THE IMPACT OF MIGRATION ON HUMAN CAPITAL AND ECONOMIC DEVELOPMENT

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Abstract: Human capital accumulation is time consuming and requires public and private resources. Therefore, decision of investing in human capital depends on the gains and costs associated with these investments. It was noticed that, during the last decades, the migration rates have been much higher for the highly-skilled than for the low-skilled workers. Moreover, they tended to migrate especially to the developed countries, where they are better remunerated. In this context, migration costs of highly-skilled workers are not only on short term, discouraging investments in higher education, but also on long term, generating a number of "externalities": their departure increase the domestic inequality, raise the fiscal burden on those left behind and it negatively influences the country's economical and technological development prospects. Considering all these arguments, it can be concluded that skilled migration increases inequality at the international level, rich countries getting richer at the expense of the poorer countries. Recent studies doubt this conclusion and analyze the way in which traditional negative effects of the skilled labor migration may be compensated through positive consequences of the migrants' return, creation of trade and business networks, knowledge diffusion or remittances.

Keywords: migration, human capital accumulation, economic development, economic growth

1. Introduction

In the same way that at the end of the last century the cross-border financial capital flows have transformed the global economic and political landscape, over the next few decades, it is likely that the global migration, driven by demographic and technological factors, and by the inevitable persistence of large income gaps across countries, plays a similar influential role in shaping this landscape. It is foreseen that the migration will take place within developing countries – in giants like India and China, specifically regarding the movement from rural to urban settings –, among them, and from developing to developed countries. In the context of globalization, the migration from lees developed or developing countries to prosper economies has a particular importance. A leading cause is the increasing focus of immigration policies from industrialized countries on "quality of human capital". This trend is likely to intensify as rich countries age and competitive pressure amplifies.

It was considered that the states with a higher educational level grow faster than the others due to the fact that formal and informal education gives the opportunity to better adapt to the new technologies in a shorter period of time. Some authors such as Rauch (1993) or Acemoglu and Angrist (2000), analyzing the production externalities of education, conclude that a higher level of human capital generates an increase of the individuals' marginal product and, by extension, of their wages; to sum up, we can agree that a more educated labor force can raise the average productivity of a country. Moreover, education improves the welfare state not only by opening up broader economic opportunities, but also through its indirect benefits such as improvements in health, nutrition, opportunity for self-fulfillment and development of individual capabilities (Haveman and Wolfe, 1984). Regarding these indirect effects, Sianesi and Van Reenen (2000) underline that a high educational level might be related to a friendlier environment, a wider political and community participation, a greater social cohesion and a lower criminality; all these, on their turn, may influence the economic growth.

Therefore, an important role in sustaining the educational system of a country is played by the level of the investments that are made, not only public funds but also private resources. Lall (2001) considers that the public sector should be responsible for financing the primary and secondary education, and only partially for the tertiary one. It is the case of many East-Asian countries that put a great accent on the private expenditure for the tertiary education.

Judson (1998) argues that, for the economic growth, the way in which resources are allocated between the primary, secondary and tertiary education is more important than the their quantity. To sustain this idea, some studies conducted by Lee (2001) and Lall (2001) bring the example of the Asian tigers where the good allocation of the resources for education contributed to the economic growth and development. They show the way in which the allocation of the resources on different educational levels has been made in East Asia, starting with 1970. Thus, at the beginning of the development process, the primary education had a great priority in East Asia, obtaining an attainment rate of almost 100% for this level in 1970. This fact helped the region focus on improving the quality and raising the amount of the resources devoted to secondary and tertiary education.

In a comparative analysis of M. Belot (2004) between European states and USA, he concludes that in USA there is a higher share of population with tertiary education than in Europe. We can also remark the higher share of private and public expenditure with the tertiary education in the total expenditure of United States compared to any other European country; this aspect could be partially explained through the high cost of migration in Europe.

Specialized studies reveal the fact that the opportunities offered by migration stimulate the private investments in education. For example, Stark and Wang (2001) confirm that the results of private investments in human capital depend on the medium level of human capital from the countries where people work. As a consequence, in poor states this level is low and consequently the results of the investments in human capital will be low. The opening of these countries to migration to states with higher levels of human capital may foster the investments in education. As long as the migration policies establish the limits up to which workers can migrate, the opening of the country to the migration process may involve welfare (if all the workers, including those from home, invest in order to increase the level of human capital).

