

BRAINS ON THE RUN: Movements and Possibilities

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ABSTRACT

This article analyzed the brain drain phenomenon (brains escape) in a qualitative approach; the conducting wire is the motivation of this phenomenon and the policy for the solution. The research was developed using the EBSCOhost database platform, where 77 articles about the theme were found; however, only 15 articles were analyzed because they had qualitative analysis, which was performed from secondary data as documents analysis, literature and case study. As result, we present a framework, divided in two segments, public and private, with the policies found in the articles to reduce the brains escape; we can conclude there is a condition to be explored through the policies combination.

Keywords: Brain drain; Policies; Qualitative

1- INTRODUCTION

Developing or economic laggard's countries suffer with the brain evasion, or *brain drain*. This condition is established in many educational levels, graduation and postgraduate. Gibson and McKenzie (2011) perform an analysis about the ten main occupations of the skilled migrants present in United States with origin in developing countries. It is a group, which contains more bachelors, followed by masters and, last by doctors. This migration generates costs and highlights the incapacity of the origin nations to create an environment where these skilled people can live with dignity and develop themselves in their field.

Thus, reports from skilled youth, scientists and professionals, searching for alternatives to live as they planned, are no longer part of a speech from small well-positioned groups in society. This phenomenon occurs due to an internationalized education structure, caused by the globalization. This phenomenon has made the knowledge to be highly valued institutional asset, which reflects in the society as a whole.

This situation becomes potentially concerning when we notice that the *brain drain* phenomenon is not new. Jalowiecki and Gorzelak (2004) comment about the Russian czar, Ivan – the Terrible (1547-1584), who sent 17 young men to study abroad, with the intention that this action would bring wisdom and prosperity to his country, but the result was a failure caused by the non-return of the young men. On the other hand, the authors report successful policies, as Carlos Magno's policy (768-814), in Europe of VIII Century, where the phenomenon was registered. Posteriorly, Henry II (1133-1189), published a letter inviting masters to England, ensuring to them liberty and privileges. The term gain popularity when it was used in 1957 in the novel *Atlas* from *Any Rand*, where the brains escape was used to illustrate what happened when the research and the production of innovators and entrepreneurs disappear, due economic, social or politic reasons (GAILLARD; GAILLARD, 1998).

More recently, we notice that the concern with the concept *brain drain* remains on the staff of managers and public or private organizations, and it takes international proportion, as it is addressed in Dos Santos (1983, p. 101), where he uses the expression *exodus of skills*, to say that the "concern with the phenomenon becomes more significant in the early 70's". In another approach that treats the qualification of the worker and the consequences of its evasion, it is verified, "The brains escape is a process where skilled and highly skilled workers of a country migrate due to multiple reasons. As result, the political and economic systems are transformed and they can become brittle and the States fragile" (BRADLEY, 2005, p. 540).

Thus, the purpose of this work was verified how the qualitative approach was used to understand the context and situations responsible for the migration of a group of skilled people and what suggestions from public and organizational policies are presented in circumstances of loss of human capital through the knowledge evasion. According to the phenomenon *brain drain*, we try to answer the following question: *Is there a condition of public and private policies to minimize the brains escape?* Thus, to obtain the answer, we performed a search in the 'EBSCO Host' database platform and it results 77 articles, wherein only 15 fit in the purpose of this study.

Therefore, this work is divided in 6 parts from this introduction. Next, we present brief references to the theme *brain drain*, followed by the topics methodology, results and analysis, conclusion and, in the end, a list of researched sources. As a limiter to this study, we present the condition of qualitative analysis, because most of the survey resulted in quantitative data, as well as it performed in only one search platform. As contribution to future researches, the study offers a framework with indications to public and private organization policies where a gap between both is evident; this can direct the researchers to the contributive effort to minimize such condition.

