

Brain drain – current conditions and perspectives

Ljupcho Kevereski and Bisera Kostadinovska-Stojchevska¹

ABSTRACT

It can be safely confirmed that there may be no other problem in modern living, which with its multidimensional determination and conditionality no longer shakes, disturbs social, institutional and personal perspectives. It is a brain drain as a specific form of migration that implicitly refers to the outflow of the most highly educated, gifted, talented, creative potential possessing professional and personal competencies. The study focuses on the analysis of the situation and the perspectives related to the brain drain which, because of its far-reaching unpredictable, uncontrolled and uncertain implications and repercussions, acquires the legitimacy of a planetary phenomenon. The subject of research in the study is an analysis of the situation and the perspectives that refer to the brain drain from the aspect of the young population based on the examination of the opinion of the examined people regarding the psychological factors for the brain drain. The main goal of the study is to identify and actualize the implicit and explicit factors and assumptions that determine this phenomenon. In the research we start from the general hypothesis that the brain drain is not determined only by material-existential, social and other reasons. The sample in the survey consists of 300 examined people who are part of the student population from 3 universities in the Republic of North Macedonia.

KEY WORDS: Brain drain, gifted and talented, conditions, perspectives, repercussions, implications.

POVZETEK

Mirno lahko potrdimo, da v sodobnem življenju morda ni nobene druge težave, ki s svojo večdimenzionalno odločnostjo in pogojenostjo ne pretrese bolj, moti socialne, institucionalne in osebne perspektive. Gre za beg možganov kot specifično obliko migracije, ki se implicitno nanaša na odtok najbolj izobraženih, nadarjenih, talentiranih, ustvarjalnih potencialov, ki imajo poklicne in osebne kompetence. Študija se osredotoča na analizo stanja in perspektive, povezane z begom možganov, ki zaradi daljnosežnih nepredvidljivih, nenadzorovanih in negotovih posledic in posledic pridobi legitimnost planetarnega pojava. Predmet raziskave je analiza stanja in perspektive, ki se nanašajo na beg možganov z vidika mlade populacije na podlagi proučevanja mnenja analiziranih o psiholoških dejavnikih za beg možganov. Glavni cilj študije je prepoznati in aktualizirati implicitne in eksplicitne dejavnike in predpostavke, ki določajo ta pojav. V razi-

1 ABOUT THE AUTHORS: Ljupcho Kevereski, PhD, Professor of Pedagogy at the Faculty of Education, University of St. Kliment Ohridski, Bitola, North Macedonia. Email: lj.kevereski@uklo.edu.mk
Bisera Kostadinovska-Stojchevska, PhD, Assist. Professor of Pedagogy at the Faculty of Education, University of St. Kliment Ohridski, Bitola, North Macedonia. Email: k_bisera@yahoo.com

skavi izhajamo iz splošne hipoteze, da bega možganov ne določajo le materialno-eksistencialni, družbeni in drugi razlogi. Vzorec v anketi je sestavljen iz 300 analiziranih ljudi, ki so del študentske populacije s treh univerz v Republiki Severni Makedoniji.

KLJUČNE BESEDE: beg možganov, nadarjeni in talentirani, pogoji, perspektiva, posledice, implikacije.

INTRODUCTION

“The brain drain is the most sought after and most expensive “brand” in underdeveloped countries.”²

The world, which we live in produces new (non) natural phenomena that create a new visualization of our modernity, new natural products that sometimes have confusing terminological perception, uncertain scientific argumentation and spectacular manifest patterns.. One of them is migration as a new visualization of our modernity that has multidimensional manifest forms, where the shifting of space is no longer a trend but an immanent need.

The search for a new world and new future i.e. the shift of space is no longer a trend, but an imminent need. Perhaps there is no other problem in modern living that does not stress, shake or disturb social, institutional and personal perspectives with its multidimensional determinism and conditionality. It is assumed that it is acceptable to conclude that the gifted, the talented and the creative are the best and most expensive brand of underdeveloped countries. This syntagma emphasizes the paradox of the brain drain as the cheapest export of capital, which is found on the waiting list in highly developed countries, especially in the countries from the Western Balkan region. A special feature of the Western Balkan countries is the brain drain, which is a highly sensitive subject and it is still suffering the consequences of the transitional and post-conflict period and is deeply burdened and troubled by their recurrences.

The international project Brain drain (not) solvable problem - states and perspectives of the Western Balkan countries³ is an attempt by the authors to decipher certain implicit indicators of this phenomenon, which do not have evident manifest forms, and potentially social, insti-

2 In this context, a brand means a product that is revitalized by itself.

3 The split results of the project were presented at the International Conference in Ruše, Slovenia, 2018

tutional and individual barometers. The goal is to demystify the needs, motives, the trend, the magic of the human quest in the search for the future that explicitly or implicitly signals intra psychic confrontations the state of the body and mind, the spirit, the reality, the perspectives, the aspirations, the vision, and verifies the personal character of the person in a micro and macro contextual environment. The complexity of the responses to the previously mentioned dilemmas is certainly unconvincing given its planetary expertise, the multifactor determinism and the condition the eternity of this ephemeral. With the project, that is, by means of its empirical argumentation, we need to get closer to building a more realistic diagnostic picture of the pull and push factors that determine the statistical image of migration movements. The authors of the project go in search of checking the existing thesis that the basic brain drain motif is determined primarily by the material-existential set of reasons. But they also point out the potential need for a change or revision of the existing mental personality technology⁴ when taking into account the true argument for brain drain.

Migration is one of the most unpredictable population phenomena from which a new expansive intensity of a migration movement, called brain drain, is shaped, as a specially structured focus that refers to highly educated experts in various fields of science. The brain drain is an extremely complex population phenomenon that is multifactorially determined and conditioned. This means that society, institutions and individuals are facing a new set of challenges on how to behave. Because of the inability to effectively prevent brain drain, academic interest is more or less focused on recording the striking statistical indicators. The brain drain due to its far-reaching (un)predictable, uncontrolled and uncertain implications and repercussions, gets the legitimacy of a planetary phenomenon. Brain drain is a characteristic of the countries, but even more so of the world. Is it seen more as a solution than a problem or a solution to the problem? This paradoxical thesis becomes more absurd when trying to answer it. The symbol of the brain drain can be brought about in the title of the book *The Place in between* (Stewart Rory, 2002), which illustrates the transfer of highly educated individuals, between two places. In fact, this points to the constant searching for the talents of economic and psychological well-being.