2. Human capital and the trends of migration

One of the most complex phenomena that define globalization is the migration of labor force. Being based on the need of personal fulfillment or on the simple desire to survive, the phenomenon has major consequences for the countries involved in this process. Globalization gives the opportunity to accumulate human capital in that regions or countries where it already is abundant and well rewarded – in developed countries. While the world exports/GDP ratio has increased by 51% between 1990 and 2000 (WTO, 2004), the total number of foreign-born individuals residing in OECD countries has increased in the same proportion - 51% (Docquier and Marfouk, 2004). In absolute values, the total number of immigrants who lived in OECD countries was 58.5 million in 2000, compared to 39.8 million in 1990. Referring to a United Nations report, Borjas (2000) considers that 200 millions of people, which means almost 2% of the world's population, were living, at the beginning of the XXIst century, in another country that the natal one. Moreover, the share of the immigrants with tertiary education was 70%, compared to that of immigrants with a low level of education (30%), in spite of the fact that migration costs probably hurt more the high-skilled workers (Schiff, 2002). The high-skilled workers can perform more tasks, including the low-skilled ones, so they do not necessarily need to migrate. But because they invested a large number of resources to specialize in doing specific tasks, they will look for a job corresponding to their education, with a good salary. Investments in ones education, which require not only material resources but also a long period of time, have a clear reason: increasing the income. As an average, in developed countries each additional schooling year increases the income with about 20%. It is obvious why people with medium and superior education are the most tempted to migrate to these kinds of destinations, especially when in the origin country, due to the low productivity and to the limited options for using the productive capacities, they will not be able to completely use their skills and they will get a salary significantly below the medium level of the developed economies.

At a global level, 1.66% of the active population lives in a foreign country and the average global rate of emigration is 0.94%, 1.64% and 5.47% for those with low, medium and high levels of education. Since 1990, the share of skilled workers in the total stock of immigrants has increased in all receiving countries. In the OECD countries, especially in North America, the proportion of skilled immigrants originating from low-income countries has raised during the last 10 years, with a notable increase of high-skilled immigration from Asian countries (OECD, 2013). Meanwhile, the number of the low-skilled migrants has also augmented, as a result of an increasing demand for low-skilled workers. For example, the number of the migrants with no more than lower secondary education in OECD countries increased by 12% during the last ten years (OECD, 2013).

Brain drain has a very important impact on the human capital structure of the labor force in the Caribbean, Central America, South-East Asia, Western and Eastern Africa. The proximity to the USA is obviously a key factor explaining the situation of those from Caribbean and Central America. The emigrants from the South-East Asia generally choose between USA, Canada or Australia. In the case of the African countries, one of the factors that influence the destination country for the emigrants is represented by the colonial ties with the European states such as UK, France or Portugal.

For the poor countries, the increase in the number of high-skilled emigrants became a serious problem because those who migrate represent a growing share in the total population (for example, they are more than a quarter for many African countries). A research conducted by Docquier and Marfouk in 2004 reveals the situation of the emigrants with tertiary education, starting with 2000. The share of the tertiary educated people, in the whole population with tertiary education, who had emigrated, was more than 50% in Gambia, Cape Verde, Somalia and Seychelles, between 25 and 50% in 14 countries and between 5 and 25% in 28 other states. Moreover, a study conducted by OECD in 2013 shows that, in 2010, close to 90% of highly skilled persons born in Guyana lived in OECD countries.

Kapur and McHale (2005) consider that these flows are driven by three powerful long term trends: not only do the new technologies require a larger number of high-skilled persons, but also there are also favorable governmental policies in the host country; the aging of rich countries' population; the broader globalization of production and trade: the integration of capital and product market brings along the integration of labor force market (for example, the multinational companies desire flexibility to locate the production and to move their staff between locations).