2- METHODOLOGY

To reach the goal of this study, a systematic research taking in consideration the keywords *brain drain* and *knowledge* was conducted, the search was performed in publications, within 14 year-gap, with the following criteria: the keyword filters, the first position in the condition of *Ti Title*; the second in *and Tx All Text*. As expanders, search in the full text of the articles too; in limiters, publication date: 1990-2013; type of source, scientific journals and topic: *intellectual capital* and *Government Policy*. The search was performed in October 21st, 2013, on this date a result with 77 journals was obtained from the EBSCOhost database platform.

Thus, first step was an *abstracts* analysis, identifying the goals, followed by a topic of methods analysis; when the search of the articles had a qualitative approach that clarify the question of the research: *Is there a condition of public and private policies to minimize the brains escape?*

After analyzing the *abstracts*, we noticed from the whole that about 20% of the articles match the purpose of this work, in other words, they discussed the concept of *brain drain* in a qualitative approach. Other texts from the research were related to the concept with a significant incidence of clinical articles, in general, related to the health field, working with quantitative treatment of the data, thereby, eliminated from this analysis.

To conduct a logical process of research's result comprehension, we established as the analysis structure, figures with charts containing the articles synthesis and a third figure built to propose a framework, where the propositions abstracted from the texts that demonstrated public and private organizational policies to the topic of

this study. They were reviewed among their characteristics and properties, afterwards separated into two groups that resulted in private and public policies, where this frame was the qualitative result of the researched articles.

3- BRAIN DRAIN

Debates on *brain drain* go longtime back. In the past years, with regard to Europe, the discussions about this theme can be separated in two moments, according to Wickramasekara et al. (2003). The first phase occurred in the mid 60's, when people highly skilled from countries in development status from South migrated to developed countries in the North of the continent. In a second moment, occurred in the early 90's, with the advent of globalization and the matters related to information technologies and communication (ITC). "The term *brains escape* itself was first used in 1958 when British academic and scientists emigrated to United States, and it refers to migration of people with a high level of education. The brains escape is an intellectual exodus" (VIZI, 1993, p. 102).

Several authors, like Sabbadini and Azzoni (2006, p.2), have treated the phenomenon that concerns both public and private managers:

The brains escape "*brain drain*" is a specific type of migratory movement, the emigration of highly educated people who graduated in a certain location. A huge emphasis was given to the research on this topic, mainly after the 1950's, due to the increase and large migration of people from the less developed countries (LDC) to the countries with highest economic and social development, essentially the United States of America.

In this context of high migration, it lies a condition where skilled individuals are working in positions below their qualification. This condition is noticed in the report from Jalowiecki and Gorzelak (2004, p. 130) about:

The Greek experience, which shows the phenomenon of brains escape in the countries of origin, is followed by a loss of brains in the destiny countries, meaning the great number of highly skilled migrants are working in positions with very lower educational requirements.

Thus, the authors conclude that the human capital knowledge is partially or totally unusable.

In another approach, Wickramasekara et al. (2003, p.3) claims that "the concept of 'brains escape', in the condition of developing countries in general, refers to the permanent or long term international emigration of skilled people who was a result of a considerable educational investment from their own societies". Thereby, the authors go back to local social-economic matters and complete arguing that "the available literature points to the implicit transfer of knowledge and skills from the country of origin to the host country is a huge loss to the country of origin, given the crucial role of human resources in the development of these countries" (WICKRAMASEKARA et al. 2003, p.3).

Under this circumstance, we have the term *transnational*, used by Altamiro (2006), which is used to argue about the migration of skilled human capital, whose quantitative and qualitative evidences show that such type of migration is a very important sociodemographic and cultural phenomenon in the past twenty years. In addition, this phenomenon came from a cyclical process to a structural process, because it is present in the economic, political and social aspects of the countries where the migrants are established, or from the countries, they have emigrated.

There are many motivations behind this movement, the search of job opportunities, qualified education like postgraduate and professionals who go through the phenomenon. According to Altamiro (2006, p.21), it rises a new cultural and sociodemographic context: the brains escape, with the following characteristics: "The transnational migration has a supposed migrational transition". Previously, the countries that were emitting migrants, like Central and Occidental Europe and Japan, today are receptors of these specialized people; the transnational migration implies in the deterritorialization and in the reterritorialization; the transnational migration is synonym of culture in movement; it implies sociocultural and economical net creation attached to the local; it assumes the rising of a new way of content of exclusion, cultural and economic, of certain groups of immigrants from Indian, Peasant or poor origin and it has implied the arising of new social actors.