⁴ Under mental technology we mean a structured system of mental patterns of thinking who physiognomer a certain kind of behavior in the concrete case towards gifted and talented.

It is estimated that today over 1.5 million highly trained and well educated professionals from developing countries live in already developed countries (Stalker, 2000, according to Iredale, 2001). The statistical data indicate that over 200 million people i.e. more than 3% of the world's population live outside of the country they were born in and their number is constantly increasing and it is expected to continue to increase in the decades that follow. In this process we will include illegal and forced migrations (Stojanoska M., 2018, p.10). In the end, we will point out that migrations, especially the type of migrations relating to higher intellectual capacity could be hard to predict due to their multidimensional conditionality (LeBras, 2002,p.65), especially because this process is determined and conditioned by multiple factors. Our understanding of the term brain drain would be to define it as a specific type of migration that implicitly refers to (most) highly educated, gifted, talented and creative potential, which possesses potential professional and personal competences from various scientific fields, which are the potential bearers of the future development of other countries with which countries acquire a comparative advantage over the other countries in the surrounding area.

DEFINING THE KEY TERM

For the first time, the term brain drain appeared in a report by the Royal Society of London in 1963, in which it is described as an exodus of English professionals in the United States. The term brain drain is defined as a large, very frequent, mass migration of a particular category of population, of mostly higher education specialists from different fields of science. It is often associated with an outflow of young people from their place of residence, who are potential bearers of the future development of their own country. Contrary to this notion is the term brain inflow, which implies the arrival of higher education potential specialists and scientists to give the country a comparative advantage over other neighboring countries.

It is impossible to study the brain drain from the aspect and in the context of globalization and multiculturalism with which (Marga, 2010) agrees from the point of view of the positive effects for the countries where experts come from Mountford (Mountford, 1997) according to Blagojević-Vasiljević (Blagojević-Vasiljević, M. et al., 2016). Winners are those, who attract brains and losers are those, who are experiencing a brain drain (Marga, 2010). Brain drain means an international trans-

fer of resources in the form of human capital, and generally refers to migration of highly educated individuals from developing countries in highly developed countries (Beine et al., 2008). Brain gain means increased investment in knowledge in developing countries in order to avoid migration (Munck, 2010).

The same team points out and suggests that a growing number of authors deal with or treat various aspects of the brain drain, such as defining it, reducing the intensity of this process (Adams, 2003; Beine et al., 2001; Carrington & Detragiache, 1999), analyzing the link between study abroad and brain drain (Oosterbeek & Webbink, 2011). The departure of highly educated people results in the loss of human capital as well as in the shrinkage and elimination of externalities, which the employment of the highly educated creates in the home country (Glytos 2010; Tessema 2010). Also, Sriskandarajah (2005) says that nearly one in ten adults with some university or post-secondary schooling born in the developing world now live in the developed world. Other authors suggest ways to transform the brain drain into brain inflow (Grigolo et al., 2010), but also to introduce the concept of networking the outflow (Ciumasu, 2010), as well as to examine the needs for attracting and retention of specialists (Wadhwa, 2009). In the end it's important to point out that migration movements, especially those relating to higher education potential, can be most difficult to predict given its multidimensional conditionality (Le Bras, 2002,p.65); (compared to Adamovic, M, (2003).

When it comes to emigration, there are a number of factors that stimulate or support it, which are called push factors, and appealing reasons why the individual chooses another particular country (pull factors). The first group certainly includes unemployment, socio-political situation, discrimination, disagreement with the value system, and others (Sullivan and Thompson, 1988; Prpic, 1989; Golub, 2002). But suppressive and appealing reasons are almost the same for all potential migration movements and cannot be fully explained until we take a look at their individual perception of the situations, phenomena, processes, and perspectives (Portes 1976, according to Joyce i Hunt, 1982; Golub, 2002). Migration of skilled workers to France and Germany increased following the implementation of policies to attract researchers, IT workers, and foreign students. In 2000, Germany introduced a program similar to the American green card to recruit 20 000 foreign IT specialists. By the end of that year Germany had recruited half of that number, most-

ly from Eastern European countries (Cervantes, Guellec 2002). This means that the key factor in explaining this complex phenomenon still stems from the subjective perception and experiencing the occasions. Some authors propose a way to transform the brain outflow into the brain inflow in European lands (Grigolo et al., 2010) and the concept of migration of the outflow (Ciumasu, 2010). On the other hand, in larger countries like China and India, the relative scale of loss of human capital is smaller; however, particular sectors might be affected adversely, as for instance through the departure of huge numbers of health care workers from some sub-Saharan African countries (Lowell, 2003; Sriskandarajah, 2005). The brain drain is the migration of highly educated population (professionals, scientists and intellectuals) from individual countries (Šverko, 2004). The same author considers that this negative trend is pernicious for the countries in which it's occurring.

Existing data indicate the extent of high-skilled migration and its continuing growth over time. High skilled migrants come from every corner of the world, especially from poorer, smaller, and isolated economies, and move to larger, wealthier, English-speaking OECD countries. In light of this, it is not surprising that the term brain drain dominates popular discourse on high-skilled migration (Gibson, McKenzie, 2011a). Ironically, the term brain drain first appeared in the British media a little over half a century ago to depict the loss of skilled labor from Britain, mainly to the United States, as noted by Clemens (2013), and Britain still remains one of the largest source countries of high-skilled emigrants. The earlier literature was mostly theoretical, as exemplified by Grubel and Scott (1966), who provide a theoretical framework with which to examine the implications of high-skilled emigration for economic outcomes in the sending countries. They conclude that, if an emigrant takes with them the value of their marginal product, welfare loss is not of concern in competitive and efficient markets. A similar paper by Berry and Soligo (1969) points out that although the sending countries lose their skilled workforce, they would be compensated with remittances from the emigrants and knowledge transmission. More important, they argue that a sending country may gain if emigrants leave behind their assets.

