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MASTER'S THESIS

**AN ANALYSIS OF THE FACTORS AFFECTING BRAIN DRAIN OF  
YOUNG PEOPLE FROM BOSNIA AND HERZEGOVINA**

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## LIST OF ABBREVIATIONS

sl. – Slovene

**AISP** – Account Information Service Provider

**API** – Application Programming Interface

**ASPSP** – Account Servicing Payment Service Provider

**BaaS** – Banking as a Service

**BiH** – Bosnia and Herzegovina

**C2B** – Consumer-to-Business



**CSC** – Common and Secure Communication

**ECB** – European Central Bank

**EBA** – European Banking Authority

**EEA** – European Economic Area

**EMI** – Electronic Money Institution

**EU** – (sl. Evropska unija); European Union

**EIB** – (sl. Evropska investicijska banka); European Investment Bank

**FI** – Financial Institution

**GDPR** – General Data Protection Regulation

**IP** – Instant Payments

**JIT** – Just in Time

**P2P** – Peer-to-Peer (or Person-to-Person)

**PFM** – Personal Finance Management

**PISP** – Payment Initiation Service Provider

**POS** – Point of Sale

**PSD1** – Payments Services Directive 1

**PSD2** – Payments Services Directive 2

**PSD3** – Payments Services Directive 3

**PSR** – Payments Services Regulation

**REST API** – Representational State Transfer API (Application Programming Interface)

**ROI** – Return on investment

**RTS** – Regulatory Technical Standards

**RT1** – Real-Time 1

**RT2** – Real-Time 2

**SCA** – Strong Customer Authentication

**SEPA** – Single Euro Payments Area

**TIPS** – Target Instant Payment Settlement

**TPP/TPPSP** – Third-Party Payment Service Provider

**TSP** – Trust Service Provider

**UPFBiH** – Udruženje Poslodavaca Federacije Bosne i Hercegovine

**XS2A** – Access to Account

## INTRODUCTION

Generally accepted, migration is a common human activity and it refers to continuous process of moving from one place or country to another. Migration is also a term that cannot be covered by just one simple definition, so I will explain it further by using interpretations of the authors who already wrote about it, since it is related to the main term of this thesis – brain drain. Migration implies an everyday occasion that has an impact on the global labour market, and, in the same time, on a global labour force (Mikac & Dragović, 2017). Definition continues with the explanation that migration implies the motion of people from one place to another, being attached to a change of permanent residency place (Kyaing, 2014). Since the main term of this thesis, brain drain, is deeply conditioned by migrations, before everything else, the term of brain drain itself should be explained. The term “brain drain”, to us known as departure of specialists, experts, highly educated professionals from one country, smaller, poorer to another, wealthier one, refers to the international relocation of resources that rest on the foundation of human capital, applying mostly to the motion of highly educated personnel from their homelands to receiving countries (Docquier, 2014).

Existing data indicate the extent of high-skilled migration and its continuing growth over time, especially in the last decades, with enormous technological advancement, better opportunities for education, career development, highly salaried job, etc. On the other side, it is important to mention the formidable motives for migrations and brain drain itself: poverty, wars, internal conflicts in the country, terrible policies implemented by the leaders of the countries, poor conditions for education and insufficient salaries. Regarding these motives, they are more discussed in the continuation of the thesis, more than the positive ones. When we talk about migrations, it is important to taxatively mention their motives, following the existing literature. According to the following research, it is said that high-skilled migrants come from all over of the world, from every corner of it, especially from poorer economies and move to bigger or wealthier countries, in which the English is a first spoken language (Kone & Özden, 2017). Effects of brain drain when it comes to the sending countries have been loosely documented in the literature, and explains that brain drain, in fact, lowers the economic growth by wasting the human capital good from homeland and not investing properly in education (Pănescu, 2014).

There are many pull and push factors that influence brain drain, factors that force people to leave one country and factors to come in another country. Unfortunately, push factors are more prevalent and have a stronger intensity, although pull factors are more attractive, promising a better life. In the following lists from the literature, it is possible to see both polarities. They can be explained in the next way: the push factors are the factors in the homeland of a person which compel that person to leave, and the pull factors are the lures in the receiving country that push someone to relocate there (Kazamias, 2021). On the other hand, pull factors could include: elevated mind-set of a society, distinguished

universities, better cooperation, calmed policies regarding migrants, better working conditions, normal hierarchy in society, better interdisciplinarity, smaller groups at work, etc. (Breinbauer, 2007). It is also considered that the common push factors are: unemployment and underemployment, low efficiency, poor economic conditions, less opportunities regarding advancement, formidable natural disasters, exploitation of natural resources, etc. (Thet, 2014).

In addition to brain drain, there are two other related terms: brain waste and brain gain. Migration of highly educated people does not necessarily have to be characterised as a gain for their destination country. The case of gain for a country is when a migrant, for example, a nuclear physicist, finds a job in the new country area that matches knowledge and skills. But if they find employment in the host country that is incompatible with his competencies, such as nuclear physicist working as a truck driver, this represents a loss to both countries. In this case, the gap between the offered skills by the individual and those required by the labour market is characterised as brain waste (Ilić & Milosavljević, 2017). It is explained that brain gain for the host country, on the other hand, is contrary to brain drain for the home country (Kone & Özden, 2017). While brain drain deprives a country of its human capital, with brain gain, the arrival of high-skilled migrants might lead to an upsurge in the human capital level. According to these interpretations, it is difficult to predict outcome of a migration, and it is difficult to predict whether a migration is going to be a brain gain or brain waste. It is also difficult to predict whether a brain gain is going to happen.

BiH also faces the problem of migration, since an increasing number of young, highly educated staff is leaving the country continuously and rapidly in search of better living conditions. One of the basic problems that BiH is facing today generally is an already mentioned emigration, the departure of a large number of people, especially young people from the country. After major migration changes caused by the 1992-1995 war in BiH, and occasional post-war periods of intensified brain drain from BiH, the number of emigrants from BiH in 2016 and 2017 was higher than in previous years. For a layman, it is difficult to be as precise as possible, and, talking about numerals, it is especially important to be precise and to look back to the sources who conducted researches. As documented, in November 1992, 2 million people from the former country Yugoslavia were compelled to leave their homelands (Rondić, 2004). Regarding similar statistics, it is documented the following data, showing that 2,5 million people were compelled to leave their homelands, making up 10% of the total estimated 26 million refugees and relocated persons in the whole world (Zlatković Winter, 1992). I can also put to the evidence the next statistics regarding official data from receiving countries, diplomatic or consular missions of BiH, represented in the Migration Profile for 2016, which say that an average number of people who originally come from BiH and live in exile is at least 2 million, more precisely, 56,64%, which makes 3,531,159 of total population in BiH (Heinrich Stiftung Foundation Report, 2017).

From the same source quoted above, we can see the ranking of BiH when it comes to migrations. Report says that situation nowadays is a bit better and that today's percentages are lower than before, so that number of BiH emigrants amounts to a percentage of 44,5%, which places BiH in the 16<sup>th</sup> place in the world, in the ratio of emigrants and the number of the population. Just to mention, this report covered total of 214 countries of the world. Following these statistics, it is evident that even after war and post-war period the number of emigrations from BiH continues to grow, pointing on some other motives that compel people to leave the country. Having in mind the fact that BiH is a small country with an already small population of people, these statistics are worrying not only when we look back at completed migrations, but also when we look back at those happening now and especially those that will happen in the future.

In addition to permanent migration, there are also cyclical migrations, i.e., who spend several months a year in another country due to education or work engagement. It is an obvious fact that youth nowadays mostly abandon the country not having the expected opportunities in their homeland. Regarding education, given an important factor for both permanent migrations, but also cyclical and its impact on migrations in general, it is reported that it is obviously that the departure of educated and skilled population has primary negative effects on development in countries whose migration rate of the educated and skilled personnel is above 20%, as it happens with BiH (Čičić et al., 2019).

This research will focus on the question of which factors influence young people to plan to leave BiH, and to better identify the push and pull factors behind their opinions. It will also aim to understand the context of youth's migration choices, and whether young people intend to return to BiH after a period of time spent abroad, and, if yes, in which conditions.

The main objective of this thesis is to examine brain drain in BiH and to help better understanding of the factors affecting decisions of the youth. This type of research could greatly assist the Government of BiH, entity and cantonal governments, in identifying the main problems young people face and the reason why they still want to leave BiH today, 28 years after the war. The identification of the main pull and push factors will enable a better understanding of the attitude of young people, and in this context will enable faster and easier implementation of measures that would incentivise young people to stay in BiH or encourage their return.

The main goals of the work are:

- To identify the basic concepts related to migration and brain drain;
- To review previous studies on the push and pull factors influencing brain drain and its effects on sending countries' economies;
- To explore the attitudes of young people in BiH about the potential departure from BiH during/after school;
- To identify the main push and pull factors among young people in BiH;

- To identify conditions for their potential return to BiH.

Several sources of data are used in this research. The theoretical part relied on scientific sources and relevant literature quoted, as well as secondary data sources such as OECD publications, Ministry documents, etc. Empirical data used to create the paper include primary and secondary data. The research process of writing the paper contains four basic steps. The first step involves collecting basic data on brain drain from professional and relevant literature. The second step involves creating a survey and designing the entire primary data collection process. The third step analyses the collected data, while the fourth step includes creating for the Government of BiH and the entity governments, with the aim of retaining young workers in BiH. One hundred respondents took part in the questionnaire presented at the end of the paper. Participants are young people up to 40 years of age, asked on whether they intend to leave BiH, and if so, what are the reasons for such a decision. Data was collected through a survey questionnaire, which was posted on the Google Survey platform, Google Forms, more precisely. In addition, the questionnaire was shared on social networks. Once the data collection was completed, it was processed in the SPSS statistical program. Descriptive statistics methods were used in data processing, with the aim that the presented results were as precise and clear as possible. The results obtained by statistical processing are presented in tables and figures created by the author himself.

The paper consists of five different chapters. In the introductory chapter, are presented: subject, problem of the research, methodology and research objectives. In the following chapter, Conceptual Definitions of Brain Gain, brain drain theories are discussed, and then the terms brain waste and brain gain are precisely defined. This chapter speaks the importance of discussing this problem, and the steps that can be taken to reduce brain drain. The following chapter, Brain Drain in Bosnia and Herzegovina focuses on the brain drain in BiH. First of all, it points to certain previous studies of this phenomenon in BiH, and talks about the problems and consequences of brain drain in BiH, but also about the present push and pull factors who are affecting brain drain. A special review is given in the comparative presentation of brain drain between BiH and neighbouring countries. Furthermore, the fourth chapter, Methodology, contains a methodological overview of this topic. In this chapter, the method and system of primary data research are described. The next chapter, Analysis of the results, focuses on the analysis of the answers collected in questionnaire. In the final section, Recommendations, a recommendation for further research is given, and certain shortcomings of the research are presented. Concluding considerations, a list of tables and figures, and a survey questionnaire are presented at the end of the paper.

Before finishing the thesis, I expected that the prevalent push factors would be low salary or low income, but the results showed the opposite, as it can be seen in the chapter Analysis of the results.

# **1 CONCEPTUAL DEFINITION OF BRAIN DRAIN**

In this part of the thesis, conceptual and theoretical work about brain drain is presented, along with the ways in which this problem can be treated, and theories that have been developed in the past, related to this topic. Related concepts of brain waste and brain gain are also discussed as well as the trends of brain drain in the world.