These characteristics are, in certain way, embedded in some other approaches as we can see in Beneva et al. (1998), European Council (2000) and at Carr et al. (2005) that the migrant skilled workforce is a significant potential resource of international organizations. The migrants are more motivated than the non-migrants are, because they contribute with cultural matters, meaning a variety for all different kind of contexts. Thus, the

word “brain, acquires connotations of a power, of scientific and technological brain and the flow of migrants is much wider, including the business owners and entrepreneurs” (CARR et al. 2005, p.388).

In a sociological view, we find in Portes (1976) the answer to the generation of brains escape. The author divides the phenomenon in three primary conditions which are the inequalities between the origin and destination, in other words, the destination offers better job and research conditions; the secondary conditions are related to the point of lack of perspective of the highly skilled people, and, finally, the tertiaries are related to the difference between people, ranging status to the possibilities and quality of training.

The socioeconomic implications are related with the intellectual force represented by the specialized human capital, “in last analysis, the loss of skilled human resource will severely affect the economic and it will compromise development programs. The basic sciences determine the scientific potential of the country, and in long term, its technological progress”, VIZI (1993, p.102).

The *brain drain* episodes are closely linked to the migration processes, where it is possible to be observed and worked by leaders and managers, given that a lot of information is derived from census and other statistical data in public domain. We notice, by the small number of literature about some topics, that, a few situations have not been worked, like the migrant’s return. In the notes from Hoti (2009, p. 441), it appears the following review:

A topic related to this theme – which is overlooked by the literature – is the migrant’s return and its effect on the skills of the workforce in the country of origin. This is important in the transition economies point of views, where the migration is frequently due to seasonal nature or only for a short period, when the returned migrants bring back the experience acquired abroad, which is widespread in the local economy.

The term “mobility and the brains escape in science are not isolated, but characteristics of all development economies” (GEORGIEVA, 2004, p. 363). Thus, it can be seen, from these references, the importance of the subject in various approaches where it’s presented; situation that is exposed in this study due the results obtained for the conditions that motivate the exodus and the policies that are being developed to the understanding and possible solution of the phenomenon *brain drain*.

4- RESULTS AND ANALYSIS

After surveying articles, we present, in Figure 1, the list of publications, authors, themes and publication year of 15 articles analyzed in this work, around 20% of 77 articles. We observe there was a concentration of publications in 2004 with six published works; in 2005, three articles, and in other years, from 2002 to 2012, only one article by year. It is possible to notice that most articles, total of 10, were published in *journals* about education area; followed by, health area and science, politics and ethics.

N.	Publication	Year
1	BROBBY, G. W.; OFOSU-BARKO, F. O. Developing appropriate community-based postgraduate training in a developing country. Education for Health: Change in Learning & Practice , v. 15, n. 1, p. 3-9,2002.	2002
2	TEFERRA, D.; ALTBACHL, P. G. African higher education: Challenges for the 21st century. Higher Education , v. 47, n. 1, p. 21-50, 2004	2004
3	JĄŁOWIECKI, B.; GORZELAK, G. J. Brain drain, brain gain, and mobility: Theories and prospective methods. Higher Education in Europe , v. 29, n. 3, p. 299-308, 2004.	
4	PIFAT-MRZLJAK, G.; JUROŠ, L.; VIZEK-VIDOVIĆ 1, V. Broad strokes of recovery: the case of Croatia. Higher Education in Europe , v. 29, n. 3, p. 373-380, 2004	
5	NIKOLOVSKA, M. Employment, education, and emigration: the FYR of Macedonia. Higher Education in Europe , v. 29, n. 3, p. 319-328, 2004	
6	GĂUGAȘ, P. Labour migration in Moldova: Context and controls. Higher Education in Europe , v. 29, n. 3, p. 343-352, 2004.	
7	ZINDOVIĆ-VUKADINOVIĆ, G.. Serbia and Montenegro: the catalytic effects of higher education. Higher Education in Europe , v. 29, n. 3, p. 329-341, 2004	

