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Human Capital Flight, or the Luxury of Indifference?

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Abstract: This paper is meant to point out the phenomenon of losing human capital, which became a characteristic aspects of the poor countries, that affects more and more their economy, in the favour of the developed countries. Even if this is a corollary of the globalization process, but the future for the developing countries will be not a good one, because of this exodus of brains; and even this is what our study is meant. The present approach is brought into light by qualitative means of observance, survey and study-case. The results of this research is quite a worrying situation for the donor countries, presenting the huge dimension, together with its economic and social consequences. Our paper could be useful both for the governments of these countries of origin, but also for researchers, academics and students. We hope that the readers will appreciate this attempt of awareness about the gravity of this situation and of its consequences for our country and remaining people here.

Keywords: international labor migration; brain drain; donor country; migration

JEL Classification: F22; J61; J24; O15

Motto: "The empires of the future will be true empires of the mind"

Winston Churchill

1. Introduction

The movement of skilled workers internationally represents brain gain for the countries that reap their skills and experience and a brain drain for their countries of origin. On the brain gain side of the divide countries increasingly are looking to position their immigration policies to attract the types of international workers and students whose skills they desire. On the brain drain side, the development impacts of losing educated workers are being assessed in immigrant-sending and receiving countries alike as the research presented here shows.

The expression of brain drain dates back to the 1960's, when it referred strictly to the phenomenon of losing high-skilled labor in poor countries. Over time, different scholars have developed various concepts about this phenomenon, but have nevertheless retained the essential meaning of migrating the

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intellectual population from underdeveloped countries to highly industrialized ones. Brain Drain is one of the most disputed phenomena when it comes to the economy of a country. Even in Romanian society, this phenomenon has taken a real magnitude over the last 25 years and may be one of the causes of the economic crisis. The phenomenon called Brain Drain is known under a number of other names: brain drain, brain migration, skill exodus, intelligence theft or human capital flight. However, this phenomenon is natural for any country, even for those developed.

We often ask why doctors, engineers, researchers, specialists have the desire to leave their country of origin. The reasons are the same as those of the rural-urban exodus. The natural desire of the individual to lead a better life, to find new perspectives and to have bigger gains! Many are uncertain about the future and therefore are looking for a stable job, professional recognition opportunities, an adequate working environment, endowed with all the utilities needed to carry out a profitable activity. In short, the reason for leaving is the economic underdevelopment of the emigrant country.

2. Related Work

Writer Ayn Rand introduced for the first time, the term Exodus of Brains in 1957, in his work "Atlas Shrugged." Subsequently, in 2004, H.B. Entzinger & more (2004) associated the concept of brain drain with the loss of human capital in developing countries. In 1989, I. Ahmad and N. J Bhat explained the phenomenon as the loss of competent, professional specialists for society on the domestic labor market. Also, Johnson and Regets (1998) introduced a new concept - Brain Circulation. It referred to the cycle that it is doing, especially young graduates of universities and young specialists. They are moving abroad to pursue their postgraduate studies, or to do an internship or exchange of experience, later to return home, bringing new knowledge, new skills and technology transfer. The more economic differences between countries will be, the more the migration process will increase.

W. Carrington and E. Detragiache (1998) present estimates of emigration rates from 61 developing countries to OECD countries for three educational categories built using 1990 U.S. Census data, Barro and Lee's data set on educational achievement and OECD migration data.

J.C. Dumont and G. Lemaitre (2005) presented some results in their paper, based on the new database on immigrants and expatriates in OECD countries, show that

- the percentage of foreign-born in European OECD countries is generally higher than the percentage of foreigners;
- international migration is quite selective towards highly skilled migrants;
- in most OECD countries the number of immigrants with tertiary education exceeds the number of highly qualified expatriates to other OECD countries;
- among non-member countries the impact of the international mobility of the highly skilled is diverse.

Çağlar Özden and Maurice Schiff (2007) mentioned more than ten years ago that the number of the people leaving their country of birth were estimated (by the World Bank, in 2006) to be about 180 million people, or about 3% of the world's population.

Nina Heuer (2011) appreciates that: "We find a robust negative impact on the incidence of high-skilled emigration on the level of human capital in the sending countries, thereby rejecting the

hypothesis of a beneficial brain drain. The negative effect was significantly stronger for professionals - the occupational category with the highest incidence of south-north migration and the highest educational requirements - than for technicians and associate professionals.”