The emigration is a very serious problem for every country, but especially for the poor or developing ones. Usually, the young productive people emigrate. Not only the base of the age pyramid is narrowing, affecting the normal structure of the population, but also the production will be disturbed by the diminishing of the available labor force, fact that modifies the level of the equilibrium salary, increasing the costs and reducing the competitiveness of the products. The final effect is not a favorable one for the poor countries, because for them, the low price, due to cheap labor force, is the only competitive advantage. Moreover, from among the young people, especially those with strong general or specific education emigrate. The loss for the origin country is double. On one side, the investments in education of those people will not be refundable. The costs of education are high, the average being around 3% of GDP. At a macroeconomic level the emigration of the young people is considered to be an unproductive consumption, a diminishing of national product. On the other side, the country loses the future production that could have been obtained by those who emigrate. In fact, this is the most important loss not only because the number of specialists diminishes, but also due to the fact that the structure of market's labor force modifies. It is not surprisingly why the supplying labor force countries rest, for a long period of time, in a less developed stage, not being able to develop or to adopt new technology: there are not enough specialists to do this because they are attracted by the higher levels of incomes from the developed countries. This aspect is largely debated.

Analyzing the determinants of the migration for Indian states between 1961-1991, Cashin and Sahay (1996) consider that here the income in the destination region has a much smaller impact on inter-state migration than in the case of the migration across the USA states between 1900-1987 or across Japan between 1955-1985. Moreover, the impact of income in the destination area on migration in India is closer to that of migration across regions of Europe. The authors argue that the most important factors explaining the differences in response in the US and Japan, on the one hand, and Europe and India, on the other, are the higher level of social, cultural and linguistic barriers in the latter. Studies by Barro and Sala-i-Martin (1995) or Gros (1996) confirm this aspect, underlying the fact that migration trends within or between the nations, generated by the unemployment or by the level of the wages, are lower in Europe than in the United States.

In the analysis made by Rodriguez-Pose and Vilalta-Bufi (2004), regarding the disparities still existing in the regions of European Union, they point out the correlation between GDP per capita, the level of human capital endowment and the migration trends. They divided the EU regions in four groups, taking in consideration the evolution of GDP per capita between 1994 and 2000:

- A: catching-up regions, with a low starting level of GDP per capita with respect to their national average, but with a higher than average economic performance;
- B: winning regions, with both higher than national average initial GDP per capita and economic growth rate;
- C: losing regions, with both lower than national average initial GDP per capita level and economic growth rate;
- D: falling behind regions, with a higher than national average initial level of GDP per capita, but with below average economic performance.

As shown in the Rodriguez-Pose and Vilalta-Bufi's study, most of the regions tend to fall either in the winning or losing category. Among the winning regions we find many of the capital regions (such as Brussels, the South-East of England, Madrid, Athens or Lisbon), as well as regions home to some of the most important urban agglomeration, such as Munich, Milan or Ruhr. Loosing regions form a large group that consists of a series of industrial declining regions (such as the North, North-West and Yorkshire in UK, Wallonia in Belgium) and many peripheral regions such as Calabria or Sicily in Italy, the South, Centre and the North-East of Spain, the Centre and North of Portugal. After analyzing the endowment with human capital in the four types of regions, it results that the winning regions have a superior stock of human capital compared to the other three: here, the number of persons with tertiary education is 30% higher than in the regions form the D group. The situation from this last group reveal a shortage of individuals with higher education, a low percentage of high-skill jobs and a low presence of professionals and technicians. In fact, while in the first three regions – A, B, C – the number of people with secondary and tertiary education is above the average, in the D type regions the share of these individuals is 10-15% under the average. From the migration point of view, it is obvious that the regions with a high level of GDP per capita (especially in B and D regions) have the highest rate of migration, while in the poorest regions the immigration rate is much lower. However, the type and motives for recent migration differ across the four categories of regions: the winning ones manage to attract highly qualified workers; the catching-up group attracts skilled labor and has a strong job-related migration; on the contrary, falling behind regions and the loosing ones score best in non-highly qualified job related migration. Considering the econometric analysis of Rodriguez-Pose and Vilalta-Bufi, we can conclude that the ability of a region to attract foreign highly qualified workers is as important as a good education; as a consequence, the regions that are able to attract a large number of qualified workers have a high growth rate.