8	MOGUEROU, P. Doctoral and postdoctoral education in science and engineering: Europe in the international competition. European journal of education , v. 40, n. 4, p. 367-392, 2005.	2005
9	MORGAN, W. J.; SIVES, A.; APPLETON, S. Managing the international recruitment of health workers and teachers: Do the Commonwealth Agreements provide an answer? The Round Table , v. 94, n. 379, p. 225-238, 2005.	
10	GIGUERE, M.. Revitalizing Pennsylvania through creativity: dance in education. Arts Education Policy Review , v. 106, n. 4, p. 34-40, 2005	
11	BURDICK, W. P.; MORAHAN, P. S.; NORCINI, J. J. Slowing the brain drain: FAIMER education programs. Medical teacher , v. 28, n. 7, p. 631-634, 2006.	2006
12	KABA, A. J. The black world and the dual brain drain: A focus on African Americans. Journal of African American Studies , v. 11, n. 1, p. 16-23, 2007	2007
13	GUTH, J.; GILL, B. Motivations in East–West doctoral mobility: revisiting the question of brain drain. Journal of Ethnic and Migration Studies , v. 34, n. 5, p. 825-841, 2008.	2008
14	GRIGOLO, Mi.; LIETAERT, M.; MARIMON, R. Shifting from Academic ‘Brain Drain’ to ‘Brain Gain’ in Europe. European Political Science , v. 9, n. 1, p. 118-130, 2010	2010
15	LATOVA, N. V.; SAVINKOV, V. I. The influence of academic migration on the intellectual potential of Russia. European Journal of Education , v. 47, n. 1, p. 64-76, 2012.	2012

FIGURE 1: Articles classified by publication year. Source: 2013 research’s data.

Regarding the qualitative approach of the articles, we can observe, in Figure 2, the higher incidence of secondary data analysis, from documentary research type.

Type	Authors
Documentary research: reports, information documents, census.	1) BROBBY, G. W.; OFOSU-BARKO, F. O .2) MOGUEROU, P. ; 3) MORGAN, W. J.; SIVES, A.; APPLETON, S; 4) GIGUERE, M.; 5) ZINDOVIĆ-VUKADINOVIĆ, G.; 6) GRIGOLO, M.; LIETAERT, M.; MARIMON, R.; 7) BURDICK, W. P.; MORAHAN, P. S.; NORCINI, J. J.; 8) LATOVA, N. V.; SAVINKOV, V. I .
Literature review: books, articles.	1) JAŁOWIECKI, B.; GORZELAK, G. J. 2) TEFERRA, D.; ALTBACHL, P. G. 3) NIKOLOVSKA, M. 4) GÄUGAŞ, P. 5) KABA, A. J.
Case study: interviews	1)PIFAT-MRZLJAK, G.; JUROŠ, L.; VIZEK-VIDOVIĆ 1, V. 2) GUTH, J.; G., B.

FIGURE 2: Research and Authors classification. Source: 2013 research’s data.

Accordingly, eight articles used data from documentary researches like reports and other information documents from non-governmental organizations (NGO), federal institutes, university departments, craft organization, census, among others.

Written document is an extremely precious source to every researcher in social science. Evidently, it is irreplaceable in any reconstruction regarding a past relatively far away, because not rarely, it represents almost all traces of human activity at certain times. Moreover, quite frequently, it remains as single witness of certain activities passed in a recent past (CELLARD, 2008: 295).

Five articles used the literature analysis “study directly from scientific sources, with no need to appeal to facts/phenomena of empirical reality directly” (OLIVEIRA, 2007, p. 69).

The Figure 3 presents the reasons for skilled people migrate from their countries of origin. As for this aspect, it was possible to identify four motivations: labor condition, economic and social crisis, scientific and educational support, all present in the texts explaining the *brain drain* phenomenon. Portes (1976) points the factors that summarize the motivations, when it comes to the inequality between origin and destination, because the migrant searches in the destination country, the conditions he didn't find and can't visualize in short term, with better salaries, structure to develop his activities, stability, quality of life among other conditions listed in the summary chart.