## **1.1 Definitions**

Brain drain implies the departure of the highly educated people - as a rule, migration - as a reflection of the workforce in which employers in developed and richer countries can offer better working conditions and higher incomes to highly educated people than they are offered in their own countries. Brain drain represents the redistribution of human capital from one state to another with profits on the side of the country of emigration. Regarding nomenclature, it is said that the inception of using the term brain drain results as a reach of the European economies extent, which permitted to human brain to start with the temporal features of constancy (Mlikota, Prelas & Kovačević, 2013).

In a broader sense, brain drain is nothing else than a migration of high-skilled people with a goal for education, work, new experiences, etc. Also, it is known that health and skilled professionals are desirable everywhere around the world. Talking about this fact, it should be also mentioned that those professionals are attracted by better quality of life, higher salaries, highly advanced technologies which they often don't have in their homelands (Dodani & LaPorte, 2005). So, it is evident that the major part of migrations is happening in developing countries and finishing in developed countries. This is a great concern for developing countries and their stability, but also an advantage for developed countries which provide better condition, investing in education, training and headway of the coming professionals. Regardless, we can never be absolutely sure that brain drain is a loss for the homeland, and gain for the receiving country.

To explain the causes of migration, it is believed that migrations mainly happen because of an existing need to change and improve life standards and conditions in the homeland, since the poor and unfortunate circumstances in the homeland don't stop, nor are there any signs of improvement (Troskot, Prskalo & Šimić Banović, 2019). Migration itself is a phenomenon difficult to predict, like it is already mentioned, and it is especially difficult to predict it when it comes to the migration of highly-skilled professionals because this part of the migration pattern is more subject to the synergic economic and political factors regarding labour market, since the skilled professionals are a very complex field interacting with some of the systemic factors (Adamović & Mežnarić, 2003). Reasons for migrations to happen have both positive and negative polarity, and they are going to be explained in details through the thesis, but known as push and pull factors.

According to Gould's typology of skilled international migration, the brain drain is actually a subspecies of it. With the goal to fully understand the concept of brain drain, it is

necessary to focus primary on the circulation of scientists and highly educated people. Although they may be considered synonyms or similar terms, circulation and brain drain are not one and the same. Circulation is, unlike brain drain, a positive phenomenon. It means a short trip of highly educated people abroad where they gain knowledge and experience, after which the person returns to the home country and continues to work there again. Unlike that, brain drain is accepted as a negative phenomenon, since it means a permanent staying in the receiving country. On the other hand, brain drain doesn't need to be a permanent staying, since it depends on various factors and changes. Since a person after a while can return to a homeland, there should always be present a concept that brain drain is a phenomenon which is dynamic and subjected to many and various changes, influenced by alternations in socio-economic and political occasions (Šverko, 2005).

Talking about highly educated persons who are subjects of brain drain, but also of brain gain, it should be explained who in fact they are and why they are often called human capital. Human capital is called highly educated experts, artists, scientists and intellectuals who represent the bearers of economic and social development of each country. The segment and concept of intellectual capital are very important to every society, but also when it comes to an explanation of migrations, brain drain and brain gain. It is necessary to understand the importance of a highly educated workforce, especially by developing countries, and consequently to invest in the development of human capital, which with its knowledge will be able to contribute to the development of the state. Investments are made through scholarships, through their professional development, etc. Very often, this is not the case and there is a phenomenon of leaving the country by top experts or their departure abroad, which leads to brain gain or gain for the country they go to. It is also necessary to distinguish between "brain drain" and "brain waste". The process of "brain drain", as already mentioned, is an external migration or departure of scientists abroad. On the other side, regarding brain waste, it is stated that brain waste implies professional migration happening inside the homeland, abandoning the science and education in the homeland, and leaving the homeland country for other operations outside it (Relja, Reić Ercegovac & Čerenić, 2015).

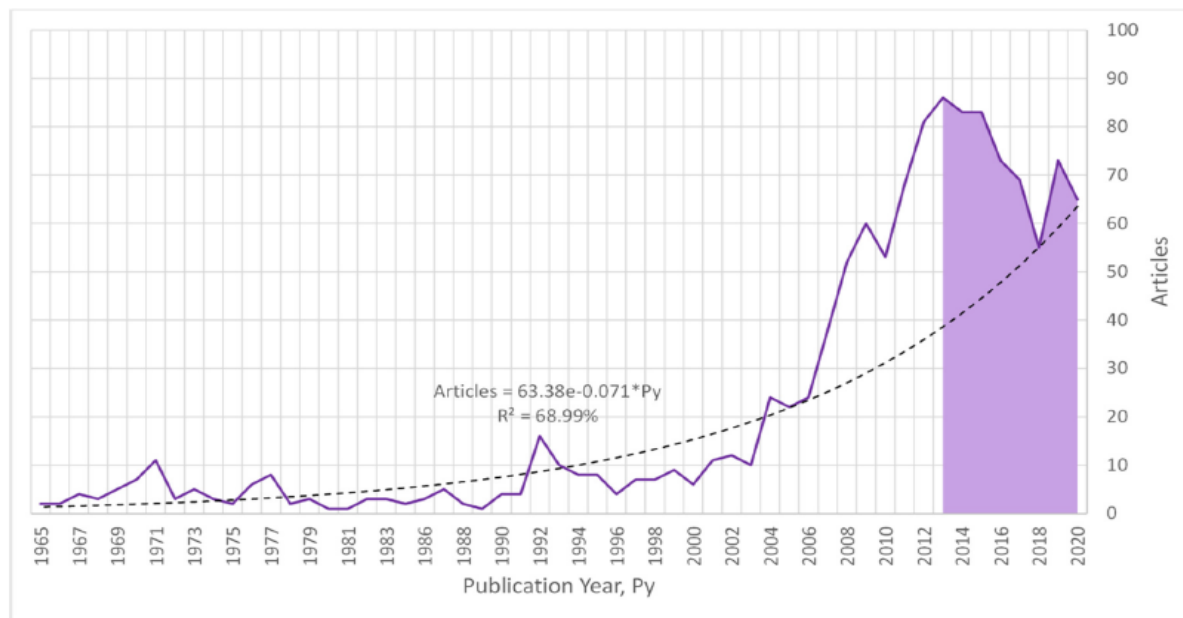
## **1.2 Causes of Brain Drain**

The concept of migration has existed since ancient times, but the phenomenon of brain drain has only been present in the public, especially in the literature, for the last few years. Nevertheless, the notion of migration is related to the notion of brain drain, i.e., the two notions are inseparable. Since it is already mentioned, migration and brain drain, including brain gain, are connected and conditioned, so, migrations happen because of the exigency to improve life standards in the receiving country, availing unpleasant experiences in the homeland, i.e., country of origin (Troskot, Prskalo & Šimić Banović, 2019).

In the academic literature, there is a growing discussion about brain drain, as evidenced in Figure 1, where you can see the exponential increasing in the brain drain studies articles

during the years, highlighted with purple. Exponential brain drain evidenced in Figure 1 started in 1965 and, as it can be seen, the Figure 1 includes data until 2020. In the horizontal axis can be seen the years and, on the right side, in the vertical axis, can be seen the percentages of exponential increasing in brain drain of 69%, with highlighted articles of the contemporary semi-period of knowledge production in the shadowed area.

*Figure 1: Exponential increasing in the brain drain studies articles*



*Source: Vega-Muñoz, González-Gómez-del-Miño & Espinosa-Cristia (2021).*

According to authors quoted below the Figure 1, it is shown that scientific journals report an exponential increase in brain drain over the years. Even though recently the term brain drain was not so popular and represented in literature, interestingly, nowadays it has gained an extraordinary momentum. Because of that, it was necessary to acquire tools and mechanisms to explain and characterise a phenomenon that has been defined as dynamic and changing, and now recognized as a scientific term. This type of resurgence of production in academic world forced us to look this dynamic phenomenon from other perspective, this time, from scientific one.

Listed causes of brain drain are many and various, but we can reduce them to the most important. They are mostly related to economic issues, such as unemployment, low wages in the home country, job insecurity, housing, etc. Also, unfavourable involvement of the state in improving the conditions of scientific and research work is one of the reasons for leaving the country. Reasons which attract people to countries mostly are: better training of professionals in the world of science, better conditions at work and, least, but not less important, bigger potentiality of self-actualization (Adamović & Mežnarić, 2003). However, it can be pointed out that unemployment is one of the most important driving

forces for leaving the country. Drawing on Kostanjevečki (2002), solutions to this problem would be:

- Elaboration of socio-economic strategies for development, exempli gratia, a reform of the complete education system, or, at least, one part of it, which could give an opportunity to young people after finished degree to use their knowledge acquired during education;
- Improvement of the working conditions;
- Augmentation of the salaries for high skilled personnel;
- Achieving the best possible relationship between the population of a country, all of the possible sources of capital in that country and employment in that country too.

Research shows that the departure of professionals from underdeveloped countries to highly developed ones is caused by factors such as differences in income, greater opportunities for scientific research and greater opportunities for professional development, as well as differences in some important determinants of quality of life in the country, opportunities to use free time, richer cultural life, etc. To summarise, it is about dissatisfaction with all or part of the key aspects of life. Regarding the key factors, it is noted that they can be divided in four groups, as expected: educational, economic, legal and political (Troskot, Prskalo & Šimić-Banović, 2019). The most common factors regarding economy could be: low income, unresolved housing issues and low standards of living. Regarding macroeconomic factors, negative growth in gross domestic product, unpleasant economic situation, unemployment and underemployment high rate, low salaries and generally low standard of living could be mentioned.

Both push and pull factors must be present for migration to occur, whether they are positive, alluding to pull factors, or negative, alluding to push factors. When it comes to push factors, it is considered that they could be some life situations in a person's homeland which can produce discontent, like impossibility of employment, poverty, low social status, and, in the contrast, pull factors attract and lure people to leave their homeland and move to another country, such as better education, better life conditions, many job opportunities, etc. (Zanabazar, 2021).

Reason for the departure of highly educated professionals and scientists, intellectuals and artists, or, so called, "push" factors of the process of brain drain, can be divided into several groups. In the first place, economic reasons are very often the most present ones. They refer to low salaries of the mentioned human capital, problems with the housing issue, as well as a lower standard of living in general than expected for highly educated subjects. Other macroeconomic factors that stand out are: negative growth of gross domestic product, low wages in terms of qualifications as well as the poor economic situation in the country. The following group includes factors of an educational nature, such as: better conditions for scientific creativity and activity, and the generally poor position of science and scientists in the country. It is important to single out non-scientific reasons, i.e., those of closer social or individual roots such as: family reasons, bad

atmosphere and conflicts at work, desire for life change and other. Finally, the driving factor that has not been sufficiently explored and has a definite impact on the brain drain process is corruption in the state, so that highly-skilled and educated persons surely prefer to migrate to a country in which they could be employed by virtue of their qualifications, rather than staying in their homeland where they could only hope to be employed thanks to nepotism, bribery or other similar acts (Bulat, 2020). According to Bolona (2020), the main pull factors, starting from medical staff and scientists, followed by the main push factors are:

*Table 1: The main push and pull factors*

<b>THE MAIN PUSH FACTORS</b>	<b>THE MAIN PULL FACTORS</b>
Better economic perspective	Underemployment
Higher salary and income	Economic underdevelopment
Better quality of life	Low income and low salary
Improved research facilities	Instability in political life
Advanced and modernized educational system with a better chance of advancement	Excessive production and underutilization
Prestige of training and education abroad	Deficit of researches and other facilities
Intellectual freedom	Lack of freedom
Better conditions at work and better chances for employment	Discrimination in advancement and nomination
Political stability if possible	Bad conditions at work / Lack of good and satisfactory conditions at work
Existence of a cultural, rich and scientific tradition	Deficit of tradition and culture regarding science
Attractiveness of urban centres	Unseemly institutions
Possibility for gaining experience and supporting staff	Desire for a better life organized in urban centres
Frequent opportunities of a lucky break in life	Desire for higher qualification and recognition
Technological gap	Better expectations regarding career
Availability of funds for researches	Low percentages of economic growth
Better possibilities for employment	Technology poverty and importer of it

*Source: Bolona (2020).*

Regarding the European Union report from 2018, it is evident that the main push factors which cause workers to migrate are unfavourable structural conditions (e.g., high unemployment of young population) already existing in a region, that lead them to the emigration.

