



# High-Skilled Migration: Past, Present and Future

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*Migration is an expression of the human aspiration for dignity, safety  
and a better future. It is part of the social fabric, part of our very  
make-up as a human family.*

—*Ki-Moon (2013)*

## 1 INTRODUCTION

Migrating is intrinsic in human nature. Campbell and Barone (2012), in their study on the origin of human migration, point out that proofs of human migration found in fossils date back at least 2 million years. The basic principle of migrating is clear, people move to “improve” their situation, but the meaning of “improve” has been changing over time and it is different across space. Initially individuals moved for survival reasons. As societies evolved, this sort of “forced” migration was gradually substituted with other forms of migration, where the scope was not strict survival, but

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rather ensuring a better quality of life and living conditions. Although forced migration still exists in situations of conflict or extreme poverty, the majority of migration movements nowadays has a more “voluntary” component. Migrants move to get more opportunities, often linked to the labour market. High-skilled migrants are becoming an increasingly important part of migration flows. As Nathan (2014) highlights, in the decade 2000–2010, high-skilled (international) migrants (identified as individuals with a tertiary degree) in the OECD countries increased by 70%, as compared to 20% for the low-skilled. As Faggian et al. (2017) point out *labour markets have become increasingly globalized, which has created new opportunity for mobility, especially of high-skilled workers*. Acostamadiedo et al. (2020) expect a further increase in the number of migrants to the European Union by 2030. They propose four different scenarios and find an increase in 2030 of between 21% and 44% from the recorded average annual figure for the 2008–2017 period. The figure is much larger—between 83% and 208%—when restricted only to high-skilled labour migration. As such, migration is now a more “selective” process that has attracted a lot of attention of both academics and policy-makers. However, although the extensive, and growing, literature on the topic, much confusion still exists and more needs to be studied and understood. This short contribution aims at highlighting what we know on the topic, while also paving the way for possible future developments. Section “[How Do We Define “High-Skilled” Migration?](#)” starts by discussing what is meant by “high-skilled” migration; the other three brief sections sketch the main issues dealt with in the past, the improvements in the present and some possible future advancements.

## 2 HOW DO WE DEFINE “HIGH-SKILLED” MIGRATION?

It is often the case that high-skilled migration is discussed without making explicit what is meant by “high-skilled.” In reality, the way high-skilled migration is defined and measured in the literature is not univocal and there is no agreed concept, partly because the migrants themselves do not constitute a homogenous group (Salt, 1997). The three ways to identify high-skilled migrants found in the literature are based on: a. educational attainment; b. occupation; c. salary or income. Although the three alternatives are somewhat positively correlated, a contribution by Parsons et al. (2020) shows that their correlation is not as strong as previously thought. For instance, by looking at recent international immigrants to the USA,

using data from the American Community Survey for the year 2015, they find that only 8% of migrants can be defined as high-skilled if all three conditions, that is, a tertiary education, an occupation in the upper tier of the US Standard Occupational Classification and a salary of at least \$100,000, are to be combined. If salary is relied upon in isolation, potentially 87% of otherwise classified high-skilled migrants may be omitted, if occupation is used this number goes down to 53%, but it is still very high. The most comprehensive measure is educational attainment (only 9% excluded). This reason, together with data availability, provides a strong justification in favour of education as a means to identify high-skilled migrants. While recognizing that also education has obvious limitations, education is therefore now the most common way to define high-skilled migrants (e.g. Pekkala et al., 2016; Parey et al., 2017; Basile et al., 2020; Crown et al., 2020a), although there are also examples of occupation-based definitions (e.g. Czaika & Parsons, 2017).