BRAIN DRAIN IN THE REPUBLIC OF NORTH MACEDONIA

The unstoppable trends in brain drain do not go beyond our territory which has excellent assumptions about it. In this section we will

present certain media claims of different individuals, institutions and associations that give their views on this problem. The love for the homeland lasts, but not too long (Panel Discussion, The Innovation Fund of the Republic of North Macedonia).

In December 2017, the Skopje-based Institute for Strategic Research and Education published a study showing that 69 percent of lecturers, assistants, and researchers working in North Macedonia's higher education system would consider leaving the country to seek new employment opportunities, and that 20 percent of them had already applied for a job abroad. A study conducted in North Macedonia in 2010 estimated that, during 1995-2000, the number of scientists and researchers in the Western Balkans decreased by 70 percent (Vracic, A., *The way back: Brain drain and prosperity in the Western Balkans*, 2018).

The wealth of a country is determined by how many talented people there are, but how many of them will be successfully kept within the country. "According to World Bank data, the total number of immigrants from Macedonia is 21 percent – a percentage that has steadily increased in recent years."⁵ Twenty-five percent of higher education staff of North Macedonia has moved out in the last 10 years, a conference "Brain Drain: Perspectives of Young People". Brain drain is increasing, with half of young people not seeing a future in North Macedonia. More and more young people are deciding to leave the country in search for a better job and social conditions. More than 70% of young people are willing to be part of that brain drain, and nearly half of them, or 49.3%, do not see their future in the country, according to a new survey by the Institute for Social Democracy Progress. The outflow of young people reaches alarming numbers. In 2010, the World Bank announced that 447,000 people have left North Macedonia, which is a quarter of the population. Thirty percent of these are highly educated people. North Macedonia is considered to be among the 10 countries, whose population is most frequently leaving the country. According to United Nations data, in 1990, the country was abandoned by 14 percent of residents, and in 2010 the number increased and reached more than 20 percent.

How to prevent brain drain: 70 percent of young people are willing to go abroad (Google, brain drain). We are in 133th place. The list is ranked vice versa. That is, the last country is the country with the most

5 More about this issue in "National Report: Brain Drain in Macedonia: Scope and Factors".

outflows. The list is based on the percentage of students and highly educated staff leaving for abroad. A total of 144 countries are ranked in the Competitiveness Report of the World Economic Forum (WEF), with the last place in the country with the largest outflow of staff, and North Macedonia is at 133th place. The drain of brains is worrying, young people are all less concerned about a future art home. Poverty, deep politicization and lack of perspective are all factors that motivate the emigration of young people. The Friedrich Ebert Foundation study only confirms that Macedonia is facing an exodus of young people. New statistics in this area show that according to the World Economic Forum (WEF) of 2012,⁶ Montenegro is ranked 60th, Serbia ranked 141th out of 144 places. Then North Macedonia is ranked 135th, Croatia and Bosnia and Herzegovina rank 126th and 140th respectively, Bulgaria at 128th, Romania at 136th and Albania at 96th place (Melovic, Faculty of Economics Podgorica, University of Montenegro, Stankovic, Faculty of Economics, Niš, University of Nis).

(DE) STIMULATING FACTORS, WHICH DETERMINE THE STATISTICAL PICTURE OF THE BRAIN DRAIN

WHAT ARE PUSH AND PULL FACTORS⁷?

The conclusions to which the highly educated professionals who follow the brain drain index presented by the statistical picture of the most renowned world and European demographic reports and trends came have been staggering and surprising to the scientific world. Although the general causes for the brain drain phenomenon in underdeveloped countries are approximately clear and well known, it is nevertheless necessary to throw a new light so as to further illuminate the factors, which determine this fateful nature of the poorest and most undeveloped countries. The true motivation behind the brain drain is much more complex than what was originally thought, given the fact that the phenomenon is characterized by an intricately complex contextual and structural appearance.

When it comes to the factors, which determine and condition the brain drain phenomenon, there are a number of reasons and causes which stimulate or induce it. These factors are otherwise known as push factors (factors, which are pushing the individuals out of their homeland). On the other hand are reasons, which the individuals deem as

⁶ More detailed on the issues in the reports of the World Economic Forum (WEF) of 2012.

⁷ Relate to the factors that stimulate the brain drain.

attractive and which stimulate them to choose some other country as a future destination for settling down. Those are better known as pull factors (factors which are pulling individuals to other countries).

The first group of push factors consists of such factors as unemployment, the socio-political situation of the country, discrimination, prejudice, disagreement with the value system and many others (Sullivan and Thompson, 1998.; Prpic, 1989.; Golub, 2002). Apart from these, the following are mentioned in the same group: various pressures from different environments, poor infrastructure, inadequate offers for work, poor educational opportunities, poor healthcare, bad environmental conditions, natural disasters, social pressures and others.

The second group of pull factors consists of factors such as: improvement of the standard of life, healthcare and bigger availability of services, variety of opportunities to find work, higher salaries, higher quality of education, reduced social pressures as well as other pressures from the environment, better and bigger perspectives and others.

However, the push and pull factors are almost the same for all types of migration, not only for the brain drain phenomenon, and they cannot be fully explained unless professionals, who follow the brain drain index are able to deeply penetrate the individual perception of the situations, phenomena, processes and perspectives (Portes, 1976, according to Joyce and Hunt, 1982; Golub, 2002). Considering that in a number of papers that study the brain drain problem, we will point out some factors that are not so frequent in bibliographic publications.⁸ Here we mean, first of all, the individual perception of individuals of particular social developments, institutional trends and individual outflows of behavior. But, above all, are those factors that perform psychological pressure on the person in terms of their personal characteristics. In our case, these are the following: it is a special world for me, there are dubious criteria for success, there is differentiation and discrimination of different kind and degree and others.