Giovanni Facchini and Anna Maria Mayda identify three channels through which migration can have impact on individual attitudes: the labor market channel, the welfare state channel and the efficiency channel.

Aniruddha Mitra & more (2011) analyse two themes that have come to occupy central positions in the debate: first, as the volume of skilled migration increased dramatically in the last decades of the twentieth century, there has been a resurgence of scholarly interest in the causes and consequences of the brain drain. Second, as countries have increasingly undertaken financial liberalization programs over the corresponding period, there has been a great deal of interest in the consequences of such policies, especially for developing nations.

Tito Boeri & more (2012) provide for the first time a measure of the net global impact of the brain drain on sending countries. The results indicate that most developing countries experience a net gain from skilled emigration. Adverse overall impacts are found to be limited only to a subset of countries exhibiting very high skilled emigration rates. A number of policy recommendations are also offered to increase the benefits of brain drain.

Philip Hunter (2013) revealed that in a related but distinct trend, the incidence of co-authorship reflecting greater international collaboration has similarly been on the upswing. New studies of the migration routes of scientists show that international mobility benefits all parties including countries that are net exporters of researchers. In the USA, a haven for researchers ever since the exodus of European scientists during the Second World War and to some extent before, the number of foreign citizens gaining a PhD has risen from 17% in the 1960s to nearly 40% in 2010. Almost 60% of post-docs now working in the USA are doing so on a foreign visa. Similarly, in Europe, 43% of postdoctoral researchers in the life sciences are working in a country that is not their place of birth. Until recently, this movement has been more between the EU member states than with countries outside, but growing efforts try to reach out beyond Europe's borders - the EU-US Science and Technology Agreement, for instance, signed in 1998 has increased cooperation and regular meetings. And the author concluded that: “At one time, migration in particular was regarded as little more than a form of trade, in which an individual country either has a surplus or a deficit”.

Yui Suzuki and Yukari Suzuki (2016) examine how the rising inter-provincial migration of individuals with diverse educational backgrounds affected human capital formation in China in the 1990s. We find that gross outflow migration of those with higher and lower levels of education, respectively, has human capital incentive and disincentive effects. Our estimates suggest that the incentive effect eclipses the disincentive effect in general; however, a surge of migration, particularly among less educated groups, implies more of a disincentive effect in China in the 1990s. We also find that changes in the relative labor supply resulting from net outflow migration mitigate a direct brain drain by both encouraging and discouraging school enrolments.

Miloslav Bahna (2017) analyses the internationally mobile students coming more often from families with a higher level of cultural capital. Moreover, students from families with high cultural capital have a higher probability of studying in more prestigious study destinations. The study destination is, however, not influenced by the economic capital of the family. The author suggests that such a “cultural capital drain” could have positive consequences on vertical labour market mobility in the

source country. It is discussed the connection between international student mobility and labour migration in the case of international students from low income families.

3. Problem Statement

The problem of this study is about the brain drain, that is a very important one, especially by its consequences on the giving countries, which are - in their majority - developing countries. Even if there are some few advantages also - that is the sums of money sent in most cases to their country of origin, these migrating people become the largest “foreign” investors in their country, after their departure; as to illustrate this ascertain it should remind the sum of 582 \$ billion, that were sent by immigrants to their relatives in their home countries in 2015. But without this exception, this phenomenon as a whole, is a very damaging one for these donors countries. Thus means that all the rest of the deriving aspects from this human capital loss are not only negative, but quite damaged. Furthermore, looking forward the perspectives for these developing countries are quite gloomy: they invest in the teaching and high education of these people who are then contributing with their skills - obtained on the expense of their native country - to the increase of GDP of the developed country where they go to. And thus, these developing countries will become poorer and the developed countries become richer.

Is there something wrong in society, theoretically unclear or in dispute?

This qualitative case-study will examine the corollary results of the immigration of human capital from the developing country to the developed ones. Many countries and increasing as number of high qualified people will be taken into account in this survey. The data to be gathered in this study may provide leaders with information relating to how they may address or mitigate factors contributing to the current brain drain.

