., 2016). In other words, **aggregate demand in the short-term has a positive impact on GDP growth.** Aiyar et al. (2016) are more cautious about the long-term effects. Effects depend on: migrants' average level of education; how long they will remain in their host countries; and, most importantly the long-term economic impact of refugees rests largely on how successful countries are at economically integrating migrants. **The more refugees who find jobs, and the better paid these jobs are, the greater the positive impact on labour supply and economic growth.**

The literature shows that both high- and low-skilled migrants increase productivity. However, **high-skilled migrants are more likely to have a larger impact on GDP per capita through their larger impact on productivity.** According to the literature, lower-skilled migrants may also increase productivity if their skills are complementary to those of natives. Jaumotte et al. (2016) found that both high- and low-skilled migrants have a positive impact on productivity of a similar magnitude. They attribute this finding to the "over-qualification of migrants", as some countries show a higher proportion of highly educated migrants employed in lower-skill occupations, which add to the complementarities. Low-skilled migrant workers allow higher-skilled natives to move into different labour market segments, encouraging them to take higher-skill jobs and obtain additional education. They also promote female labour force participation by taking housekeeping and childcare jobs. However, **a large entry of low-skilled immigrants could change the sectoral specialisation of the economy, for instance toward lower-productivity sectors such as construction, lowering Total Factor Productivity (TFP) (IMF, 2016).**

Productive and innovative sectors

Van de Beek (2010) is more critical for the Dutch context, as he showed that in the 1960s and 1970s jobs for economic migrants were concentrated in low productive sectors. In the medium term, this had an overall opposite effect on the economy. These industries could only compete internationally by keeping the wages low, but during the transition years towards more capital-intensive sectors in the 1980s it were mainly the migrants who lost their jobs. The lack of integration efforts and policies combined with a non-flexible labour market, the majority of these migrants fell back to social security programmes (Van Beek, 2010). Nagamura's (2010) study of Japan supports these points, outlining how international migrants working in less productive sectors can be a cushion for necessary rapid economic transformation. However, he showed that

a combination of immigrants and native Japanese in low productivity sectors, rather than only focussing on cheap migrant labour, could increase survival probability to make production operations more efficient.

In this context, innovation is an important factor for any conclusion on international migration and economic growth. Migration can contribute to innovation and migrants can benefit economically from innovation. For example, immigrants may foster services trade to all destinations by increasing the overall productivity of the firm, thereby increasing the profits associated with overseas sales (Wright, 2014). Potential sources of these productivity gains are a 'diversity effect' in which immigrants foster creativity and help generate new ideas, and a 'specialization effect', in which immigrants possess a comparative advantage in performing certain production tasks, allowing for greater division of labour within the firm. **When these productivity gains are large enough and firms face fixed barriers to exporting, the gains may help firms to overcome these barriers and access foreign markets they might not otherwise serve** (Ottaviano et al., 2015).

Most of the literature focusses on the impact of high-skilled migrants and their impact on innovation and GDP growth. Hunt and Gauthier-Loiselle (2010), using US patent data, find that "immigrants account for 24 [per cent] of patents, twice their share in the population, and that the skilled immigrant patenting advantage over natives is entirely accounted for by immigrants' disproportionately holding degrees in science and engineering fields" (Hunt and Gauthier-Loiselle, 2010, p.33).

5. Impact on government spending and tax revenues

Revenues from migrants include taxes they pay directly such as income tax, social insurances, and VAT on purchases. Expenditures include direct costs such as public health care, education for migrants' children and cash benefits such as tax credits and pensions, and government spending that is likely to be affected by the size of the population such as transport and policing. **Given their impact on the working-age population and economic activity, migrants can generate additional tax revenues and social contributions** (Vargas-Silva & Sumption, 2019). However, especially in the case of refugees, time is an important factor, which means there will be a delay before they begin making a fiscal contribution (IMF, 2016). **In the short term, they may need recourse to welfare services and claim social benefits - notably, health care and social assistance.** In case of a short-term negative effect on employment and wages, although the literature suggests that this is not often the case (see above), social costs could temporarily increase. However, these effects could also be mitigated if migration increases the income from capital (e.g. through higher house prices – see box 1) for natives (IMF, 2016).

The impact of migration on fiscal accounts depends not only on migrants' income, but also on the generosity of the social security system in host economies and the flexibility of the labour market to adjust to changes, which are two important factors of how fast immigrants can integrate in the labour market (Vargas-Silva & Sumption, 2019). Over their lifetime, migrants tend to contribute less than natives to the fiscal accounts, mainly because they pay less in taxes and social security payments (IMF, 2016). This points to the importance of their integration into labour markets: their smaller contributions reflect less time in the labour force and in general lower-paying jobs. This also explains the rationale of labour migration management systems. In the Australian system, for example, age has a strong weight - up to 38% of the pass mark - and there are maximum-age thresholds for admission (IMF, 2016).