3. Migration externalities

Current trends of the global economy reveal a tendency towards a complete globalization in which the boundaries become less important for the factors of production. Free movement gives individuals the opportunity to identify the best job offers, with the best level of the salary, from the international labor market. We cannot yet call it global because it still excludes some regions and there are some prohibitions left, which developed countries still maintain in order to protect their own internal markets. In the future, the migration trends will increase due to the intensification of product market competition that will force the governments to ease immigration restrictions so as to provide domestic firms with a source of competitive advantage through improved and cheaper access to a diverse set of skills. In a world of perfect competition, with free mobility of labor force, we can talk about equilibrium: those who emigrate will receive higher incomes, natives in the receiving countries can share the immigration surplus and the remaining residents in the sending countries can benefit from the rise in the land/labor and capital/labor ratios. In reality, this does not happen because the highly-skilled emigrants generate a number of externalities. Being net contributors to the government budget, their departure will increase the fiscal burden on those left behind. Moreover, human capital depletion through emigration seems to have a negative influence on a country's growth perspectives because human capital accumulation is considered to be a central engine of economic development. As demonstrated in various new geography frameworks, skilled labor force is essential in attracting foreign direct investments and fostering research and development expenditures (Fujita, Krugman and Venables, 1999). Looking for competitive advantages, the multinational firms identify and migrate to those locations that have specific characteristics, such as a cheap and highly skilled labor force. It is the case of Central and East Asia in the last fifteen years. Here, the firms could benefit from skilled workers, who required a minimum training. As a consequence, the mobility of labor force generates the agglomeration of the economic activities in specific locations, at the expense of sending regions.

The "brain drain" literature of the 1970s emphasized the negative effects of migration for those left behind, one of the conclusions being that skilled emigrants contribute to increased inequality at international level, at the expense of the poorer countries. From this analysis it was omitted the fact that due to the insufficient capital resources, the skilled labor force would not have been used anyway at its compete potential by these countries, remaining an unused stock. Migration allowed human capital to reach a superior level of usage and remuneration, fact that also brought advantages for the sending countries. We have to admit that a large share of those who migrate for economic or professional reasons do not do this forever; after a certain period of time, long enough to get financial resources, they return. This return is an advantage for the origin country, due to the surplus of human capital that people had obtained in the host country and to the financial flows that they bring with them. Meanwhile, even if the emigration is forever, the family relationships involve the fact that the emigrants repatriate a part of their incomes (obtained in the host country). It must not be forgotten that, in the case of Romania for example, the emigrants annually repatriate between two and four billions Euros, representing 2-4% of GDP, money that fosters the domestic consumption, the investments and the savings. Despite all the problems generated by the emigrants on short term to their origin countries, on long term they could contribute to the increase of national welfare. That is by using their savings, earned in the foreign countries, to invest at home, acting like international entrepreneurs or even developing business networks between those from origin country and the social international networks (Grubel and Scott, 1969). Kirdar estimates that the annual flow of accumulated savings of returning migrants from Germany to Turkey averaged around 1,25% of total Turkish domestic savings in the middle of 1990s (Kirdar, 2005). Moreover, many of these returning migrants invested their savings in small business in home country. Based on a survey, Dustmann and Kirchkamp (2002) consider that 51% of the Turkish migrants who returned from Germany started their own business. More than 60% of the companies with foreign capital from China have, as main shareholders, Chinese persons; this leads to the paradox that the Chinese are the most important foreign investors in China.

The number of the emigrants who return is relatively high, both in North America and in Europe. Jasso and Rosenzweig (1982) reported that from the 1970 immigrants in the US, the share that returned by 1980 was as high as 50%. The German Ministry of Interior estimates that between 1993 and 1997 around forty-five thousand Turks returned from Germany, on average, per year (Kirdar, 2007). This number declined in the early 2000s; however, the number of Turkish returned migrants was still above thirty-five thousand in 2002. A remark made by Kirdar underlines the fact that while the Turks emigrants have a higher return rate among the persons with the age between 45 and 54 years old, most of the European emigrants are more likely to return at earlier ages – up to 35 – or after 55 years old (Kirdar, 2007).