### 3 PAST: WHAT DO WE KNOW ABOUT “HIGH-SKILLED” MIGRATION?

Given that the initial study of migration goes back as far as Ravenstein in 1885, there is a lot we know about migration (including migration of highly skilled individuals), in particular with regards to two aspects:

- (a) Migration **determinants**
- (b) Migration **consequences**

Migration determinants include both individual and regional characteristics. Among the individual characteristics, some established facts include that age is negatively correlated with the probability of migrating, while education and skills are positively associated with it (Faggian et al., 2015). The reasons for the latter are many. Education helps in finding and processing information more efficiently (DaVanzo, 1983), it also implies a more “globalized” search for jobs, as educated individuals are more selective in picking their employment (Schwartz, 1976). More educated individuals also rely less on family and friends (DaVanzo, 1981) and are generally more *adaptable* to new places, in that they are more “receptive to change” (Levy & Wadycki, 1974) and extrovert (Crown et al., 2020b). In OECD countries, between 2000 and 2015, there has been a

continuous increase in the level of education of immigrants, and a simultaneous decline in the proportion of poorly educated ones.

As for regional characteristics, it is clear that individuals move to regions that offer not only better economic and labour market opportunities (Greenwood, 1985), but also better amenities (Graves, 1976, 1980). The balance between the two depends on the characteristics of the migrants themselves. For instance, younger migrants place more importance on labour market variables, while retirement migration is often linked to quality-of-life factors. The income of migrants affects their choices too, with richer migrants being able to give amenities a higher value.

As for the consequences of high-skilled migration, they are often supposed to be positive for the destinations, for example, in terms of increased productivity and innovation (Faggian & McCann, 2009), and negative for the origins, in the form of reduced growth and brain-drain (Beine et al., 2008; Wong & Yip, 1999). However, although maybe a bit counterintuitive, some argue that also origins might benefit from the emigration of highly skilled individuals, for instance, in the form of remittances, future return migration (also called brain-circulation) and the creation of networks between destinations and origins. Kanbur and Rapoport (2005) go an extra mile and point out that ex-ante emigration prospects could also foster the formation of human capital in the origin pushing more individuals to invest in their education. If not all of them emigrate, then those left behind represent an added-value for the origins.

#### 4 PRESENT: IMPROVING OUR CURRENT KNOWLEDGE

In the past two decades, more and better data on migrants, both interregional and international, became available. This helped refining some of the previous work on both the determinants and consequences of migration. For instance, although a positive link between high-skilled migration and innovation was found in different contributions, all of them relied on patents to measure innovation, but, in time, it became clear that patents were a poor way to measure innovation especially for the sectors where high-skilled migrants were actually working.

As Faggian et al. (2017) state, *most highly-skilled migrants end up working in advanced service sectors where patents heavily underestimate innovation*. Pinate et al. (2021) extend the analysis of innovation, in the case of Italy, by using not only patents, but also other intellectual property rights (IPRs), that is, trademarks and design rights. As for the determinants,

better individual data means that it is possible to focus more on gender issues. The majority of migration studies in the past focused primarily on the experiences of male migrants (as head of the households) or did not distinguish between genders. This is a common flaw in the labour-related literature, but with better data it is possible to address the role of female migrants in more detail. This is of paramount importance because contributions on female migration are still rather scarce (e.g. Faggian et al., 2007) and results are mixed.

## 5 FUTURE: BIG LEAPS WITH BIG DATA?

With the advent of so-called big data, there is a huge opportunity to further progress our knowledge of migration. Ascani et al. (2021), for instance, using data from Facebook, were able to study mobility patterns within and across local labour markets in Italy and the effect of the recent pandemic. The potential of these data is clear as they are high-frequency (three observations per day) and provide very large samples (about 2.5 million observations). However, with big potential come also possible big problems. First of all, it is easy to get lost in such a large amount of data and being tempted into data-driven, and not theory-driven, research. Second, there is the need to find appropriate tools of analysis (models) and even appropriate hardware and software. Third, there are issues of privacy and anonymity, which might prevent from getting detailed information on the characteristics of the migrants, such as their educational level or even age and gender, which are often the variables of interest.

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