Migrants depend more on some social transfers, but differences between them and natives do not seem to have large budgetary implications. Relative to unemployed native-borns, unemployed migrants are more likely to receive social assistance, but less likely to receive more generous unemployment benefits. The case of Germany illustrates that both natives and migrants have an increasing contribution as they approach working age, which diminishes during retirement - the contribution of migrants, though, tends to become positive later, peak at a lower level, and turn negative at an earlier stage (IMF, 2016). Furlanetto & Robstad (2016) show in **case of Norway with its generous social security programmes that the burden that immigrants may place on public finances over the long-term is neutral**. They found that a positive immigration shock lowered public expenditure in the short run, but increased it in the long run, perhaps reflecting family reunifications. Because fiscal revenues also increased the net effect on public finances was slightly positive in the short run, and neutral in the long run.

Experience, suggests that the net fiscal impact of migrants is small for OECD countries. Estimates depend critically on a number of assumptions - notably the many elements that determine the employment prospects of migrants (as noted above), their age profile, and how the analytical approach takes into account the dynamic macroeconomic effects of migration (Vargas-Silva & Sumption, 2019). OECD (2013) presents a cross-country study based on a static accounting (cash flow) model that assesses the tax and social security contributions as well as the receipt of social security benefits and government services of the stock of migrants in 27 OECD countries between 2007 and 2009. The impact, either positive or negative, rarely exceeds 0.5 percent of GDP in a given year and is about zero on average. There is a positive fiscal impact in 19 countries—that is, 70% of the sample of countries.

In case of refugees, higher short-term costs of caring for refugees, however, could add fiscal pressure in recipient economies. On arrival, refugees receive housing, subsistence, and integration support. Moreover, they are often not allowed to work until their legal status is cleared. This lowers their short-term fiscal contribution relative to that of other migrants and natives (IMF, 2016). Less developed countries have typically shouldered the largest burden associated with refugees - for instance, in Jordan, Lebanon, and Turkey, spending on refugees is estimated at 2.4%, 3.2%, and 1.3% of GDP, respectively, during the recent surge (for Jordan: IMF, 2015a; for Lebanon: IMF, 2015b; for Turkey: IMF, 2016). This is also relevant for many European countries, which have relatively generous welfare systems and a significant number of humanitarian migrants. Aiyar et al. (2016) estimated for the euro area suggest that average budgetary expenditures on refugees could reach 0.2% of GDP in 2016, with Austria, Finland, Germany, and Sweden expected to shoulder the largest spending increases. For Sweden, expenditure on migration is expected to be 1% of GDP in 2016.

For the UK, all studies (Rowthorn, 2014; Dustmann & Frattini, 2014) come to similar conclusions that there is a difference between the contributions made by migrants from the original EU-member-states, the newer EU-member-states, and non-EEA migrants. Studies examining the fiscal impact of migrants have produced different results, although in all cases, the impacts have been estimated at less than +/- 1% of GDP. However, there is consistency in the results, as they conclude that the **fiscal impact of EEA migrants is more positive than that of non-EEA migrants**; and that the impact of recent migrants is more positive than the impact of migrants overall. For example, a study by Oxford Economics (2018), commissioned by the Migration Advisory Committee, estimated the net fiscal contribution of EEA migrants in fiscal year 2016/17 at £4.7bn, compared to a net cost of £9bn for non-EEA migrants. Migration Watch (2016) found that in fiscal year 2014/15 both EEA and non-EEA migrants represented a net fiscal cost (of

£1.2bn and £15.6bn respectively). A large part of difference between these studies arises from the choice of how much of the taxes paid by businesses attribute to migrants (Vargas-Silva & Sumpston, 2019).

Oxford Economics (2018) found that the negative net fiscal contribution of non-EEA migrants was primarily due to higher spending on education of children, since non-EEA migrants are currently more likely to have dependent children than the UK-born. They were also estimated to receive more in family benefits and tax credits. Oxford Economics (2018) found that a single 20-year old with no children only needed to earn just over £10,000 per year in order to 'break even' from a fiscal perspective, while a couple with two dependent children—who incur much greater expenditure on health and education—would not become net fiscal contributors until they earned around £45,000.