BRAIN DRAIN FROM ANOTHER PERSPECTIVE⁹

Brain drain presents a serious social and institutional problem for each country, especially for underdeveloped countries. But this prob-

8 In this context, we mean factors that stimulate brain drain and have psychological, ethical and other dimensions.

9 We think of new paradigms that are not in the context of traditional cliches.

lem is not exclusive property only to countries that have a low degree of development and poor economic power. His seriousness is noted in that brain drain is implicitly associated with the abandonment of the high intellectual potential of a state. For these individual development in traditionally established processes, standards and principles of thinking and behavior. Her spatial transfer as well their new mental patterns that go beyond the frames of social stereotyping and rigidity produce the shift and alteration of our social reality. Traditionally the usual migration movements of individuals and groups in the time of globalization processes have a new population form. Traditionally the usual migration movements of individuals and groups in the time of globalization processes have a new population form.

In order to affirm new and different aspects for which there are certain stereotypical views in the perception of this population phenomenon in the common and academic public, we will try to articulate several questionable theses:

The first is that the brain drain does not represent a new population phenomenon¹⁰. It represents a new visualization of reality, which creates a new fabricated constructed phenomenon for the needs of contemporary globalization processes. New in it is that it gets new statistical unpredictable parameters and migratory expansiveness.

The second refers to the fact that the final instance of brain drain is not only the achievement of economic well-being, but also psychological well-being. This means that temporarily or permanently distancing from the social setting in which a series of social and other deviations are governed means also achieving a certain psychological relaxation in the new setting.

The third relates to the fact that material and existential aspects are not the only and dominant motives for the brain drain, but the existence of a series of psychological and ethical issues and problems. This conclusion suggests that in the analysis of the causes of brain drain, it is necessary in the focus to put other intangible determinants that stimulate this process.

The fourth relates to the impossible tendency to stop brain drain, which is also a nominal tendency of underdeveloped countries. In this sense it

¹⁰ This thesis is a hardly acceptable finding for underdeveloped countries.

would be better and more accurate to talk about creating realistic conditions and perspectives for keeping talents with their own country.

The fifth refers to the immanent need to change our mental thinking and behaviors towards gifted and talented. It actually means changing our mental patterns of thinking about the potential that is planning or leaving our country. These changes should take place in the micro and macro context so that brain drain can have new, different perspectives that all underdeveloped countries advocate.

The above elaborations point to the need to redesign our views that will be in line with the new globalization trends and the new contemporary reality.

RESEARCH METHODOLOGY

The fundamental problem in the research was the brain drain as a significant socio-economic one that has multidimensional reflections in all spheres of living. The subject of research in this paper was to examine the differences among the examinees regarding various aspects related to brain drain. The main goal of the paper is to identify and actualize the implicit and explicit factors and assumptions that determine this phenomenon. In the research we start from the general hypothesis that the brain drain is not determined only by material-existential, social and other reasons, but also from a number of other psychological-ethical reasons.

Research questions: Are material-existential, social and other assumptions the real reasons for brain drain? (Explicit discourse). Are personal, psychological and ethical reasons determinants that stimulate the brain drain process? (Implicit Discourse) A collision of paradigmatic concepts. The sample in the survey consisted of 300 respondents, of whom 200 were from the fourth year in high school (Ohrid, Bitola, Štip, Skopje, Strumica) and 100 students from the fourth year of 3 universities in the Republic of North Macedonia.

The survey used the questionnaire (PIOMRM) ¹¹ containing 20 questions with Likert type of answers. They sought to obtain an opinion on the following aspects that explicitly reflect the attitude towards this

11 The questionnaire was designed to identify more psychological factors and dimensions for the brain drain that are beyond the layout and academic observation.

problem: opportunities for progress, motivation for leaving the state, emotional attitude towards abandoning, belief in the perspectives of society, degree of readiness to leave. Statistical processing of results includes a frequency display, percentage ratio, graphic representation, ranking differences in compliance with claims, and others.

A VIEW AND INTERPRETATION OF THE RESULTS

The display of the results was based on an assessment of the most important responses of the respondents regarding the brain drain opinion.

Figure 1. Our country insufficiently invests in the direction of STOPPING¹² the brain drain

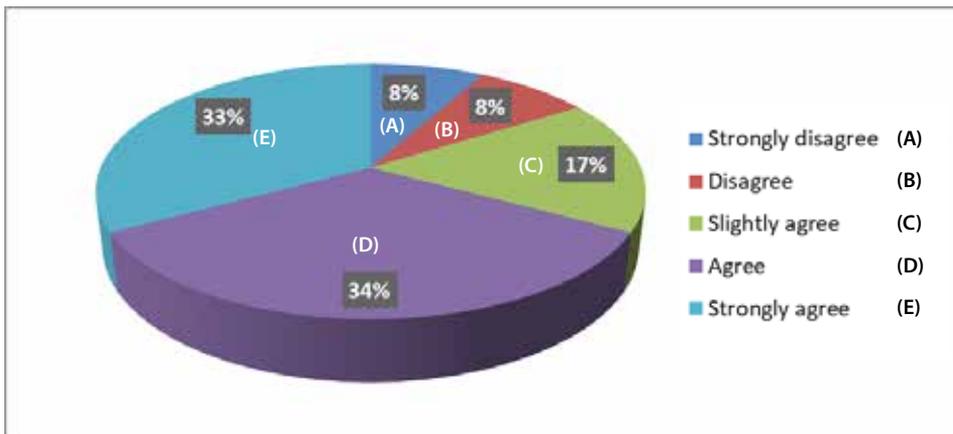


Figure 1 shows the high percentage of respondents agreeing with the claim that the state does not invest enough in stopping brain drain. As evidence of this, 34% completely agree, 33% agree and partly agree 17% or 84% in total. This high percentage speaks about the insufficient investment of our country in its talents. This percentage confirms the generally accepted attitude towards gifted and talented, that the state demonstrates a theoretical declarative rather than a practical operational system of measures and procedures that stimulate the development of gifted and talented.

¹² The term STOP for the outflow is insufficiently explicit, more functional would be the prevention or reduction of the brain drain, but its use is the result of a simpler understanding.