### **1.3 Brain Waste**

When it comes to description of the process of brain waste, to make a difference one more time, but this time in details, it can be said that the process of brain waste represents a situation in which comes to skills declination – situation in which a worker should work by using lower level of skills which that job originally requires (Garcia Pires, 2015). In that situation, a skilled worker confronts his high educational level with low level of job required skills, and that is a perfect explanation of arising of the brain waste. This often ends so that high-skilled worker comes to a receiving country with biased insufficient information regarding labour and skills demands, so that he ends up being unemployed, or possibly, employed in a job which doesn't require his originally high qualifications and skills.

When it comes to devaluation of knowledge and education, which is one of the most important push factors for brain drain, happening all around the world, but especially in developing countries, brain waste occurs when a knowledge acquired in the homeland is not recognized for its complete value (Brezis, 2019). Since the human capital and education acquired in the homeland cannot be wholly used and exploited, a person which is going to become a migrant looks across a high rate of devaluation of his potential and skills.

Considering how often the lack of possibilities and opportunities for advancement and job in the profession is mentioned in the literature and researches as the main motive for brain drain when it comes to educated and skilled professionals, it seems that this is the most important one, regardless of how much poverty and low wages can force a person to change and demanding better conditions in another country. Statistics vary from country to country, but relying on literature, this is the most mentioned push factor. Talking about brain drain and brain waste, it is important to mention that those two are not the same terms, nor synonyms. Whether it is going to be brain drain or brain waste depends on place, i. e., homeland or receiving country. Regarding this, if it comes to depreciation of a high skilled and educated professional in his homeland, it is called “internal brain waste”. On the other hand, if it comes to depreciation of a high skilled and educated professional in a receiving country, then it is called “external brain waste (Breinbauer, 2007). Now, it is evident that even this term, brain waste, has a double interpretation, whether it is happening in a homeland, whether it is happening in a receiving country.

One of the following most important factors for brain drain appear to be unemployment or underemployment. Although those terms can be figured by their meaning and linguistic

conception, they also should be explained relying on the existing sources. Distinction between two terms is given below, according to Ruiz Soto, Batalova & Fix (2016):

- Unemployment happens when a person, highly skilled and educated or not, is searching for a job and employment actively, but is not able to find it;
- Underemployment happens a highly skilled and educated professional is looking for a job in his profession, but ends up being employed in a job which doesn't require nearly as much knowledge and skills as he already has in his profession, a job which doesn't demands more training or education, e.g.: maids, housekeepers, truck drivers, caregivers.

Talking about unemployment or underemployment, it is necessary to mention emigrants again. Emigrants' skills are not properly used because their jobs don't require their high education, nor high skills (Brzozowski, 2007). This is just a pattern more which has to be added in the global picture of phenomenon of brain drain.

Talking about immigrants and brain waste, it should be mentioned one more time that brain waste refers to situations in which immigrants take on jobs that do not correspond with their skill sets. Other terms associated with brain waste are skill waste, skill underutilization and waste of human capital. Additionally, brain waste could happen for different reasons, such as: not having an access to job opportunities, unawareness to information regarding vacancies, impermanence of human capital, escape for a job which inquires less skills and education in order to increase migration possibilities (Battistella, 2013).

To conclude, it can be seen that unemployment mostly happens in a homeland, and underemployment in a receiving country, although it can be vice versa, and, additional to that, it should be mentioned that brain waste can happen in both spoken above, whether homeland, whether receiving country.

#### **1.4 Brain Gain**

Talking about brain drain as a negative, complex phenomenon, as it is mostly conceived, a phenomenon which gains its place more and more in researches. It is evident that brain drain has gained upon a very important role when it comes to researches, implying both theoretical and empirical fields. Recently the literature has presented a whole new concept of brain gain, proposing the possible positive effects of it (Pănescu, 2015). Brain gain has become an important aspect to be examined in recent literature, as can be seen in the articles and researches. It is a fact that before, in the past decades, this term was not discussed in the literature, so it can be seen how big role it has taken in the migrations nowadays, so it is frequently a subject to researches, works, etc. This is referred to as the potentially positive impact of skilled emigration on the development of those left behind in the source countries. Regarding that, mechanisms of brain gain imply an augmentation regarding migrant remittances, started in the homeland and coming from highly skilled and

educated people, now emigrants (Nakamuro & Ogava, 2018). This can at least partially compensate possible losses caused by emigrations. Since the remittances have augmented recently, this has become more and more pertinent.

About the implications of brain gain, being nearly the opposite of the implications of brain drain, it is evidenced that literature supporting brain drain proposes that homeland experiences a deprivation because of brain drain. On the other hand, literature supporting brain gain proposes that migration of highly skilled and educated professionals could lead to an augmentation of human capital level in the homeland (Kone & Özden, 2017).

It is already mentioned that brain drain or brain gain are difficult to predict, since they depend on various factors, especially brain drain, which is represented both in literature and life by negative polarity, but it is encouraging to see that even the researches and literature aim to a positive outcome, as it could be seen from the source above.

Since it is evident that small, developing countries suffer a huge loss by departure of educated people, it is necessary to take some actions to keep them in their homeland. Underdeveloped and developing countries, aiming to increase their own production and standard of living, must obligatorily train top professionals, predicted to contribute to the development of the country with their knowledge or hard work. Brilliant students should be offered scholarships, quality education and professional development, and if that is not the case, some will certainly decide that the professionals, category most needed by society, will leave their homeland to be employed in other countries, and this will be a brain gain or gain for the receiving country (Duras, 2018). Besides that, it is expected that, if an individual does not have the conditions for progress and a better life in his homeland, he will go somewhere else, to a country that will enable him to do the same, which is not available in his homeland.

Talking about impact of brain drain and migrations, to conclude the chapter about brain drain, it is evident that the concept of “brain drain” has concerned scientists, exposing its possible benefits and potential of migrations between the countries (Battistella, 2013). Since brain gain implies migrants who return to their homelands with gained knowledge, learned skills and accumulated new knowledge, possibly with some new technology and earned capital, all of the factors enumerated above could contribute to the growth and advancement of the homeland of migrants who once in their lifetime have abandoned it.

To focus our attention on the positive aspects of brain drain, it can be assumed that, with accumulated financial capital, migrants could now be in ability to start their own projects or businesses, and even to teach other people about their learned skills. Also, it is assumed that, by returning to homelands with some new abilities, they could be more productive and boost productivity itself in their homelands, proposing new ideas, investing capital or bringing some new technologies to their homelands, and, like that, weaken the negative impacts of brain drain.

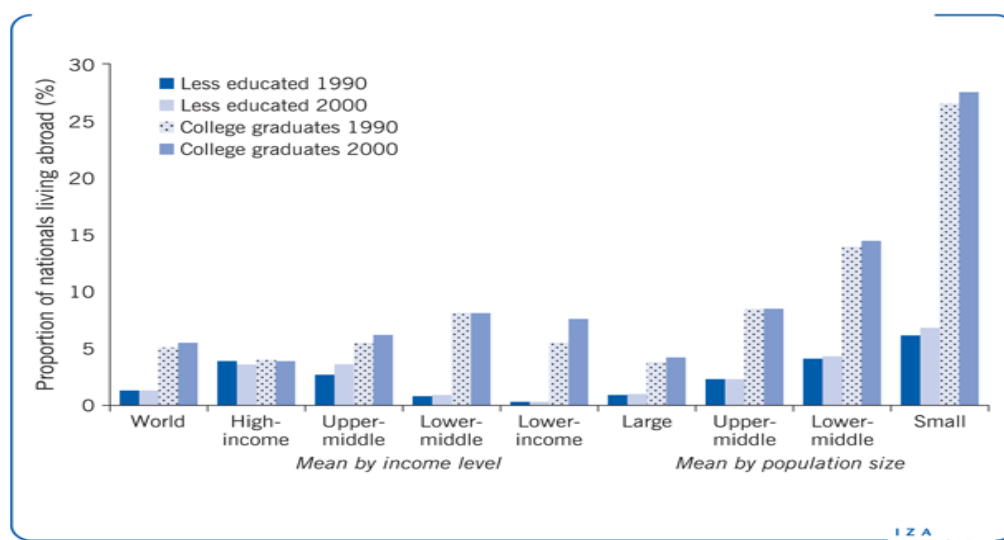
## 1.5 Brain Drain Trends in the World

Brain drain is one of the most current topics today, even though it was not always like that. Migrations have become an integral part of the developed world, taking place under the influence of globalisation. Along with large migrations comes a large brain drain.

Talking about proportions of foreigners born in rich countries, it is claimed that number has tripled since 1960, and that, in the same time, emigration of skilled people coming from poor countries has accelerated. Concerned about that, many countries intensify their efforts to attract and retain foreign students, which increases the risk of brain drain in the countries with high emigration rates. In addition, in poor countries this transfer might change the whole formation of the labour force, cause labour deficit, have an effect on fiscal policy, but it can also influence on remittances and other benefits coming from emigrants returning to their homelands (Docquier, 2011). These reports concern not only scientists, but also leaders of the countries and habitants of these countries, since it is known that the same countries, small ones, in distant parts of the world, with small economies, low wages and low level of educational and advancement opportunities suffer from migrations and brain drain for decades, and the situation is still the same, if not worse. It is also concerning that through the decade leaders, politicians and governments have not succeeded to change the situation. It is difficult to say why, since the factors are multiple and connected between themselves, but they always start from lack of determination, lack of finances, impossibility to arrange public opinion, but also, as a negative side, it can be said that the situation does not change since the heads of those countries care only about their personal benefits, leaving the people on side, especially in highly populated countries.