Returned migration has important implications for both the host and home country. For instance, if many emigrants return before reaching older ages, it would mean that they will be less a burden for the health insurance system of the host country. Moreover, returning before older ages would also imply receiving less unemployment benefits when there is a positive association between age and unemployment probability, which, for instance, is the case of Germany.

For the host country, the impact of the low-skilled immigrants may be negative because they may raise concerns about the employment prospects and the wages of natives with similar characteristics. The participation of the immigrants to the host country welfare system is another problem that has drawn a lot of attention. Hansen and Lofstrom, and Riphahn argue that immigrants are more likely to receive welfare than natives in Sweden and Germany (Hansen and Lofstrom, 2003). This phenomenon determined European states impose various constrains to immigrants. Zimmerman (1995) considered that the immigrants in European Union should pay some immigration taxes. Canada has implemented programs to ensure that immigrants bring sufficient human, financial or/and entrepreneurial capital with them (Stalker, 1994).

Some analysts, such as Kapur and McHale (2005), tried to find out solutions for the developing countries (home of emigrants) so that they take advantages form the emigration. One of the solutions considers four policy options: control, compensation, creation and connection. While the control refers mainly to the reduction of the emigrants flow through various governmental policies, the compensation is about some taxes that should be established for the host countries' governments, for the employers from the host country or even for the emigrants. The creation implies both the developed host countries, which should avoid the underinvestment in sectors such as health care and education, and the origin poorer ones, that should reform the educational system and give the emigrants the possibility to return, creating return incentives and not prohibitions on staying. Meanwhile, the emigrants must remain economically and socially connected to their homes; for this it is necessary that both host and origin countries facilitate the free movement. Moreover, the origin country should make temporary visas without the possibility of transitioning to permanent status.

All these measures intend to attract the skilled migrants back to their home country, because, as Kapur and McHale (2005) underlined, “countries need talent to ensure innovation, build institutions and implement programs”, aspects considered to be the key pillars of long-term development.

4. Conclusions

The role of human capital in fostering the economic growth is a primordial one for the modern economies. The accumulation of a high stock of this factor became a priority for developed countries and, therefore, there are policies concerning this aspect, both at a micro and macroeconomic level. Meanwhile, these states have to face the problem of the aging population and the slowing down the growing rates, partly caused by the decreasing rates of human capital accumulation. Thus, it appeared the necessity of redirection the strategy in order to attract active labor force from the developing countries, which usually have a young population. The attention was drawn by those highly educated, able to bring a surplus of productivity for the host country. Considering that the equilibrium salary in the developed countries is much higher than in the developing ones, it is not very difficult for the former ones to attract high-skilled specialists who usually accept a lower level of income than the nationals. The brain drain, the name given to this phenomenon, became a very extensive one, especially in the last 25 years, after falling various political barriers is the ex-communist states and after the demographical boom of South and Central Asia.

There are some controversies related to the advantages and disadvantages generated by the migration of the population. From the point of view of disadvantages, we can mention the unbalancing of the internal labor markets both from host and home country, the diminishing of the cultural homogeneity, the loss for the origin country generated by the fact that the investments in the education of those that migrate are not refundable, the future losses of the national income, the aging population, especially caused by the migration of the young people, the amplification of fiscal burden, the increase of the technological gap between the developed and developing countries, etc. As we can see, the disadvantages are especially for the sending countries, while the advantages goes for the receiving states and consist in the increase of human capital stock, attraction of young people, demographical growth, creation of new technology with lower costs, increase of the national income, etc. There are some advantages for the origin countries of the emigrants, but only when they return home: increase in quality of human factor, in stock of social capital and know-how, getting financial resources, etc.

In the context in which the national economies become more and more parts of the global economy, the migration has to be considered not only from the point of view of the advantages and disadvantages. The labor market tends to be a global one so that a temporary deficiency caused by migration might be compensated by attracting labor force from less developed or developing countries. The most affected states seem to be the poorest countries that do not succeed in integrating into the global markets. They would not be able to compensate the loss of human capital because they do not have the ability to attract it.

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