Figure 2. There are no reasons for me to stay in my country

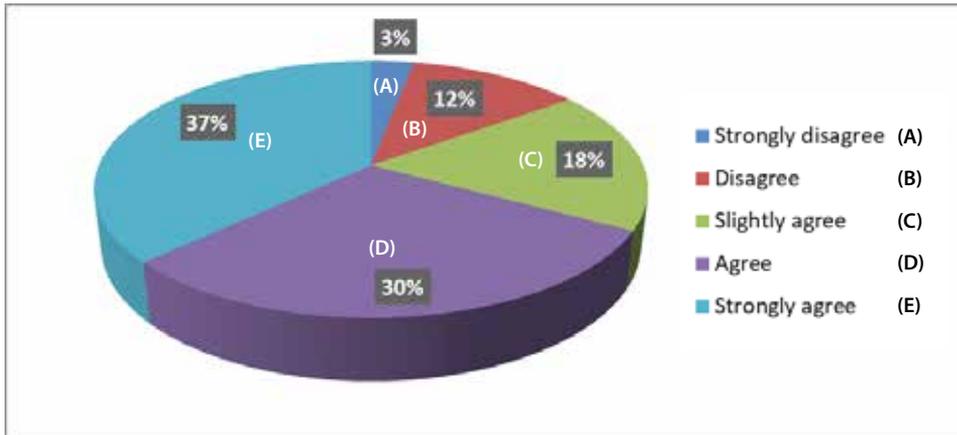


Figure 2 shows the attitude of the respondents regarding the reasons for young people staying in the country. Thus, 30% of the respondents fully agree, 37% agree and 18% partially agree with the claim that there are no reasons for staying in the country. The total percentage that agrees with this conclusion is 85%. The previous assertion points the uncompromising attitude of the respondents to stay in their own country. This largely illustrates the high degree of perceptions of the state's lack of transparency, that is, the lack of any opportunity to change the hard-line position regarding the existence of real reasons for staying in their own country.

Figure 3. If I had the opportunity, I would immediately leave the country

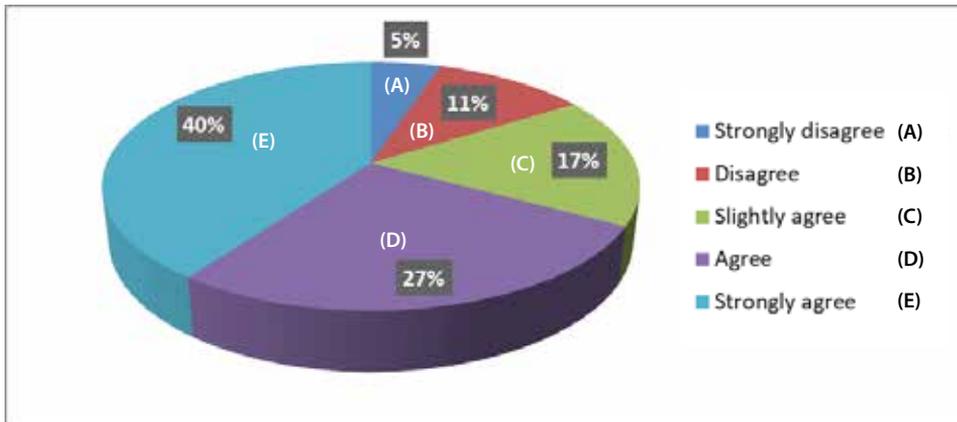
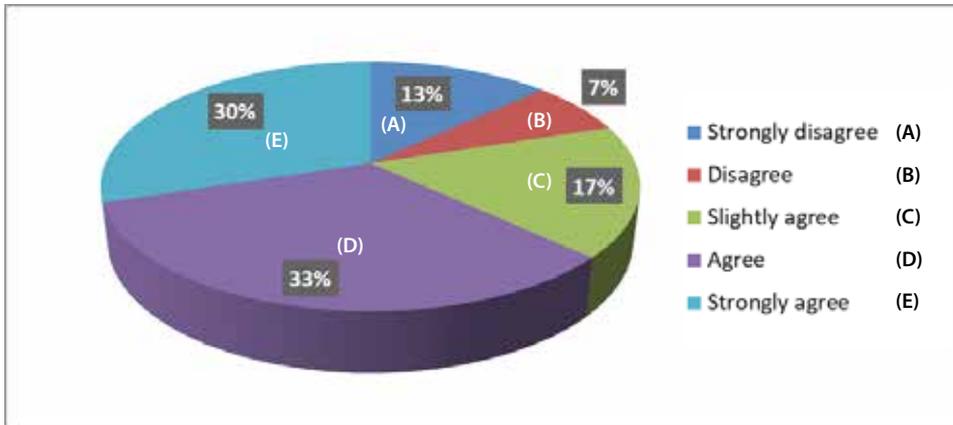


Figure 3 talks about the potential readiness of the respondents about

the possibility of leaving their country. In this sense, 27% agree, 40% agree and 17% partly agree that if they had the opportunity they would leave their country. The total percentage of this potential prospect is 84%. Meanwhile, these results indicate the highest level of concern among the relevant factors in the country; the respondents determine to leave the state at all costs and without minimal consideration. This orientation has profound social and institutional dimensions and reflects an irreconcilable attitude for staying in their own country.

Figure 4. There is prejudice against gifted and talented



From figure 4 we can note that as many as 80% of the respondents think there is a different kind of prejudice towards gifted and talented people. Out of the total number of 33%, they fully agree with this trend, 30% agree and 17% partially accept this claim. The results indicate that our micro and macro ambient is fulfilled with a large number of prejudices towards the gifted and talented that makes it difficult to improve the quality of their treatment. But at the same time, it shows the existence of inherited and current types of prejudices that are the result of traditional views of individuals with highly extreme potentials in one or more scientific fields.