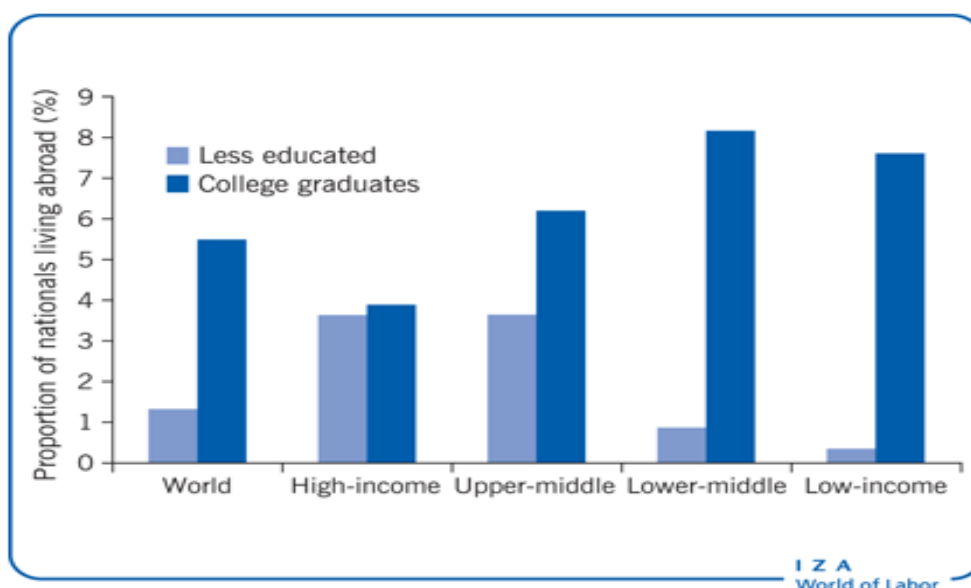
Emigration rates of high-skilled workers exceed those of low-skill workers in virtually all countries. The skill bias in emigration rates is particularly pronounced in low-income countries. As it can be seen, the largest brain drain rates are observed in small, poor countries in the tropics, and they rise over the 1990 (Docquier, 2014). In Figure 2 the proportion of nationals that live abroad vs. income/population size can be seen, with a legend within figure. Various shades of blue in the vertical bars represent the year (1990 and 2000), but also education and income level of nationals living abroad.

Figure 2: Proportion of nationals that live abroad by income level and population size



Source: Docquier (2014, p 2).

Figure 3: Number of immigrants (less educated/college graduates) vs. Income



Source: Docquier (2014, p 2).

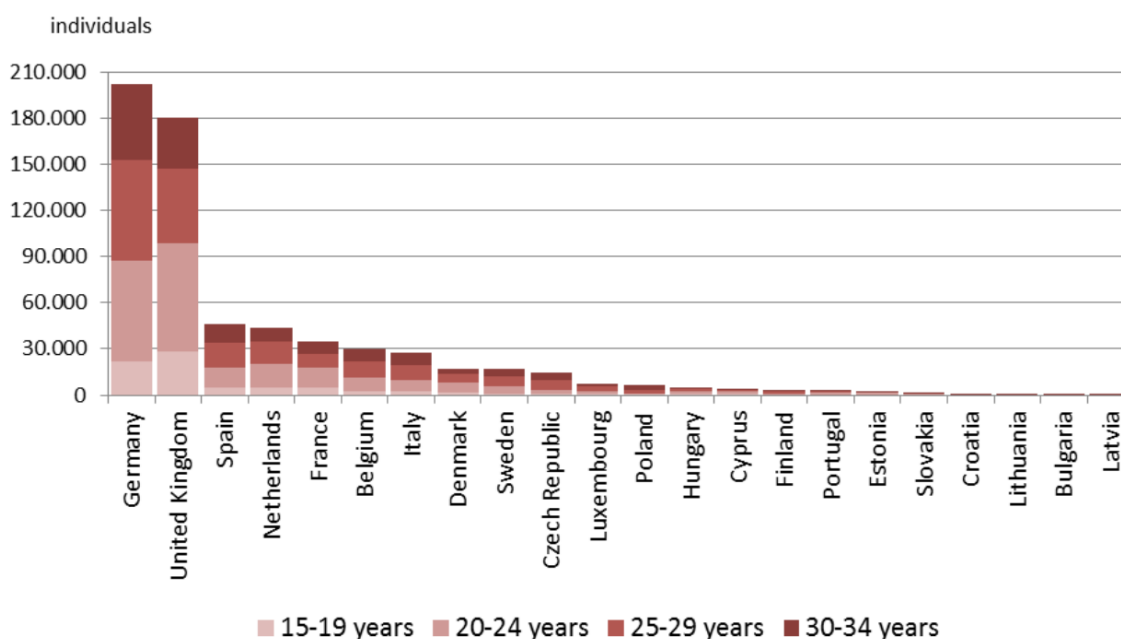
From Figure 3 can be observed that the largest number of college graduates people migrate from low-medium or low-income countries. When it comes to high-income countries, it is evident that this segment has the lowest number of people who migrate. With two shades of blue vertical figures can be seen the level of education and income, regarding nationals living abroad. Income is presented by the light blue shade, while the percentages of college graduates is presented with dark blue shade.

The rate of emigrations of skilled people from small states, considered small regarding their population, financial structure or territory, aims to be intensively high by the time,

and not only high, but also problematic. It is reported that smaller countries had a brain drain rate five times bigger than all developing countries, twelve times of countries with a high income, eight times regarding the world average. Also, in the Caribbean, made up of small countries and islands, the percent of tertiary educated people who emigrate is almost the highest in the whole world (Wenner, 2016).

Brain drain happening in the small countries is not the only problem, regarding the education quality of people staying in the homeland, people who are not educated, or are poorly educated. As stated above, the problem continues in the homeland which, if the brain drain continues rapidly as expected, is going to be inhabited (almost), or be habited only by poorly educated people. This impacts not only the rank of educated people inhabiting the country. It impacts politics in general, social politics and also income on the country level. In addition, it is explained that numerous emigrations include both benefits and costs for the homeland countries. Regarding the positive effects, overseas workers can bring a lot of transfers, make the consumption diminished, facilitate the poverty for their family members and relatives and help maintaining macroeconomic stability with the increased inundation of hard currency (Wenner, 2016).

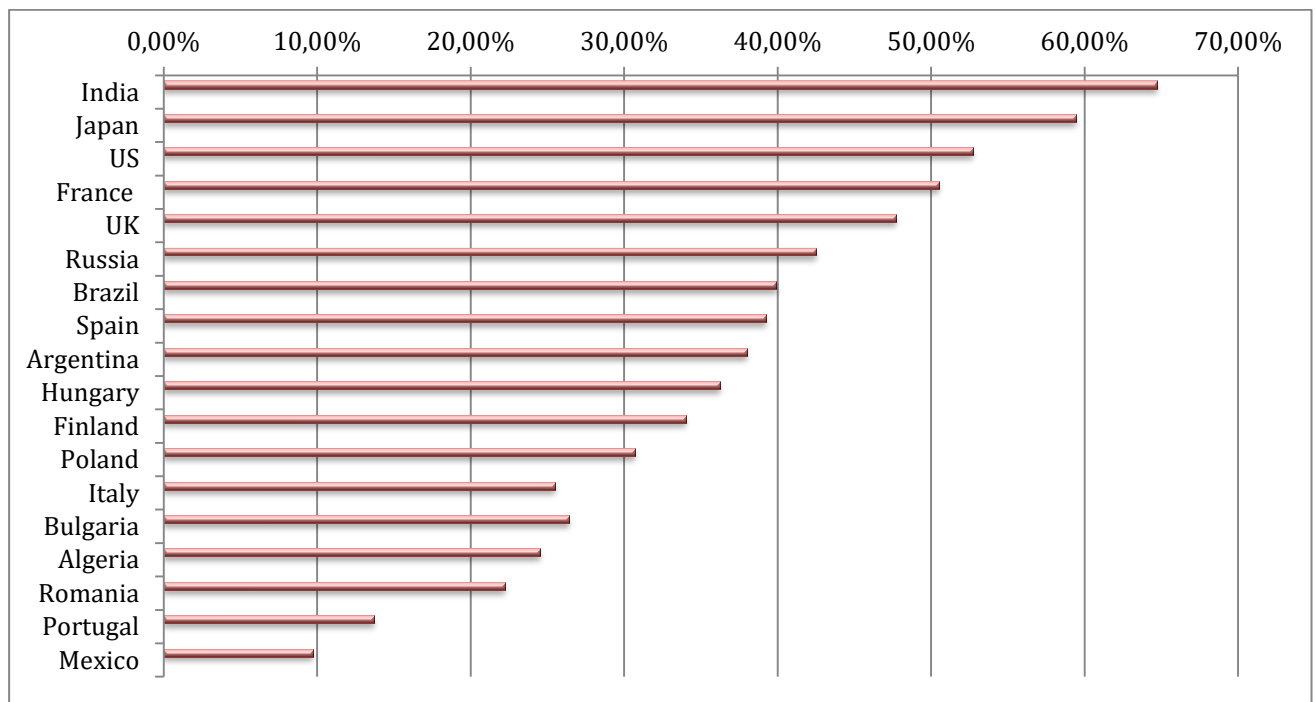
*Figure 4: The most common countries to which highly educated residents immigrate*



*Source: European Committee for Regions (2018).*

From Figure 4, the individuals, their age and the most visited countries can be seen. On the left side it is possible to see number of individuals, above the Figure 4 most desirable countries listed, and, with various shades of red bars, the age of individuals can be evidenced. The most desirable countries to emigrate for young people are Germany and United Kingdom, followed by Spain.

Figure 5: Most often abandoned countries by highly educated immigrants



Source: Bhattacharya (2022, p 1).

As can be seen from Figure 5, highlighted with the longest red bar, India, having the rate over 60%, and Japan, having the rate almost to 60%, are the countries most often left by highly educated workers. Regarding the life standard in Japan nowadays, I could say that this was an interesting data, showing that Japan is the second most abandoned country by highly educated workers.

## 1.6 Steps to Reduce Brain Drain

How current and widespread the term brain drain is, can be best illustrated by the European Union's plan to minimize it. Some of the proposed steps, based on Moravac (2020), include:

- Launch of the “European Research Charter”, for management of human resources and careers, regarding research and development;
- “Code of Conduct for the Recruitment of Researchers” at European level;
- Develop a special framework for notes and recognitions of professional achievements of researchers regarding their careers, with the identification of mechanisms who aim at increasing the transparency of their acquired qualifications and skills;
- Deployment of a platform, which can be used for social dialogue of researchers;
- Designing appropriate tools which could take care for necessary improvement and advancement of the content following education or training;
- Develop mechanisms to ensure that third cycle studies candidates have an access to at least social benefits and financing of their education and work.

When we talk about policies of brain drain or knowledge flow in this context, they concern several target groups at the same time: citizens of one country who have migrated and live abroad, as well as all researchers, regardless of citizenship. They also concern future professionals, i.e., the importance of creating space for their professional development and the possibility of staying within the country. These policies cover different areas of activity, such as: augmented investment in both education and science, augmentation of contacts with the diaspora, bigger support for returnees and short-term discrimination programs relying on positive sides of it (Acips, 2019). Increased investment in science and implies bigger investment in both science and education in general, organizing postdoctoral centres or agencies that would deal with providing support, improvement and training to young professionals after graduating from college, and before getting a permanent job in the field. It can also imply appropriate legislation that would deal with the rights of scientists.

Regarding the following step, development of contacts with the diaspora, it is important to mention that development of contacts with the diaspora is one of the most important when it comes to stimulation of flow of knowledge, income and economic development. This step can imply policies that could motivate the return to homeland of highly qualified workers or professionals through educational and business programs, establishment of academic policies between countries and through exchange of knowledge acquired in a receiving land, using the vessels of communication and technologies.

Support for return to the home as a step is almost least, but not less important and it has to be encouraged despite the situation in a homeland. Some of the suggestions regarding this step include: returnee funds, establishment of career development support centres or encouraging government's policies and narrative.