4. Concept and Terms

The phenomenon of intellectual migration or “brain drain” is defined as a constant transfer of highly qualified staff from some countries, generally less developed, to more economically stronger ones. The phenomenon has grown in the Romanian society especially in the last 20 years and can be one of the causes of the current crisis situation. Improving this phenomenon can be an effective solution for the recovery of national social and economic difficulties. The phenomenon of migration of educated or talented people is called scientific brain drain or human capital flight. In Romanian, the term has been translated by: brain drain, brain migration or even brain theft, intelligence theft, exodus of skills and so on.

Why do the specialists go? What are the causes of the phenomenon? If we were to simplify things, the main cause is the individual's natural desire to find prospects, recognition, greater gains and a better standard of living, even if for that he has to go abroad. A study by the Department of Education of the Ministry of Human Resources Development in India reveals factors such as lack of jobs, economic underdevelopment, low salary levels, overproduction and under-utilization of specialists, lack of research and endowment, employment discrimination, lack of culture and scientific traditions, non-functioning institutions, or the desire for higher qualification and recognition.

However, the situation is more complex, the cause is not a single one, more in-depth studies of the phenomenon have identified two types of causes, those in the country of origin, pushing for emigration and, on the other hand, the country of destination, which attract immigrants. These factors are called "push-pull factors", rejection-attraction factors.

It is possible to make the following parallel between the rejection factors and the factors of attraction.

4.1. Causes of brain drain

Factors of rejection versus attractive factors:

- lack of jobs;
- economic underdevelopment - better economic outlook;
- low salary levels - wages and higher earnings;
- overproduction and under-utilization of specialists - availability of experienced staff;
- lack of research and endowments - better research facilities;
- discrimination in employment and promotion - better working conditions and employment opportunities;
- precarious facilities - substantial funding for research;
- lack of culture and scientific traditions - rich cultural and scientific arts;
- inoperative institutions;
- desire for better urban life - attraction of urban centers;
- desire for higher qualification and recognition - better educational system and opportunities for specialists;
- prestige of foreign education - technological gap.

Generally speaking, a rejection factor has an equivalent factor of attraction, but there are also factors without a correspondent, but one can imagine an equivalent. In this vision of the rejection-attraction factors, the world appears divided into two economically less developed countries in which the rejection factors and the developed countries in which the factors of attraction act. On the other hand, in the developed countries, the number of specialists is insufficient because: the natural increase of the population is sometimes negative, the degree of aging increases, the cost of education is high, it is cheaper to cover the deficit of specialists through immigration.

4.2. “Brain Exodus” in Europe

Researchers have made a spectacular animation, which shows how the major European cities have been formed by brainwave migration, meaning intellectuals. They monitored the migration of 150.000 “notable people”, linking through a curved line the place of birth and death of each of these personalities. Between 1600 and 2014, major European cities are formed (these are the most lighted ones). Researchers say, however, that cultural centers do not necessarily coincide with the economic ones of the time.

Researchers have found that over the last 400 years, the average distance between birth and death has changed little, from 214 km to 382 km. Another interesting map presented by American researchers shows a huge migration between the east and west coasts of the US, especially between the cities of Los Angeles, New York and San Francisco.

Migration of people with higher education from middle-income countries increased to 44% between 2000 and 2006, according to a study by the Organization for Economic Cooperation and Development. In low-income countries, the migration of people with higher education amounted to 28%. Those who choose to work abroad pay less than a few years ago and for limited periods. Certain industrial

branches, such as oil and gas exploitation in the undeveloped areas of the world, need skilled people. According to Brookfield's chief executive, Scott Sullivan, "mining is a field that brings a lot of challenges. On the one hand, there is a need for specialists with specific skills. On the other hand, the expert must also have management skills, leadership and extensive experience". Climate change offers more opportunities for people specializing in green energy, which is constantly developing.

Globalization will lead to an increase in the migration of people with higher education in the coming years. The level of training of people in poor countries is steadily decreasing. Countries like China, Brazil or India need industry specialists. Qualified persons will always be welcomed with arms open to foreign lands.

The figures provided by the World Bank show that in 2007 only about 318 billion \$ had been transferred to the countries of origin of the emigrants. About 38.6 billion \$ have been sent to a report by the Pew Institute shows that 582 billion \$ was sent by immigrants to their relatives in their home countries in 2015. The figure is less than 2% less than last year, the report said. It's the first time the sum has fallen since 2009, when the global crisis hit the world.