Figure 5. I plan to permanently leave from the country

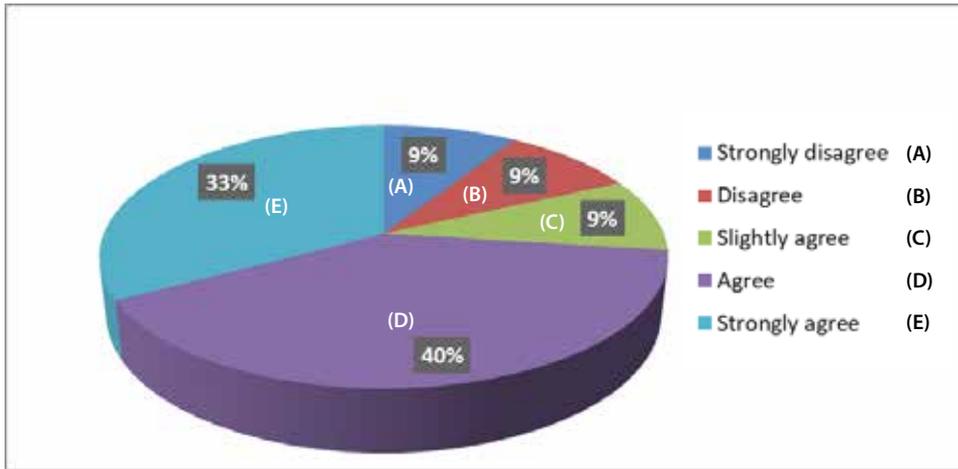


Figure 5 refers to the degree of readiness to leave the country. In this respect, 40% of the respondents fully agree, 33% agree and 9% partially agree. The total percentage that would leave the country is 82%, which speaks of the extremely high degree. The high attitude i.e. the consent of the youth to leave their country confirms the adverse fact about the state's perspectives. At the same time, it illustrates the long-standing their treatment in the state, which we think must be changed with time.

Figure 6. My biggest motive for leaving is the inequitable treatment of people

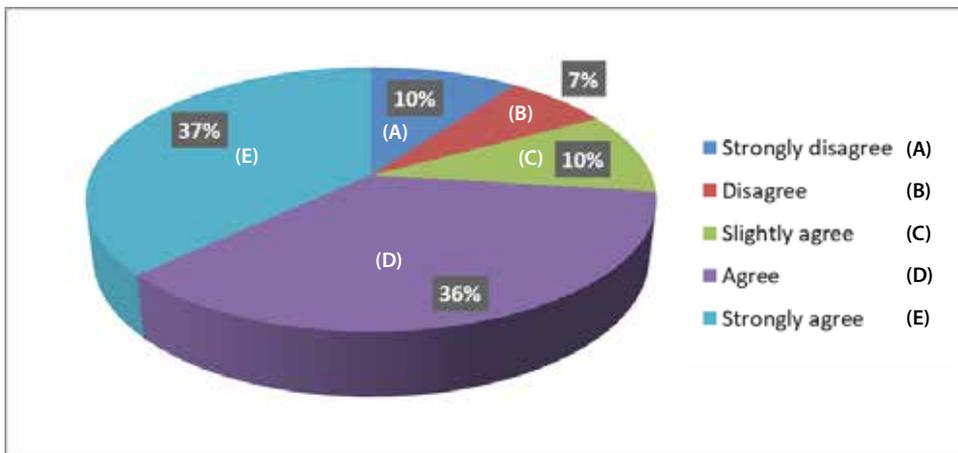


Figure 6 shows the biggest motive why people would leave their coun-

try. According to the respondents, the biggest motive for the abandonment of their country is the unequal treatment, with 36% agreeing with this attitude, agreeing with 37%, and partially agreeing with 10%. The total percentage of the total is 83%. The illustration above demonstrates that the biggest motive for leaving the state is the unequal treatment of individuals, which shows a profound crisis of social relations in which dehumanization is one of the most common principles of social functioning. This thesis can also be supported by the general attitude of the public and expert opinion to the existence of discrimination of varying degrees, and intensity.

BRAIN DRAIN PREVENTION

In proposing the recommendations for changing the attitude towards the gifted and talented regarding the brain drain prevention, we take into consideration the social, institutional and individual characteristics and specificities of our micro and macro ambient.

1. The national concept for discovering, working and monitoring the development of gifted and talented.
2. Constituting a Ministry-Agency of the diaspora with special emphasis on gifted and talented.
3. Determining a National coordinator for monitoring the treatment of gifted and talented.
4. Preparation of a general operative program for talents returning.
5. Constituting and strengthening of University research centers.
6. Constituting of Regional Scientific Centers for development of gifted and talented.¹³
7. Macedonian Association for gifted and talented.¹⁴
8. Increasing the percentage of research and development (science).
9. Constituting a database of talents from different scientific areas in the Republic of North Macedonia.
10. Recruiting and engaging Macedonian experts from the diaspora to deal with significant national problems.
11. Constituting a computer center for electronic use on the basis of the scientific-research experience of the Macedonian talents.
12. Initiation and realization of school and other acceleration of gifted and talented.

¹³ At the stage of conceptual and organizational facilitation and installation.

¹⁴ Macedonian Association for Gifted and Talented was formed in 2012 in Bitola.

13. Organizing a national, regional and municipal manifestation for gifted and talented.
14. Constituting a database for professionals who live abroad.
15. Greater financial support of young talents.
16. Inclusion of North Macedonia in the Project for Development of Research Areas (European Research Area – ERA).
17. Organizing video conferences for new scientific achievements.
18. Formation of scientific research teams from national and international experts who, besides their knowledge, possess innovative spirit, lobby-contact, ideas, and initiatives.
19. Creating brainstorming mindsets.
20. Constituting a center for Coordination of the National Network for Infrastructure Development, Logistics, and Support of the Mobility of the Researchers in the Republic of North Macedonia.

We assume that some of the mentioned measures exist or are in the phase of formation, but there is a necessity of a new organizational, material, technical, personnel, and financial improvement. The stated measures and activities are more directed towards the relevant institutions, organizations, and individuals that have a direct influence on the creation of the educational policy and the attitude towards the gifted and talented. Brain, collection, and use of minds (brain gain) require a new behavioral strategy.

DISCUSSION

In order to bring the obtained results in intercollective relationship with the empirical results, the existing layouts and academic statements we are ought to analyze the obtained results in the process of research.