Short-term positive discrimination programs include employment, tax obligations and housing policies. This step can be realized through facilitated migration process of professionals, which implies simplified conditions and requirements for entry/exit of professional emigrants or immigrants of foreign citizenship, relief of taxes, preferential, desired housing/work policies for qualified returnees, work permits obtained easier, etc. Solutions to stop brain drain, as per skilled workers, based on Sajjad (2011) could be: to provide employment suited to qualifications of the workers, to provide basic facilities, such as healthcare, to make reforms in the education system, to ensure safe and secure working atmosphere and working place, to advance research facilities and better environment at work, to ensure fair recruitment and system of promotion, to resolve economic problems, to ensure suitable encouragement with better professional and academic opportunities, to initiate campaigns to stop the brain drain. Other proposed solutions, based on Kostanjevečki (2002) include: development of socio-economic strategies, such as the reform of the education system, which could enable the utilization of acquired skills, knowledge and competencies after education, working on improvement of working conditions, offering better salaries to workers with skills and education, working on an

optimal relationship between the population of one country with its possible sources of capital and the employment rate.

### **1.7 Sending and receiving Regions**

Brain drain has a socio-economic impact on both mentioned regions. Regions can be classified into four broad types according to whether this impact is positive or negative, negative impact for sending regions, positive impact for sending regions, positive impact for receiving regions, and negative impact for the entire system, meaning for both sending and receiving regions (Cavallini, 2018).

Negative impact for sending regions is the most researched in the academic literature when it comes to brain drain. The negative effects would be: decrease of the supply of human capital, lack of labour or skills, changes in the labour market, such as diminution of wages, restricted possibilities and capacities when it comes to innovation and adoption of more progressive technologies, reduction of tax income, changes in the market, decreased economic growth, diminution of consumption, higher costs of living, and lapse of investment in human capital itself.

Positive impact for receiving regions may include some benefits such as: growing innovational potential, economic growth, bigger consumption, bringing skills and knowledge acquired in a homeland to a receiving region and investing the capital gained in a homeland to a receiving country.

Positive impact for sending regions might be: a return migration, bringing back to homeland new knowledge and skills acquired in a receiving country, possibility to train and educate the others in a homeland and investing the capital gained in a receiving country back to a homeland.

Negative impact for the entire system, meaning for both sending and receiving regions as the main effect states brain waste. This happens when a professional or a high skilled worker goes to a receiving country with insufficient data and information about the job and skills required, so he ends up being unemployed, or being underemployed, which means both being employed in a job completely different from their profession, or working in a job being not paid enough regarding his abilities, skills and knowledge.

*Figure 6: Sending and receiving regions*



*Source: European Committee for Regions (2018, p 17).*

In Figure 6 the sending and receiving regions in the European Union can be seen. Sending regions are marked with red colour on the map of Europe, and receiving regions are in green. Homelands, i.e., sending regions, have a usual GDP, per capita 64% of the EU28 average, while receiving regions have a usual GDP, per capita 108% of the EU28 average. Also, migration stream follows east-west, south-north and rural-urban patterns, marking the peripheral regions as mostly sending regions. Since the knowledge economy is considered as an important catalysator of intra-EU mobility, especially mobility of the youth and highly skilled migrants, regions relying on it aim to be characterized by withal physical and technological infrastructures, cultural heirdom and educational goods, good cooperation between businesses and educational sources, such as schools and universities, and equal attainability. These regions also provide higher standards of life and good labour possibilities (European Committee for Regions, 2018).

### **1.8 Brain Drain, Brain Gain and Brain Waste from a Psychological Aspect**

Talking about brain drain from an economic point of view is one thing. It relies on causes, statistics, percent and calculations, and mainly, from an economic aspect, phenomena and synergistic actions that globally affect the brain drain are mentioned. But, since brain drain, brain waste and brain gain represent three terms caused by human instincts, desires and needs, these terms can be also be explained from a psychological aspect.

Starting from the existence of these three terms, psychology would always, first of all ask whether they exist at all. Taking into account psychological beliefs which can be relative and absolute, the answer would be: it depends. Generally observed, it depends on people's

beliefs regarding brain drain, brain waste and brain gain. It is certainly known that the interpretation is individual, and that it depends on our view of things, so as such, it is mostly subjective and relative, and people never observe a phenomenon equally (Baghrarian, 2004). If the brain drain, brain waste or brain gain are observed by economists, as already mentioned, it will mainly be based on statistics, calculations, numbers and percentages, and possibly on the social and political consequences it can have on the state and society. If we look at it from the psychological aspect, we must first ask ourselves why brain drain, brain waste or brain gain happen, ignoring the factors we previously called push and pull factors.

Analysis should always start from an individual perspective, which is mostly subjective, having in mind that people are often unwilling to think about life, facts and acts objectively (Freud, 1984). Regarding this, it is important to evidence that every individual wonders what does he want, where, when, in which circumstances and conditions. Not everyone see himself in the country of birth, in a society where he should live, following his genesis, place of living, in a family town or family neighbourhood. This desire does not have to be motivated by financial possibilities, lack of opportunities and poor education. It is more about one's own discretion and not finding oneself in the environment in which one lives. On the other hand, there are also cultural expectations, established by tradition, age limit, gender. Every culture has its own expectations about when you should graduate from college, by what age limit, when you should find a job, preferably in the profession and immediately after completing your studies, when it's time to advance, when it's time to get married, how much money you should save over time and where and how you should invest it. Some people simply do not want to live according to the cultural determinants of the country and society in which they live, and such bonds only make it difficult for them to fulfil their individual wishes (Kitayama & Cohen, 2010). In this case too, it is not about the mentioned push and pull factors.

When it comes to salary, it is important to mention that there are people who, even today, even though the world has reached that point, are not consumerists and materialists, so in this regard, they do not strive for education, training and employment just to secure themselves financially, and the better and more if possible. It is also important to mention the fact that people sometimes want to do the same job somewhere else, in another country, for the same salary, sometimes less, but with the desire to gain different experiences, travel, live in another country for a while and thus get to know its culture, customs, people and the way their work is done in another country. Considering that this is about spiritual refinement, we can rule out push and pull factors here as well.

Speaking of salary, we can also mention general financial status and standard of living. The distinction in the standard of living is very small in neighbouring countries, even though it is the same type of work. Assuming that people go to do the same job in another country, we can say that the nuances are small. Moreover, in some countries the standard of living is very high, although the salaries are solid. Unless one consciously goes to work

in another country due to large differences in wages and living standards, preferably more developed and further away from the micro-centre where the individual lives, we cannot talk about better living standards and material status as the main cause here either (Furnham, Forde & Ferrari, 1999). Of course, here we exclude third world countries and countries where even today, in the 21st century, the basics of life's needs are questionable.

When it comes to education, the differences are very small, at least until studies. Any country that is capable of providing basic conditions for life is also capable of providing quality primary and secondary education, often academic as well (Barry, 2012). The only problems faced by smaller countries, or developing countries, are the inability to provide completely free education and the lack of opportunities for training in the desired profession, since opportunities depend on the demand and popularity of a given profession in a particular country.

Unemployment is one of the important push factors, but from a psychological point of view it is very relative to brain drain, since the guarantee of a secure job, especially a job in the profession, is never one hundred percent. Certainly, there are countries that value education, skills and abilities, so they will be happy to give a foreign citizen the opportunity for work and training. Even then, the legal procedure for getting a job in the profession is long, given the bureaucracy and is not safe. Unemployment in both the home country and the receiving country can be short-term, and therefore is not a negative factor, as presented in push factors. On the other hand, if it is about permanent unemployment, then we can already talk about double alarms: an alarm concerning the abilities and skills of the individual, and an alarm concerning employers and employment policy.

Fear of war and corruption are almost at the bottom of the list of the most important push factors, when it comes to previous part of this thesis, relied on economic aspect of analysis. On the other side, from the psychological aspect, they might be important, since they arise from human feelings and human depravity (Bourke, 2005). Fear of war is certainly part of the collective consciousness of the nation's whose countries survived the war, especially in recent history. Even though the war is finished years or decades ago, survived generations still remember it. Not only can they not erase it from their memory as a horrible lived experience, but often this experience and irrational fear in the safe time in which their children's lives is passed on to them. Fortunately, when we talk about this cause, it is mostly mapped in the minds of the generations that lived through it, but very rarely in the minds of young people, unless they come into a brainwashed state of irrational fear that is unlikely to happen, and if yes, very small.

Corruption is mentioned as the least represented push factor. Certainly, corruption has been an integral part of society since ancient times, but in our time, it has reached its peak due to the fact that people, aware of the value of money, are more than ever ready to buy, sell or get everything in a corrupt, cunning way (Garifullin, 2012). Although the state is spread out in less organized countries, it is important to mention that there is no country in the

world with a zero rate of corruption. Certainly, in some regulated countries its rate is very low, but it is not constant. This is the push factor that might be the most complex to analyse in psychology, since it originates directly from the corrupted human character, which, unfortunately, has become part of the collective consciousness, so it is assumed to be normal nowadays.

After a short psychological review of push factors, it should be also mentioned what happens after leaving, more precisely migrations caused by real push factors. After satisfying the needs and desires in the receiving country, the individual may experience short-term or long-term crises, since our affects are always bipolar, especially in certain life situations, such as migration (Stekel, 1999). This can be about: disappointment, excessive expectations that have not been realized, excessive obligations, long working hours, insufficient wages, lack of social life, homesickness, loneliness, maladjustment to the environment, people and a new job in a new country, immediate or long-term inability to return to the homeland, awareness of difficult conditions in the homeland, inability to help family members, inability to become independent.

On the other hand, since above the negative situations that can happen to an individual after migrating to another country are listed, we should also mention the positive ones. The positive aspects would be: gaining new experiences, getting to know new cultures and people, successful adaptation in the receiving country, quickly finding a job in the profession or desired job, good income, quick possibility for independence, advancement, making new acquaintances, the possibility to help the family, the intention to transfer the acquired experience, skills and knowledge to people in their home country and to invest the earned capital in their home country and start a business there (Toppr, 2023).

Certainly, in the final analysis of the results, it is obvious that positive outcomes from a psychological point of view after migration coincide with what was explained in the thesis as pull factors. From the perspective of economics and social disciplines, pull factors refer to material and social gain, while from the psychological side they refer to fulfilment, refinement and acquisition of knowledge, skills and advancement for oneself as an individual.

Likewise, like brain drain, brain gain is a relative term, because from an economic point of view, profit per receiving country is mainly observed. On the other hand, rare authors of the discipline see brain gain as an opportunity for the selection of the best in the given profession to take place in the homeland, so that those remaining in the same profession make an effort to progress and overtake those who have migrated (Mlikota & Prelas-Kovačević, 2013). On the other hand, it is uncertain, from the psychological point of view, to say how long the brain gain will last and whether the individual will remain permanently in the receiving country. This was already mentioned in the earlier part of the paper from an economic point of view, but it is also mentioned here, since it is not always material

factors that drive an individual to return to homeland - mostly they are spiritual and psychological.

To finish this chapter, it is worth mentioning, although it was mentioned earlier in the paper, that brain waste is not necessarily a negative phenomenon. Primarily, it can be about the individual's adaptation over time, his linguistic competence when it comes to the language of the country he comes to, his personality typology and in general his endurance in coping in a new environment. Some people need relatively little time to get used to a new environment, others more, and these others very often run out of patience due to the pressure, so they are forced to return to their homeland. Likewise, people have very high expectations when it comes to wages, so they expect to work for very high wages from the first day of moving, even though they are sometimes neither educated nor skilled for the job they intend to do (Glennie & Chappel, 2010). And under that kind of pressure, they very often remain either unemployed in another country, or out of impatience, work another job for a lower salary. Also, it could happen that this choice to return is not their own will, but forced returnee back to homeland, caused by a set of circumstances (Migration Data Portal, 2023). In the end, no situation is permanent and impossible to solve, and it is certain that the potential, knowledge and skills pay off, but for a person, who goes to another country with the intention of providing himself with better living conditions and greater financial security, it is sometimes hard and waiting unbearably for the right opportunity that doesn't always come immediately. If so, brain waste is inevitable, at least when it comes to economic aspect.