Another determinant condition is the difference in the job market, more precisely when it comes to the movement of offer and demand of skilled professionals, in other words, issues related to the possibility of having a career with an acknowledged status and, finally, the difference between individuals. Thus, the spectrum that these motivations cover goes from qualification continuity conditions until social interactions (PORTES, 1976).

Motivations to <i>Brain drain</i>	Aspects
Labor condition	Search for better salaries, stability, better labor conditions, career perspective, job satisfaction, researcher career more attractive in European level, a meritocracy system, young scientist recruiting system, career progression, matching European and American salaries, specialized jobs.
Economic and social crisis	Unemployment, living standards decrease, depreciation of moral and ethics standards, diseases, religious liberty, wars, local art and culture issues, desperation, poverty, death and mutilation in foreign wars that cause exodus.
Scientific support	Low investments in R&D, lack of excellence research centers to apply the scientific knowledge, low status of scientists.
Education	Lack of perspective to educate the children, lack of postgraduate programs, study policies, advances study conditions.

FIGURE 3: Aspects that motivate the brain drain phenomenon. Source: 2013 research's data.

In figure 4, we can see a framework with the synthesis of the propositions abstracted from the 15 articles, divided in public and organizational policies. In total, there were 19 suggestions of policies, 12 to organizational policies and 7 to public policies, there were articles with several number of suggestions of policies to decrease the incidence of *brain drain* phenomenon.

The fact of having a bigger number of policies from organizations is an indication that public sector, despite very concerned, had demonstrated small creativity to solve the problem affecting developing countries in general, and the propositions are not short term. Thus, the set of solutions listed by the organizational policies can provide a better work and living conditions; but, in a timely way, as for example, training and career progression. However, we can notice that only the set of policies actually can minimize the problem that causes discomfort not only to the individuals characterized as skilled, but to also to the local of origin that suffer with the loss of qualification, and it is clear in the difference between the market demand and the society established in the origin. Figure 4 makes clear what direction must be observed in the country of origin.

The developing countries, when observe the importance to retain their skilled individuals, would reduce the local social differences. According to Nikolovska (2004, p. 321), there is a strong relation between the poverty level and the education: “education can ensure higher living standard, while the bigger poverty rate is observed between families, where the head of family has only fundamental education”. This is one of the reasons of the importance of policies well aligned. This alignment is proposed taking into account the figure 4, where it is possible to verify actions of private and public organizations that together can result in suggestions of required policies.