They then sent home, globally, 28 billion \$ less, says the Pew Research Center. Despite this small decline, the amount sent by immigrants is double that sent home ten years ago, before the recession. With the exception of 2009, money sent home for immigrants has increased steadily since the 1970s. The amount sent home to immigrants is, of course, in relation to the number of those who leave their home countries. And it rose from 191 million \$ in 2005 to more than 243 million \$. However, as a whole, the proportion of immigrants in the world's total population remained at 3% countries in Europe and Central Asia, as the World Bank communiqué precised.

4.3. "Brain Exodus" of Romania

Romanian people working abroad sent around 6.8 billion \$ in 2007, according to a World Bank report. The amount places Romania on the first place in Europe, followed by Poland, where people leaving for work sent back 5 billion \$ to the country, wrote "Financial Newspaper". In turn, our neighbors from the South of the Danube sent in the country in 2007 only 1.9 billion \$. Remittances have fallen. For two reasons: firstly, 7 billion \$ as it received in 2008, the figure has not met. The crisis has come, in all countries revenue has been reduced, and our outgoing Romanians have been able to send less. Lately, another phenomenon: stabilization. There are groups, stable teams, numerous masses of Romanians starting to settle in other countries. They took their family there, they became citizens there, they pay taxes there, they keep the family there, they do not send home; after the last economic crisis, for example in 2013, the remittances were at a level of around 4 billion euros.

Romanians leaving abroad were considered to date the largest "foreign" investors in Romania. In the years before the crisis of 2008-2010 and in the subsequent period, including in 2016, the ratio between the amounts sent home from abroad by Romanian expats on the one hand and the foreign investments made by companies on the other side was over-unitary, in the sense that remittances were higher than investments. In the first five months of 2017, this report became sub-unit, with remittances being overtaken for the first time by foreign investment.

Romania is the most modest innovative economy in the European Union. According to experts, Romania's spending for research and development represents less than a quarter of the European average, and the number of researchers that Romania lost in the last decade amounts to 5.500, a quarter of the total. Thus, Romania's spending on research and development is less than a quarter of the European average and a half compared to those in Bulgaria and this makes our country the most innovative economy in the European Union. Romania has the most pronounced speed of deterioration

of innovative performance in the EU. In the middle of last year, the European Commission tells us that Romania's innovation capacity declined in 2017 by 14% over the previous year. Other countries improve these perspectives, most than Romania does not stimulate innovation and this has made a quarter of the researchers it had 10 years ago to go abroad. Instead, the number of Romanian patents registered with the European Office increases to about 100 per year, compared to 20-25 ten years ago. We are glad, we are five times better than in 2006, but when we look at the European performer, Germany is doing 2.000 times more than we do, in the fields in which the invention could bring about performance in the Romanian economy.

4.4. Disastrous Effects on the Country they are Leaving

The “National Hemorrhage of National Values” in Romania is so great that it is beginning to be noticed by the diplomats of the great European powers for the present Romanian society: The phenomenon of brain migration is becoming more and more observable in Romania. There are at least two angles from which the phenomenon can be seen: on the one hand, it is observed the interest of multinationals to seek and hunt ultra-specialized brains, useful for the development of private research activity, a phenomenon observable especially in the high tech industry. We notice the migration of the middle class, teachers, doctors, engineers, from economically slow countries to economically developed countries or with high potential for professional fulfillment. The reason for leaving is not only the economic one, but also the lack of professional prestige, as well as the humiliations of specialists from an inefficient and lacking social system. In spite of the reasons, behind the decision to brain drain, the effects are disastrous for the country from which they go.

How many costs involve the training of a specialist, health insurance, the cost of school and faculty, the destruction of a social system of which he belonged (family, friends, locality), as well as the shrinking of economic support for the pension budget? In addition, the State expects that, after at least 25-30 years of school and health care, it will benefit from the contribution of the young specialist, both through the fees he would receive from his work and the contribution as a specialist to the development of society.

As for Romania, the greatest loss is the doctors who choose to build a career and renown in other European Union countries as soon as they leave the faculty banks. A study by the Romanian Academic Society shows that Romania's main reason for losing doctors to the West is that they are not paid at the level they deserve.

Romania has a big problem with doctors who choose to leave the country, primarily attracted by the material benefits offered to other European countries. According to a European Commission statistics, more than 17.000 medical professionals have left Romania over the last 18 years. Of them, almost 9.000 are doctors and the rest of nurses. Over 36.000 doctors, dentists and pharmacists have been requesting compliance certificates since 2007 so they can perform abroad, according to the information provided to us by the Ministry of Health.