## **2 BRAIN DRAIN IN BOSNIA AND HERZEGOVINA**

There was a significant decrease when it comes to population able to work and workforce from 2015 to 2019 in BiH, with the percent of the working age population decreasing by about 12%. Decline starting in 2010 and ending in 2015 was 2%, which shows that rate of declining of the working age population is increasing with time. Therefore, there is a strong indication that existing emigration from BiH is contributing to this decline.

The main characteristics of the labour market are: very low coefficient of economic activity, which is moiety of the EU average, and high unemployment coefficient, especially for young people who, before getting a proper job, often do not have a chance for trial work and practice in the profession. Nevertheless, the labour force in the last years, possibly decades, is very low, as it is an employment rate. To better understand the statistic, few works and researches are going to be quoted. The labour force involvement rate for over 15 years was only 42,1%, regarding the working age population in 2019, of which 51,7% regards men and 32,9% regards women, with a decline over the last ten years. Uniformly, the rate of the employment for over 15 years of age reached very low point of a total of 35,5% in 2019. Employment rates are declined when it comes to certain categories of workers and populations, such as women, with a 26,7% rate, and limitedly

educated and skilled workers, with a 15,7% rate, in a comparison to high-skilled workers, with a 59,3% rate (ETF KIESE database, 2020).

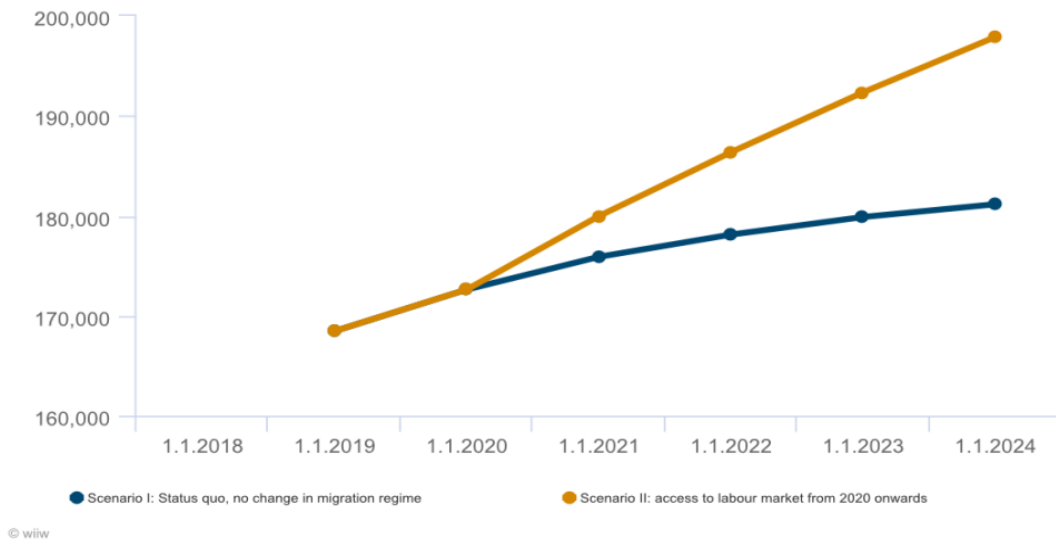
BiH records a relatively high share of self-employment too, and regarding this, it is evidenced that in 2019 the rate of vulnerable groups was 19,1% and that employment rates of young people were also significantly low in the same year, 35,4% and 23,4%. Also, the unemployment rate in the past ten years has declined, in the next ratio: 27,2% in 2010 versus 15,7% in 2019, but, regardless that, the rate of the youth unemployment is still high, with a ratio: 57,5% in 2010 versus 33,8% in 2019. Unemployment of women, especially young women is higher than of men, with the rate of 37,9%. Evidences also show that 15,8% of the whole population in BiH was low-skilled in 2019, with the opposite ratio in 2010 – 66,2%, leaving the highly skilled professional with the rate of 15,3% (Efendić, 2021).

## **2.1 Recent Researches on Brain Drain in Bosnia and Herzegovina**

BiH is traditionally an emigrant state. This fact implies that, in addition to the components of natural movement, the negative migration balance also strongly affects the volume and structural characteristics of the population. While it was part of the former Socialist Federal Republic of Yugoslavia, BiH achieved largest part of the negative migration balance in migration exchange with other republics and autonomous provinces. The wartime exodus of the population, when more than half of the pre-war population fled their homes, out of which about 1.2 million people fled abroad, has certainly left far-reaching consequences for the country's demographic development. This subchapter will present mostly statistics made after recent researches on brain drain in BiH, combining data from different sources, which was necessary to enclose precisely the statistics regarding them. It is estimated that about 2 million people of Bosnian origin sentient in emigration, which represents more than 56% of the total population from the last census in 2013 (MSBiH, 2018). More than three quarters of the first generation of BiH emigrants (78,5%), of whom 1,691,350, live in six countries: Croatia (394,146), Serbia (333,687), Germany (200,510), Austria (170,864), United States (125,442) and Slovenia (103,663) (UN, 2017; Eurostat 2016, according to MSBiH, 2018). In the following Figure 7 there are presented the possible scenarios when it comes to emigrations to Austria. By the blue line it is presented scenario in which migration rate doesn't change, regarding current state. As can be seen, in that scenario, the rate is not that high. On the other hand, by the yellow line, it is presented the possible growth of labour market when it comes to Austria. Here, it can be evidenced that an emigration rate from BiH to Austria is a lot higher than rate in the current scenario, also called as "status quo".

*Figure 7: The future of migration from Bosnia and Herzegovina to Austria*

**Fig. 2: Projected stock of BiH migrants to Austria, 2019-2024**



*Source: Mara, I., Martić, M., Đukić O.: The future of migration from Bosnia and Herzegovina to Austria, The Vienna Institute for International Economic Studies (2019).*

Today, BiH is facing significantly higher emigration compared to the countries of the region. According to the latest World Bank data, with an emigration rate of 44,5%, BiH is significantly ahead of Serbia (18%) and Croatia (20,9%), and even ahead of Albania (43,6%), which had been the leading country in Europe for years by the rate of emigration in relation to the total population of the country. Especially alarming about these numbers is the fact that entire families, almost 30% of highly educated people, are leaving BiH, of which 11,1% are doctors, which makes BiH the leader in Europe and the world. Emigration from BiH is a continuous process, and its main post-war causes are economic in nature. Regarding unemployment in BiH, it is stated that the biggest problem is that unemployment is structural in its own nature, and that it mainly refers to people who don't have a job for more than one year, and, being unemployed for more than one year, they make up 82% of the total number of unemployed people. This report adds that unemployment is mostly prevalent when it comes to young people, with the rate of 62,3%, and, regarding gender, unemployment prevails when it comes to women, with the rate of 30,7% versus the rate of unemployed men, 25,8% (Heinrich Stiftung Foundation Report & CIS, 2017).

According to the Migration Profile, it is stated that the majority of the population in BiH is discontented with life in the country, so that 50% of them plan or would like to leave BiH and work somewhere else, abroad, and, compared to Southern Eastern countries, this is the highest percentage of people who would leave their homeland country.

The massive emigrant corps was perceived as an opportunity for potential economic growth in BiH from two perspectives, as Halebić, Serdarević & Zildžić, (2013) propose:

- Direct annual benefits from remittances that increase spending power in the amount of 2,047 million KM or 7% of GDP;
- Indirect benefits in the transfer of knowledge of returnees that could potentially reduce information asymmetry among foreign investors.

The latter is justifiably considered a potential opportunity for growth, given the gradual deterioration in the ranking of the BiH brain drain index, which is very concerning.

When it comes to ranking BiH in the list of the world's leading emigrant countries, it is reported that BiH is a leading emigrant country in Europe, precisely, 11<sup>th</sup> on the global ranking (Domazet, Domljan, Peštek & Hadžić, 2020). With the exception of small, also called micro-states with less than 0,2 million inhabitants, such as Grenada, Samoa, Antigua and Barbuda, behind Palestine and Puerto Rico comes BiH, ranking as third in the world. Regarding data for 2017, it is said that BiH diaspora reaches the number of 1.7 million, distributed mostly in Europe (87,1%), then in North America (10,1%), following Oceania (2,6), while distribution in other parts of world remains insignificant (0,23%). When it comes to neighbouring countries, authors report that circa 44% of the BiH diaspora lives in Croatia and Serbia, circa 22,4% in Germany and Austria, while other, non-mentioned countries amount as a third of a total of the BiH diaspora (Domazet, Domljan, Peštek & Hadžić, 2020). Talking about formidable percentages and statistics about emigration from BiH, some recommendations on how to decrease the negative impacts of brain drain in BiH need to be given. The recommendations regard the process of starting business in BiH after return, as a great idea of decreasing of brain drain through the business opportunities. Those would be, according to Sladojević, Nanić & Mašović (2022):

- Dis-burden and facilitate the process of starting the business in BiH, so that returnees could ensure that they could easier start the new business in BiH after a potential return;
- Create a strategy on a national level regarding labour migration management in BiH and institutionalise it by creating an agency which would control labour migration management and act on time if noted that there is a massive departure happening, or, to work on policies of returning emigrants to BiH through institutions;
- Improve connections and networking between businesses in BiH & businesses owned by BiH diaspora, so that a good connection between businesses in a homeland and in receiving countries could be strengthened, or, to ensure an export of a domestic business in diaspora;
- Provide tax reduction and financial aid to people who want to return to BiH and start their own businesses in homeland, so that it will not be only easier to start one's own business upon return, but taxes and fees will be less, which would facilitate the return of people who have already started a business in the diaspora or intend to do so in BiH;
- Ensure that returnees and their families and children can have unobstructed access to the business market in BiH, so that families who return do not have to be on hold while the local population has advantages when starting a business and receiving benefits.

*Table 2: Residence permits issued to Bosnia and Herzegovina citizens in European Economic Area countries for remunerated activities for 12 months or longer, 2011- 2019.*

<b>SETTLEMENT COUNTRY</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Slovenia	8 948	6 251	3 576	3 681	4 684	6 847	10 988	19 569	24 768
Germany	521	660	953	1 213	1 889	4 604	10 102	15 427	19 904
Croatia	N/A	N/A	858	392	465	1 221	2 485	7 110	10 384
Italy	14 381	15 168	11 107	10 717	10 171	9 482	9 653	8 412	7 890
Austria	170	37	12	20	195	26	235	580	1 091
Czechia	195	445	428	374	557	634	696	812	747
Malta	53	49	40	99	210	240	324	404	425
Sweden	183	249	299	243	308	309	410	652	N/A
Norway	80	105	115	123	148	184	214	213	198
Luxembourg	541	353	208	182	133	114	119	116	120
<b>Total</b>	<b>25 072</b>	<b>23 317</b>	<b>17 596</b>	<b>17 044</b>	<b>18 760</b>	<b>23 661</b>	<b>35 226</b>	<b>53 565</b>	<b>65 527</b>

*Source: IOM (2022, p 21).*

From the Table 1 it is evident that the largest number of highly educated persons from BiH went to Slovenia, then to Germany. A large amount of people leaves every year, as many as 65,527 people left BiH in 2019. It is presumable that even higher number of people left BiH after 2019, especially after Covid 19 pandemic, which left many people without job, in a poor health conditioned and deprived of quality education caused by online classes.