However, **over the longer term, migration has the potential to reduce fiscal pressure related to population aging in recipient countries.** For example, continued migration in line with current trends could slow the expected increase in the old-age dependency ratio and associated health care and pension spending relative to GDP (Clements et al., 2015). These effects will be larger, the larger the impact of migration on GDP growth. Migration cannot fully address challenges from population aging, but it can provide time to phase in entitlement and other reforms, which are still necessary in many countries. Incoming migrants are more likely to be of working age than the population in general and therefore more likely to be working and contributing to public finances. OBR (2013) noted that over a longer time horizon than 50 years, these migrants would retire and add to age-related spending pressures. It concluded that “higher migration could be seen as delaying some of the fiscal challenges of an ageing population rather than a way of resolving them permanently”.

Box 1: Impact of international migration on housing in host countries

The effect of international migration is not the largest contributor to house price dynamics; however, it is significant. A study (Barbu et al., 2017) using data for the period 2007-2014 for 21 countries showed the existence of a positive relationship between the evolution of the housing price and the flow of immigrants. An increase of the immigration flow of 1% (measured by the percentage change in the number of immigrants) lead to an increase of the housing price (measured by the HPI index), with approximately 0.045%. One explanation for this evolution is given by the increasing demand for real estate assets generated by the immigrants (even for living, as owned property, but, even more, for rented properties). Increasing demand on the real estate market (by increasing rents) and changing its structure lead to rising real estate prices. At the same time, establishing a distinction between volunteer and involuntary immigrants would better highlight the effects of immigration on the price housing (Barbu et al., 2017).

UK: The UK Parliamentary Office of Science & Technology (2017) states that about 80% of foreign-born migrants resident in the UK for less than five years live in the private rented sector, compared to about 20% of the UK-born population. Migrants with over a decade of residence tend to demonstrate similar levels of owner-occupation to the UK-born population. About 20% of migrants live in social rented accommodation, similar to the UK-born population. There is no evidence that social housing allocation favours migrants. However, shortages of suitable housing for all groups can exacerbate tensions between established residents and new migrants and hinder integration and community cohesion (Parliamentary Office of Science & Technology, 2017). In the case of Great Britain, the origin country and the financial condition of the immigrants may impact, in different ways, the housing price. Sá (2015) examines the housing price in Great Britain in the 159 territorial units from England and Wales, for 2003-2010. The derived conclusion is that the immigration has a negative effect on the housing price, caused by the mobility of British native people, who, when native villages are populated by immigrants, prefer to move elsewhere. These moves will result in a decrease in demand for homes in these areas, which will lead to lower price.

US: In the US, housing immigrants accounted for 27.5% of the increase in the number of houses from 1994 up to date (White, 2015). Cvijanovic et al. (2010) conclude that the immigrant population continues to be a key element in the US housing market, because their appetite to buy their own homes in the US is high. Vigdor et al. (2013) had estimated the impact of immigration on the housing price in dollars and cents, using data on population and mortgage market for the period 1970-2010. The results indicate that every immigrant added 11.6 cents to the housing price, leading in the US states with a high density of population to an increase in the housing value during a 40-year time interval. Saiz and Wachter (2011) estimated the impact of immigration on the native population dynamics and neighbouring residential areas. The authors argue that if the native population show a

negative attitude towards immigrants, they will prefer to relocate. The effects will be found both on the housing market in the areas where natives relocate and on the housing markets in areas where natives moved out.

New Zealand: Based on historical data on immigration, McDonald (2013) developed a model to estimate the immigration correlation with different variables, among them the house price: 1000 arrivals of immigrants from Europe and the UK, housing price increased by 8% after two years, while if people come from Asia, the price increase is only 6%. Chanpiwal (2013) examines the response of New Zealand mortgage market to the shocks generated by immigrants. The study is based on data from the period 1996-2011 and show a positive correlation between migration and housing price, meaning that an increase with 1% in the number of immigrants leads to a price increase on average by 7.5%.

Norway: Nordbø (2013) and Frostad (2014) estimate the housing price elasticity in the case of an increase in the immigrant population share of 1% in the total population in Norway. The results are similar, indicating, based on the observations during the period 1986-2012, that the housing price increased by 2.6% to 3.3%, according to the first author, and by 2.95% according to the second author. Furlanetto and Robstad (2016) investigated systematically and in a consistent framework data for Norway, the impact of immigration on standard variables such as unemployment, housing price, public finances, exchange rate, labour productivity. By considering in a VAR model the housing price as unrestricted variable, the authors concluded that shocks induced by immigrant flows have no impact on housing price, as they are routed through labour supply channel.

Spain: The empirical study conducted by Gonzalez and Ortega (2009) on the Spanish case highlights the effects of immigration on the housing price and residential development in 1998-2008. This country is a relevant case because the period corresponds to both real estate boom, and to the wave of immigration. On average, in the selected period, Spain received flows of immigrants equal to 17% of the working population, which led, on the one hand, to the rising housing price on average by 52% and, on the other hand, it resulted in 37% of the new construction.

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