The statistics provided last year by the Ministry of Health are even more worrying than those in the countries where Romanian doctors left: about 15.000 doctors have chosen to practice elsewhere than in our country since Romania's accession to the European Union, in the last eight years. The situation is all the more worrying as the 2012 statistics, for example, showed a drastic decrease in the number of doctors per capita. More specifically, a doctor should have treated over 500 Romanian patients.

In addition, 2.450 applications were issued in 2014 to issue certificates that allow work abroad. As far as the countries where our medical graduates left, Germany is in the top - 33% of Romanian doctors

have chosen to practice in this country. Great Britain is second, followed by Belgium, Sweden and Ireland.

According to statistics, 2.000 doctors leave Romania each year. If you invest in training doctors for seven years and then give them as salary just 400 euros, then this is the result.

Countries that have been able to attract specialists and intellectuals back are now in full swing. The new economies in Ireland, India, China, South Korea, Taiwan attract many specialists who return to their motherland after they have been successful abroad. With their experience, their links and the capital they earn, they contribute to the development of industrial branches in the country of origin. For example, in Bangalore, India, the explosion of the soft industry has been done with US backers.

China has stored its intelligence over the ocean to be used later and now it is time to use it. There are just a few of the happy cases that have been able to turn brain drain into brain gain.

5. Analysis of Results

The first urgent action to do is that the State motivate, at least wages, to keep citizens in their countries of origin. This is, in fact, the logic of granting European grants, precisely to encourage the economic development of the member countries of the Union in order to strengthen the European social balance. And if the State has a major responsibility to respect the dignity of its specialists, the Church finds itself more involved in providing social and religious assistance to those left behind, whether children or the elderly alone and helpless. The fact that the current political class not only does nothing to stop, or at least to mitigate the migration of skilled brains and skilled workers, but even encourages it, may have more than a logical explanation. In other words, those left in the country, with a less developed critical spirit than those who have already emigrated, can be more easily manipulated by the electorate.

The role of Romanian researchers and intellectuals is all the more important as the results that can be gained from the activity of this elite of Romanian intelligentsia are enormous: the much-coveted economic recovery can be strongly stimulated by the existence of a scientific research based on healthy bases. The likelihood that they will give up the benefits offered by economically developed countries and their return to the country is diminished. However, repatriation of scientists is not the only way to capitalize on their knowledge and international experience for the benefit of the state of origin. A solution would be the so-called know-how transfer by organizing a “scientific diaspora” to facilitate contacts between intellectuals working in the country and abroad. The collaboration of the diaspora intelligentsia in projects taking place in their home country, the exchange of experience in conferences, symposia and other scientific events attended by both national and foreign specialists can bring solutions in the country for the economic and cultural recovery. The creation of a scientific diaspora is difficult to achieve because of the lack of an existing structure or network.

6. Conclusion

Over the last 25 years, Romania has become a true source of qualified personnel for the countries of the European Union.

An often advanced theory is that the “brain drain” of third world graduates to the first world generates a high income of foreign currency and that this income contributes to the development of third world. However, the theory that semi/unskilled emigrants currently contribute the higher income of foreign

currency. Although the highly skilled group may earn higher wages, they do not necessarily send large remittances back to the third world, mainly because they have settled into a good life in the country to which they have migrated. Moreover, the cost of producing a highly skilled individual is greater than that of semi-skilled or unskilled graduate. Stopping labour exodus requires an integrative approach, but first of all on the main incentive factor - inadequate wages. Personnel bleeding is not the effect of the poor economic situation but, firstly, is due to the total lack of interest of the political factor in stopping this phenomenon. Migration experts say there are cases where a campaign that deals with the cost of a person's travel can fail and may lose hundreds of thousands of dollars. The company may end up paying both the damage caused by the failed project and the cost of health care if the employee has suffered mental problems caused by the changes.

Globalization will lead to an increase in the migration of people with higher education in the coming years. The level of training of people in poor countries is steadily decreasing. Countries like China, Brazil or India need industry specialists. Qualified persons will always be welcomed with arms open to foreign lands.

Finally, there is a need for intervention by international donor organisations for global collaboration in order to facilitate the development of the third world by halting the “brain drain”.

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