*Table 3: Numbers of doctors and nurses that emigrated from Bosnia and Herzegovina*

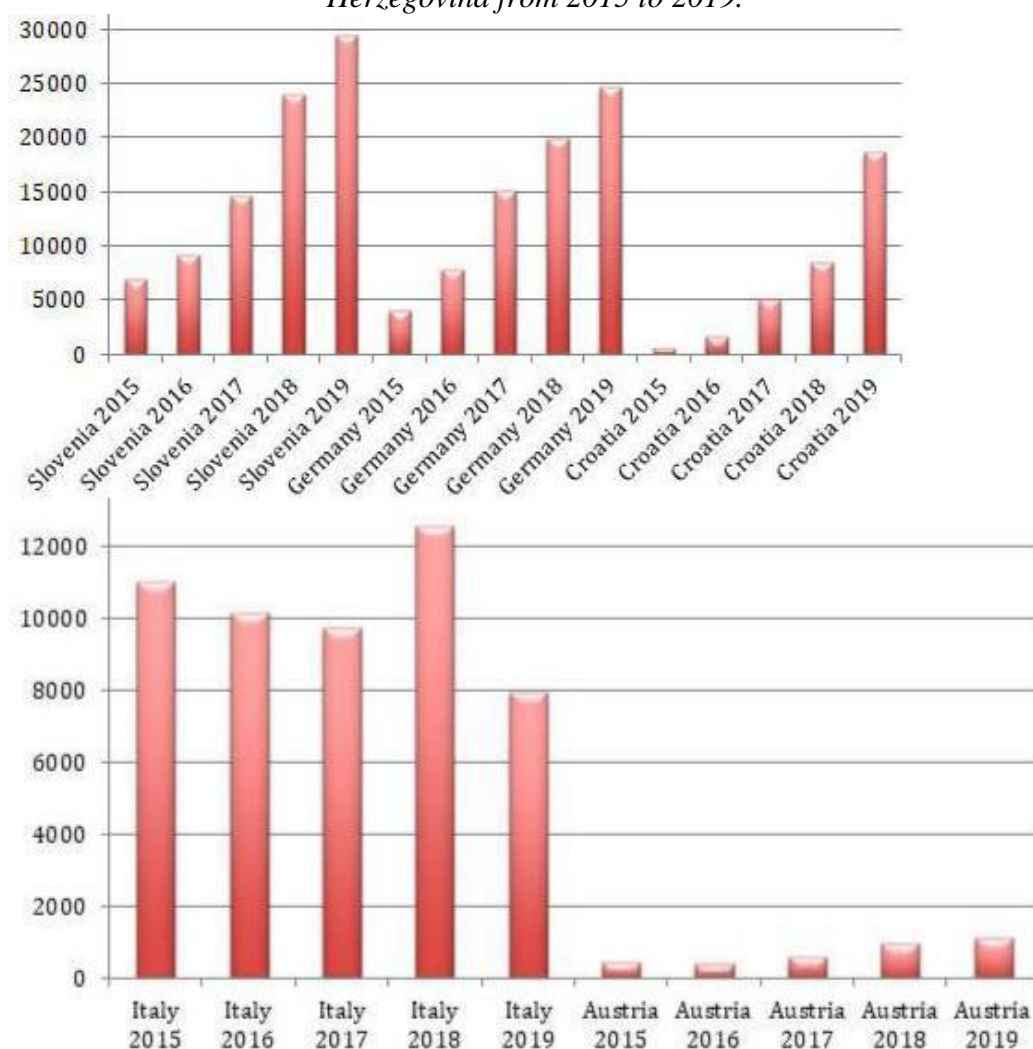
<b>MEDICAL STAFF</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Medical doctors	715	342	360
Dentists	536	367	345
Nurses	10 463	9 806	6 829

*Source: IOM (2022, p 21).*

In Table 2 it can be seen how many doctors, nurses and dentists emigrated from BiH in 2017, 2018 and in 2019. In 2017, there were over 10,463 persons from the healthcare sector that emigrated from BiH.

In Figure 8 are shown top five European destinations from emigrants departing BiH from 2015 to 2019, showing that Slovenia, in the 2019, following the nearest past researches, is the first on the list, highlighted with the longest blue column, on the left side. Compared to other countries also presented in the Figure 8, it is evident that from 2015 to 2019 Slovenia was the top one on the list, not only in 2019, numbering almost 30,000 of people who want to migrate there. In comparison, through the same years, Germany, Croatia, Italy and Austria had a lower rate of possible new residents.

*Figure 8: Top five European destinations from emigrants departing Bosnia and Herzegovina from 2015 to 2019.*



*Source: IOM (2022, p 21).*

## **2.2 Problems and Consequences of Brain Drain in Bosnia and Herzegovina**

The spatial distribution of educated human resources and able-bodied population has an impact on the countries from which they emigrate and equally on the countries to which they immigrate. Increased readiness or actual abandonment of science, observed in recent years, does not have to be a priori a negative sign. Although the process of brain drain has long been present and known to today's society, no significant analysis of the brain drain has yet been made, even though it is started to be recognized in the literature. Nevertheless, the consequences and changes are visible, both in emigrant and immigrant countries, and especially in individuals as bearers of these changes. Not only that, it is becoming a calamity for humanity too. The brain drain is not only fatal for a country that loses its human potential, but it is also detrimental to a whole humanity (Golub, 2006). It is important to note that the cast part of a country's mind is never fully reintegrated into a new environment. That is why we say that science is at a loss, be it world or national. Since negative impacts are mentioned above, there are others who claim the opposite. On the other hand, it is said that brain drain is not necessarily negative phenomenon, under the conditions that it is not permanent, as mentioned above in the thesis. It is also added that migrations and brain drain by the time can affect a selection of the primary population, and also, a selection of a scientific or educated professional (Mlikota & Prelas-Kovačević, 2013).

The social consequences of emigration, especially of the young population, are visible through the loss of invested capital, i.e., the emigration of young people loses previous investments invested in their upbringing and education. An increasingly present form of external migration is taking place to improve the quality of life, as the dominative, but also negative, natural particle of the total population motion has dropped off to a depopulation of a country (Ognjan, 2019).

## **2.3 Factors Affecting Brain Drain in Bosnia and Herzegovina**

There are several factors related to the departure of young and qualified personnel from BiH, which will be analysed below, taking into consideration the most mentioned and the most commonly assumed reasons for departure of young people.

### **2.3.1 Poor economic situation**

In the reports given, it is said that BiH has been in an economic crisis for years (BHRT, 2022). The fall in GDP over the years is evident, as is the parallel increase in politicians' salaries, and due to such a generally bad economic situation, people decide to leave the country, even if they have a job. This can be connected to an analysis of education levels of the people who leave BiH and both brain drain and brain waste, starting from a feeling of demotion.

### 2.3.2 Unemployment

When it comes to unemployment, it is reported that on January 31<sup>st</sup>, 2021 in BiH there were 415,027 unemployed persons (Agencija za rad i zapošljavanje BiH, 2021). The fact is that none of the highly educated people go to the receiving country without any reason, they all go for employment. Nowadays, there are also numerous employment mediation agencies in the countries of the EU, which greatly facilitates the employment process for BiH citizens abroad. But, when it comes to employment in BiH itself, there are only few of agencies who push the employment here, and they are mostly acting in the private sector and some selected branches.

### 2.3.3 Low Salary

Low salary as a push factor is expected and already well-known, and to confirm, BiH has the lowest salaries of all countries in the region (Mahmudbegović, 2021). Statistics also claim that the minimum salary in the Federation of BiH is officially 407 KM (Đapo, 2022). Similar to this amount, Federal Tax Administration shows that minimum salary is 420 KM. So, according to data, the government in the entity of FBiH can vent with the statistics which show that the ratio of workers working for the lowest salary has been lowered in the following ratio: 110, 000 in 2014 versus 23, 000 in 2020.

All relevant research indicates that people prefer to go to those countries of the world where the salary is significantly higher. For example, in Germany the average salary is up to 3 times higher than in BiH, which is the reason why Germany one of the most desirable for highly educated citizen of BiH. On the other side, it should be mentioned that nowadays, youth is mostly motivated by money and its accumulation, since we are living in an absorbing time of consumerism and materialism.

### 2.3.4 Unresolved housing issue

Young population in BiH find it difficult to decide starting a family for two main reasons: unemployment and unresolved housing issues. Even those who have a job, due to low average incomes and unfavourable credit conditions, mostly stay in their parents' houses, or give a large part of their income to rent apartments. The current youth housing policy in BiH is aimed at alleviating the housing circumstances of those who are already able to enter the process on their own. Providing a home is costly and expensive, and that, with mentioned policy, could be targeted just a small number of people who are going to get benefits from it, with a huge number of people remaining without home, not being able to afford it without help of the authorities or mentioned policies (Husić, 2022).

### 2.3.5 Fear of War

Some authors claim that fear of war still, to this day exists, naming this persisting phenomenon “psychology of fear” (DW, 2022). Although 28 years have passed since the

war in BiH, there are still clear outlines of fear. Therefore, people, aware of the many problems that such an environment brings, decide to leave the country, in order to ensure a better and safer future for themselves and their children. This especially applies to older generations, the ones who have lived through the war.

#### 2.3.6 Corruption

When it comes to corruption as a push factor, as the least mentioned and not so recognized one, it is said that it is a threat to a security of all people in BiH (Popović, 2019). Similarly, it is confirmed that corruption has been a blazing problem in BiH for years, since it is present in every aspect of society. Also, it is claimed that the biggest problem regarding corruption in BiH is peaceful observation and stagnation instead of active fight against corruption (Đugum, 2019).

### 2.4 Comparison of Brain Drain from Bosnia and Herzegovina and Neighbouring Countries

The departure of residents, especially young people, from the Balkan countries to the economically highly developed countries of Western Europe is one of the biggest problems faced by all countries in the region of the Balkans in recent years. Although there is still a lack of accurate official data from state institutions on this key social issue, it has long since become clear that this is a worrying demographic trend and that brain drain from the Balkans countries, is reaching alarming depths. Based on various assessments and analyses by numerous independent and non-governmental organisations, it is estimated that every country in the Balkans annually loses a population the size of a small city.

When it comes to my home country, it is important to say that in the last six years, there has been a constant growth of emigration from BiH. Research has shown that from 2013 to the end of 2019, more than 200,000 people left BiH. The above data indicate that in the last two years alone, about 50,000 people left BiH and went abroad. A similar demographic decline caused by emigration also affects Serbia, where, according to the Organization for Security and Cooperation in Europe (OSCE) it is shown that circa 654,000 people emigrated in one year, mostly between the ages of 15 and 24, from the beginning of 21. century, ending in 2018. Simmonds's statistic from 2020 regarding Serbia says that 51,000 people left in 2018 and moved to the countries of EU.

Not only in BiH as a leading country, and Serbia as following, brain drain happens in Croatia too and it is also present for many years in Croatia. Unexpectedly, with the entry into the EU the development of the country and economic crisis notably worsened. This is especially notable in smaller cities and less developed eastern areas the country.