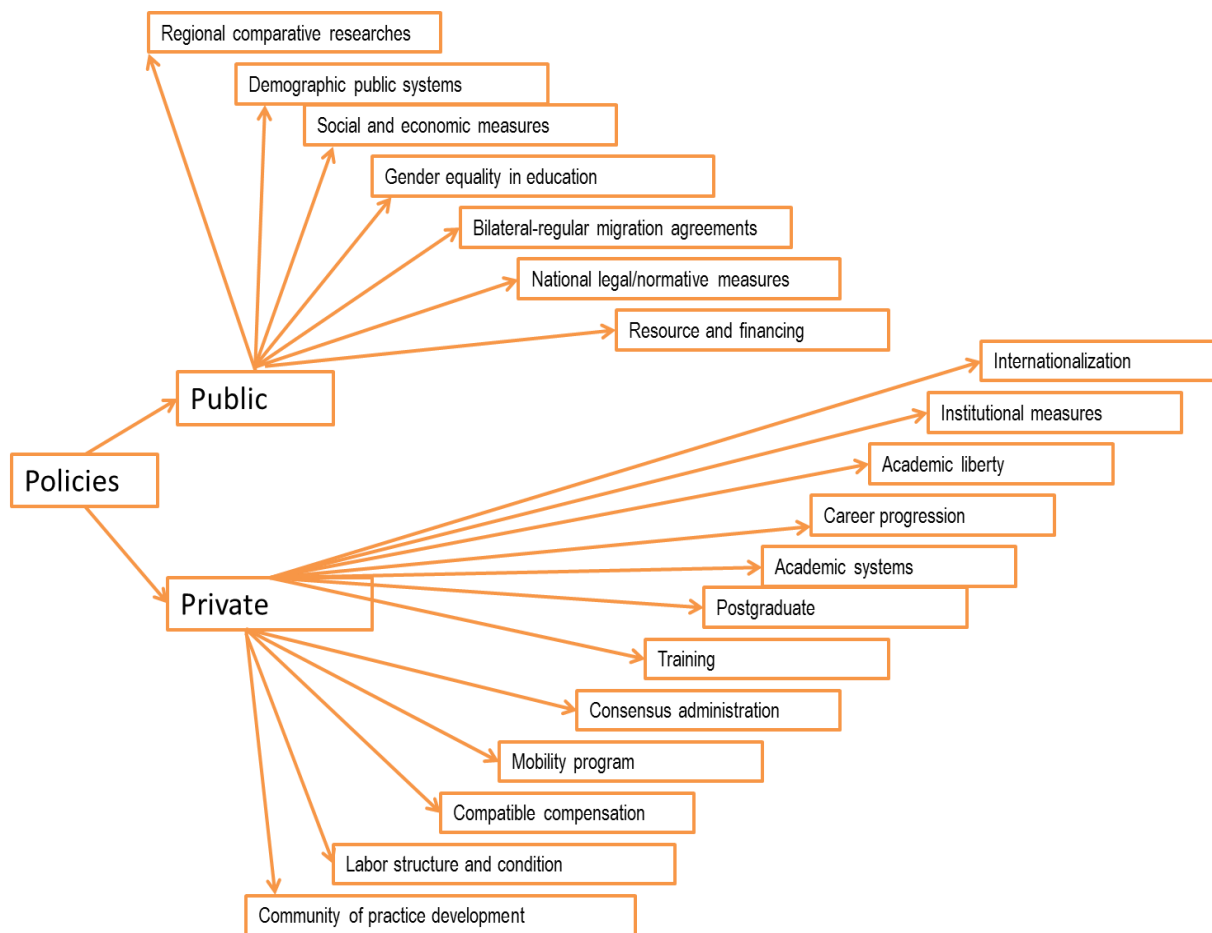


FIGURE 4: Set of policies to minimize the brain drain. Created by the author.

5- CONCLUSION

A lot of information has been processed in these fifteen articles that explicitly show the problem caused by the brains escape. We can verify the motivations of the migration of skilled individuals is well characterized and it is common to all, in other words, the search for living conditions and qualification, provided in developed countries. There is a super migration to countries like United States, Sabbadini and Azzoni (2006), where such migrants are submitted to the rules of the game of offer and demand of skilled labor, nevertheless the brains escape happens because it provides prompt possibilities of social living in family, what is not possible in country of origin, like study to the children, liberty and democracy.

Thus, the public policies listed in the articles can provide solutions, as long as, they were really applied in short term, together with the private organization's policies that are capable to contribute with punctual solutions, like training, career plan and others. The professional life is not in dissonance with the life in society, therefore, one depends on another to generate balance in living quality for a skilled individual, so that, he feels motivated and gratified for living the same way in his local of origin as other skilled individuals live in the developed countries.

Finally, it is important to highlight that studies about the theme are rightly explored by quantitative approach, because they deal with satisfaction and demographic surveys, as we noticed in 80% of the articles that were not the subject of this study; however, it was in the qualitative approach that it was possible to identify grants to discuss solution policies to the question issued in this research.

Thus, we suggest the continuity of researches that effectively explore a model that rise up against the condition of inferiority of skilled brains from developing countries to grant the academic liberty and the equality for everybody who gets qualification. The demotivation can cause a decline in the academic production as stated by Georgieva (2004, p. 365): "recent statistics reflect a growing mobility of academic, while the number of permanent instructor people quickly decreases and the sector of investigation is in decline. This determines the critical need of a special study about the brains escape phenomenon".

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