The high percentage (84%) pointing out to the insufficient investment of the state in achieving a brain drain stop corresponds to the generally accepted attitude of the academic public in the state that the ratio of gifted and talented people is more theoretically declarative than practically organized. In addition, the high 85% attitude of the respondents that there are no real reasons for staying in the country is in correlation with the view that the state does not invest much in stopping brain drain and domination of the theoretical and declarative orientation of the state towards the gifted and talented.

The results in chart no. 3, which states that if 84% of the respondents would leave their country, implicitly contain the previously mentioned paragraphs of the first and second graphic representations. The results from the chart no. 4 that discusses the high percentage of prejudices towards gifted and talented people, is closely related to the results in chart no. 5, which suggests that 82% of respondents plan to leave their country forever. In this context, from the high agreement of the respondents, we can expect that the greatest motivation for the brain drain is the unequal relationship between individuals, i.e. the existence of discrimination of different kind and at different levels.

In addition we will present the most important results from the survey conducted in 2015 in North Macedonia, related to differences of prejudice based on gender, age, work-experience and place of work-life of respondents. There is a statistically significant difference on the issue whether gifted and talented do not need help (Hi square = 25.215; df = 4; $p < 0.05$) among respondents male and female respondents. Namely 80% of female respondents believe that gifted and talented students do not need help that is not the case with the respondents were male.

The results show that the respondents were female bias exists that gifted and talented students do not need any help. There is a statistically significant difference regarding the question whether gifted and talented are better adapted in the middle (Hi square = 34,069; df = 4; $p < 0.05$) “. Namely 70% of female respondents believe that gifted and talented are better adapted to the environment that is not the case with the respondents were male. The results show that the respondents were female bias exists because they think gifted and talented are better adapted in the environment.

There is a statistically significant difference regarding this issue (Hi square = 21,53; df = 4; $p < 0.05$). The respondents aged between 35 -63 years and 69% believe that gifted and talented arising from families with higher parental education is not the case with respondents aged 35 years. Results to Table 3 show that respondents who are of higher age (35-63 years) show prejudice against gifted regarding that gifted and talented are from families with high education.

There is a statistically significant difference regarding this issue (Hi square = 46,822; df = 4; $p < 0.05$). The respondents aged between 35-63 years believe with 80% that talent is completely innate is not the case

with respondents aged 35 years. The results in Table 4 show that the respondents aged 53-63 years show that gifted and talented have only genetic predisposition. There is a statistically significant difference regarding this issue (Hi square = 11,521; df = 4; p <0.05). The majority of respondents with work experience of 20-40 years considered gifted and talented have no problem in communication that is not the case for those with work experience from 1-20 years.¹⁵

The results in Table 5 show the bias of respondents with longer length of service, from 20-40 years. Teachers think that gifted and talented do not have communication problems.

There is a statistically significant difference regarding this issue (Hi square = 17,663; df = 4; p <0.05) ». The majority of respondents with work experience of 20-40 years think Talent is conditioned by high inteligenicija that is not the case for those with work experience from 1 -20 years. The results show teachers with work experience of 20-40 years think that giftedness is conditioned by high intelligence.

There is a statistically significant difference regarding this issue (Hi square = 12,686; df = 4; p <0.05). respondents from the urban environment, and 76% considered gifted and talented are emotionally more stable than the other which is not the case with respondents from rural environment that this opinion is shared by 54%. The results show that gifted and talented have high emotional competencies.

There is a statistically significant difference regarding this issue (Hi square = 11,231; df = 4; p <0.05). The respondents from the urban environment, disagree with the position gifted and talented show higher verbal skills is not the case with respondents from rural environment. Teachers from urban environment think that gifted and talented have better verbal skills.

As a result of the empirical data of the research as well as the analyzes of many academic observations, we can focus our attention on certain conclusions that have a social, institutional and individual character. In that sense, it can be said that the state or the relevant institutions have not yet created adequate motivational mechanisms that focused on greater inspiration for individuals to stay in their own country.

15 Separate results from the above-mentioned international project.

But one conclusion from the empirical process shows that not always the material prerequisites and assumptions are the main motivational factors for brain drain. Therefore, the results depicts that 59% of the respondents do not agree with the statement that material conditions are determinant for existence. Hence, this situation emphasizes the change of the so-called discourse of understanding and accepting the material-existential causes, which are main motives for the brain drain.

In this article we can agree with the statement that the main motivational mechanism for staying in the country lies in the feeling of the previous state investment in them. Unequal treatment for all individuals is a strong motivational factor for inciting or thinking about leaving the country. Family relationships and responsibilities are one of the more important factors that inhibit the brain drain process.

One of the most attractive conclusions that are part of the empirical research findings is the subjective feeling of the respondents that they are forced to leave their country. In the end, it remains that the state and institutions should make their own reorganization of the existing system of behavior towards every individual, especially those who are forced to give their gifted, talented and creative potential (space) space and time out of their country.

Both the stated analysis and intercollective relationship of the results are a part of an international project titled “Brain drain (un) solvable problem in the countries of the Western Balkans”, which includes the following countries: North Macedonia, Serbia, Montenegro, Bosnia and Herzegovina, Kosovo, Albania. Comparative sample countries are Slovenia and Croatia. This project is being realized in the frameworks of the collaboration of the Macedonian association for gifted and talented students, Primary School Janko Glazer, Ruše, Slovenia and Faculty of Pedagogy, Maribor.¹⁶

¹⁶ The international project continues with the expansion of countries, institutions and entities.

CONCLUSION

As a result of the empirical findings of the research as well as the analysis of many academic achievements, we can focus our attention on certain conclusions that have a social, institutional and individual character.

The state should build and practice the implementation of an operationalized system of measures and procedures that will encourage the development of gifted and talented at all institutional fields, beginning from pre-school to tertiary education. The absence of real reasons for staying in their country should be replaced by alternative opportunities for the development of the top psycho-physical capacities of the gifted and talented. The absolute and uncompromising attitude towards abandoning their country should be relativized by offering a range of opportunities where young people can satisfy their educational, socio-emotional and other needs. Prevention and elimination of prejudices towards gifted and talented should be a priority goal and a task for all relevant organizations and institutions, but also for each individual. That means a necessary change of thinking patterns and behavior towards gifted and talented starting with and within the family. The theoretical interest of the state towards gifted and talented should change imperatively in order for them to feel the care of the state, for each individual. The absolute humanization of society is possible if one sees and satisfies the individual's needs, opportunities and aspirations of each individual. Nurturing individuals with incredibly high potentials in one or more scientific fields is not a privilege for individuals, but a privilege for the state and its prosperity. In that sense, it can be said that the country, or the relevant institutions, have not yet created adequate motivational mechanisms that are aimed at greater inspiration for individuals to stay in their own country.

However, one conclusion, that is the result of the empirical process, states that the material prerequisites and assumptions are not always the main motivation factor for the brain drain. That tells a lot about the change of the recent discourse of seeing and interpreting that the material-existential causes are the main motive for the brain drain. Unequal treatment of all individuals is a strong motivational factor in inciting or thinking about leaving the country.

One of the more appealing conclusions, that are part of the empirical

research findings, is the subjective feeling of the respondents that they are forced to leave their country. Finally, the conclusion remains that the state and institutions need to make their own reorganization of the existing organization of behavior towards each individual, especially to those who are gifted, talented and creative and are forced to sell their potential outside of their country.

At the very end, we will mention several seemingly paradoxical and provocative statements: Employment does not guarantee brain drain. We need a long-term brain drain strategy, but we urgently need a daily strategy for their treatment, i.e. a current strategy, a strategy of the present. It's not about what we will do, but what we are doing with the gifted and talented. Everything else is the drama of our present. In the end, we will point out that migrations, especially the type of migrations relating to higher intellectual capacity could be hard to predict due to their multidimensional conditionality (LeBras, 2002: p.65), especially because this process is determined and conditioned by multiple factors.

REFERENCES

- Adams, R., 2003. *International Migration, Remittances and the Brain Drain: A Study of 24 Labor Exporting Countries*. Policy research working paper, No.3069. Washington: World Bank.
- Beine, M., Docquier, F., Rapoport, H., 2008. Brain drain and human capital formation in developing countries: winners and losers. In: *The Economic Journal*, 118 (April), pp.631–652, Royal Economic Society.
- Cervantes, M., Guellec, D., 2002. *The brain drain: old myths, new realities*. OECD Observer (May).
- Ciumasu, I., 2010. Turning brain drain into brain networking. In: *Science and Public Policy*. 2010, Vol. 37, Issue 2, pp.135-146.
- Dokmanović, M., 2017. "Establishing criteria for quality in the social sciences in order to prevent brain drain from the Republic of Macedonia". Institute for Strategic Research and Education, available at <http://www.isie.org.mk/wp-content/uploads/2017/12/ISIE-studija-odliv-na-mozoci-MAK.pdf>,
- Grubel, H.G., Scott A., 1977. *The brain drain: determinants, measurements and welfare effects*. Ontario: Wilfrid Laurier University Press.
- Golub, B., 2002. Motivational factors in departure of young scientists from Croatian science. In: *Scientometrics*, 53 (3): pp.429-445.
- Inglehart, R., Basanez, M., Moreno, A., 2001. *Human values and beliefs: A cross-cultural sourcebook*. Michigan: The University of Michigan Press
- Joyce, R. E., Hunt, C. L., 1982. Philippine nurses and the brain drain. In: *Social Science and Medicine*, 16 (12): pp.1223-1233.
- Le Bras, H., 2002. *L'adieu aux masses: Démographie et politique*. Editions de l'Aube.
- Lowell, B. 2003. Skilled migration abroad or human capital flight? Migration Policy Institute (June). Retrieved from: <http://www.migrationinformation.org/feature/display.cfm?ID=135> (accessed Oct 3, 2011).
- Marga, A., 2010. Globalization, multiculturalism and brain drain. In: *Journal of Organisational Transformation and Social Change*, Volume 7, Number 1
- Mountford, A., 1997. Can a brain drain be good for growth in the source economy?. In: *Journal of Development Economics* 532, pp.287-303.
- Munck R., 2010. Globalization, Migration and Work: Issues and Perspectives, Labor, Capital and Society, Vol.43, Issue 1, pp. 155-177.
- Manashi R., 2012. Brain drain. In: *The Wiley-Blackwell Encyclopedia of Globalization*. Vol. 1, Edition: Blackwell Publishing, pp.132-135
- Skiskandarajah, D., 2005. Reassessing the impact of brain drain on developing countries.

- Sullivan, T. J., Thompson, K.S., 1988. *Introduction to Social Problems*. New York: Macmillan publishing company.
- Stewart, R., 2010. *The Places In Between*. London: Picador. pp. 130–58.
- Seidman, I., 2006. *Interviewing as Qualitative Research: A guide for researchers in education and the social sciences.*, 3rd ed., New York: Teachers College Press.
- Sveva A., Brandi C., 2004. *Defining Brain Drain, Evolution of Theories of Brain Drain and Migration of Skilled Personnel and Human, Brain and Knowledge Mobility*, Maastricht: UNU-MERIT.
- Stojanoska, M., 2018. *Determinants and repercussions of brain drain*, Master Thesis, Faculty of Pedagogy-Bitola.
- Šverko, I., 2004. *Studentske namjere odlaska u inozemstvo: Veličina potencijalnog "odljeva mozгова" i njegove odrednice u 1995., 1997.* Zagreb: Institut za društvene znanosti Ivo Pilar.
- United Nations, 2013. *International Migration Report 2013*. New York: Department of Economic and Social Affairs, Population Division.
- Vangeli, A., Mehmedovic, N., Bakiu, B., 2010. *National Report: Brain Drain in Macedonia: Scope and Factors*, Skopje: Center for Research and Policy Making.
- Watty, K. 2006. Want to know about quality in higher education? Ask an academic. In: *Quality in Higher Education*, 12 (3), pp.291–301.
- World Bank, 2016. *Migration and Development: A Role for the World Bank Group*. Washington: World Bank.
- World Health Organization, 2006. *World Health Report: Working Together for Health*. Geneva: WHO.