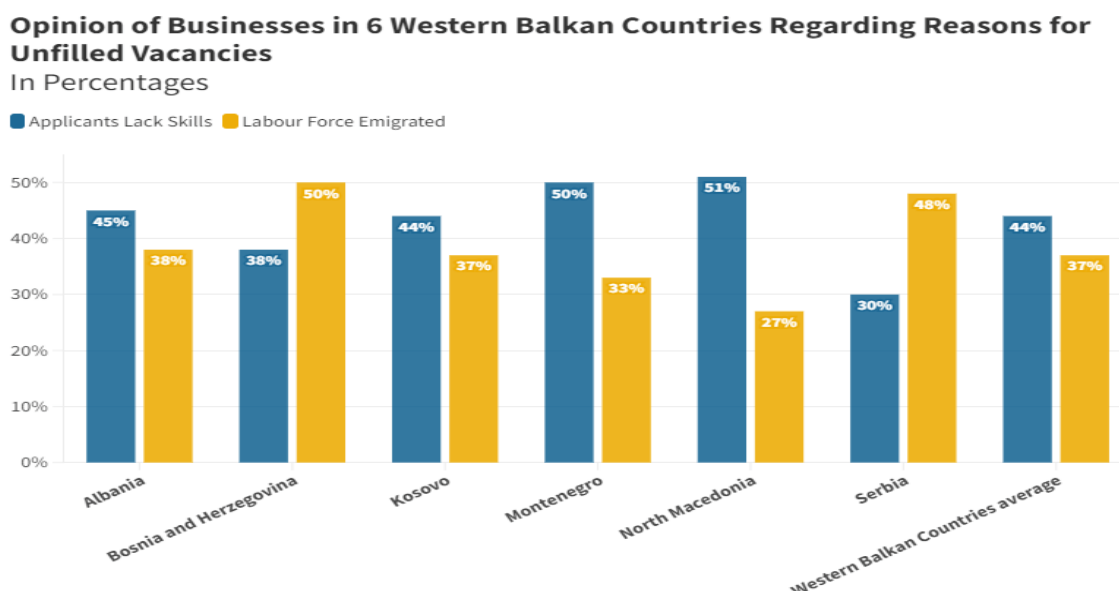
Regarding the brain drain in Croatia, it is especially concerning that Croatia faces difficulties even when it comes to retaining its population in some bigger cities. That

means that Croatia faces an emigration in all its parts equally, retaining the low-skilled labour mostly in Dalmatia and Eastern Croatia (Moravac, 2020).

Also, it is important to mention the fact that Albania, Macedonia and Kosovo have the biggest problem when it comes to emigration, regarding also the fact that they are smaller countries, smallest in the region. The last review about the conditions in Balkans is shown in the Figure 9 below. Blue bars represent the applicants' lack skills and yellow bars represent the labour force emigrated to a receiving country. Like other implications through the thesis, it is evidenced that BiH, even though is not the smaller country in the region, still has the biggest rate of labour force who emigrates to another country.

Clearly, BiH is not the only country in the region facing the emigration, but still, it has a highest rate when it comes to emigrations. Not only that, one of the highest in the world.

*Figure 9: Emigrant rates in countries of Western Balkans*



*Source: Blazhevski et al. (2023, p 2).*

As evidenced in Figure 9, with a legend within the table, BiH is the top country that people leave, with the applicant lack skills rate of 38% and the labour force emigrated with the rate of 50%. The biggest departure from BiH was in the 2000's (21%). In the 2010's it was 20%, which is still very high. On the other hand, it can be seen that Albania has the rate of emigration in 2010s 18%, Croatia 14% (and in 2000s it was 17%), Macedonia 12%, and common result for Serbia and Montenegro (Montenegro regained its independence only in 2006) 10% in 2000's.

### **3 METHODOLOGY**

#### **3.1 Methodology Review**

Total sample included 100 persons from BiH who answered the survey questionnaire. The purpose of the study was to identify the persons who want to leave BiH for some reason, and if so, what are the factors that lead them to that decision. The study questionnaire included questions related to the socioeconomic factors that define the sample, the basic push and pull factors, and ultimately, the attitude towards leaving BiH. Main goal of the study was to collect answers from young people from BiH about leaving the country, identification of factors that influence such a decision and, ultimately, to provide advice and suggestions to competent institutions on how to keep young people in BiH.

#### **3.2 Primary Data Collection**

Primary data was collected through a survey questionnaire. The survey was realised by the Google Forms, and it was distributed to respondents via e-mail and via social networks. The survey was active during the last year. Two key variables were measured in the questionnaire: Decision on brain drain as a dependent variable, and push and pull factors as independent variables. The descriptive analysis involved variables on decision to leave BiH and push and pull factors.

The push factors examined were: low salary, fear of war, corruption, unemployment, unresolved housing issue, poor economic situation, better education in a foreign country, bad atmosphere at current job and the desire for change in life.

The examined pull factors were: greater security and freedom, higher salaries in a foreign country, better technology in a foreign country, higher standard of living in a foreign country and a more stable political situation in a foreign country.

The influence of these factors was assessed using the Likert scale from 1 to 5. This scale from 1 to 5 expresses the degree of agreement or disagreement, as a rule: “I do not agree at all” = 1, “I do not agree” = 2, “I have no opinion” = 3, “I agree” = 4, “I completely agree” = 5. The survey was realised by the Google Forms, and it was distributed to respondents via e-mail and via social networks. The survey was active during the last year.

The study used the method of descriptive statistics. Descriptive statistics were used to present basic information about the sample (demographic data: gender, age, employment, monthly income, level of education), and to provide an insight into the opinions of respondents regarding the wish to leave BiH and push and pull factors.

#### **3.3 Sampling Procedure**

The questionnaire was conducted online, and it was forwarded to respondents via e-mail and shared on social networks. The questionnaire was accessed by 100 respondents who

filled out the mentioned questionnaire via Google Forms. The questionnaire contained a number of questions, divided in two parts, as you will see in the appendix at the end of the paper. The questions related to age, gender, level of education, employment and income are the first in the questionnaire, just to form a general image about the respondents, with the total of 8 questions. The first part of the questionnaire referred to general data, while the second part of the questionnaire referred to more precise answers, with the total of 15 questions, which aimed on providing more precise image about the push and pull factors for leaving the BiH.

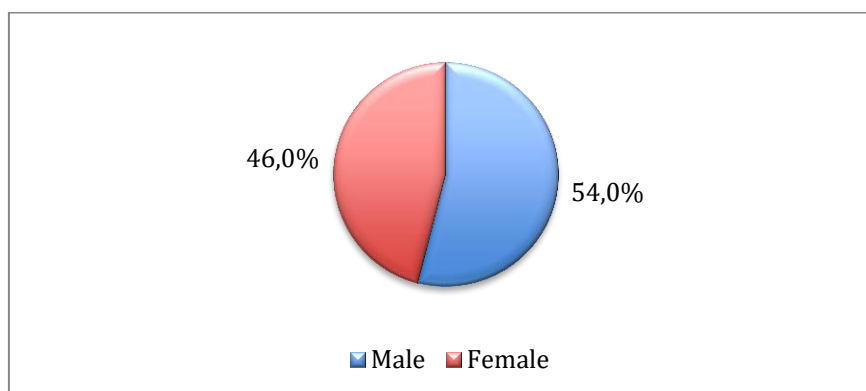
### 3.4 Data Analysis

The data from the online Google Forms survey were imported to IBM Statistics SPSS v23.0 where the data cleaning and the production of appropriate tables was conducted. The demographic data was analysed using the total number of cases (n) and the percentage (%). While the data on push and pull factors are presented as mean (x) and standard deviation.

### 3.5 Socio-demographic Information about Respondents

In this part, socio-demographic information about the sample is presented for 100 respondents who answered online survey. According to the gender distribution, there was more male (54%) than female (46%) respondents who answered the online survey.

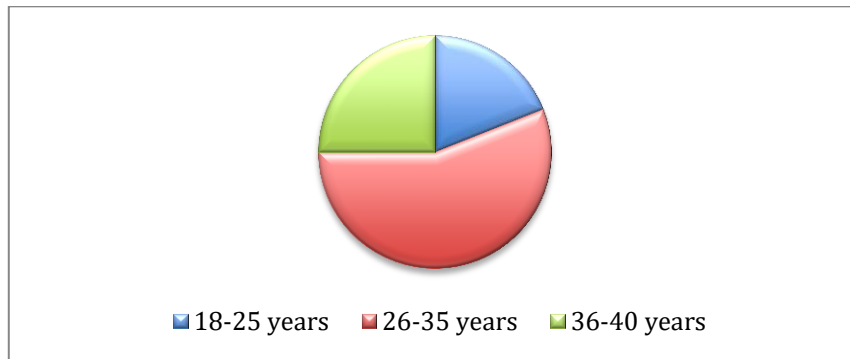
*Figure 10: Respondents by gender*



*Source: Own work.*

In the sample, there were 19% people that have from 18–25 years, 56% people that are 26–35 years, and 25% of them have 36–40 years. Age of the respondents was not limited, as it can be seen in Figure 11.

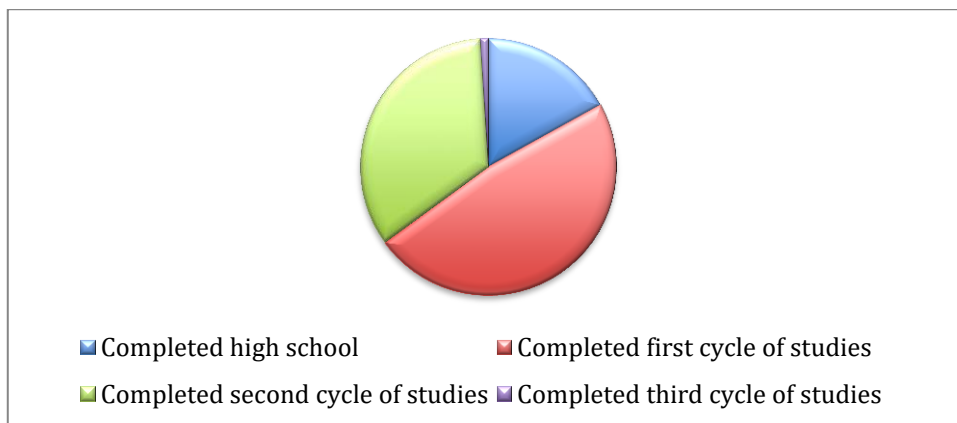
*Figure 11: Age of the respondents*



*Source: Own work.*

The sample includes 17% of respondents who have completed high school. Also, there are 48% of them who have completed the first cycle of studies, 34% who have completed the second cycle of studies, while 1% of them have completed the third cycle of studies (doctoral studies), as it can be seen in Figure 12.

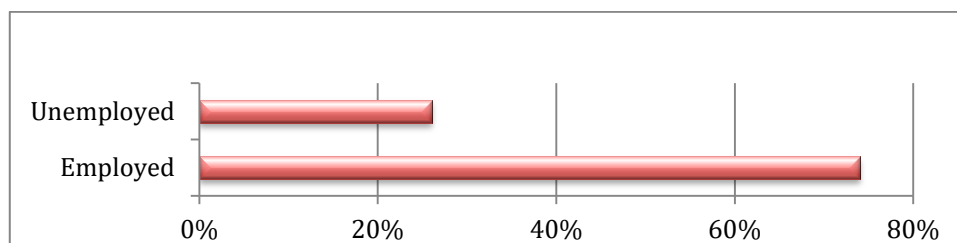
*Figure 12: Education of the respondents*



*Source: Own work.*

From the total number of respondents, 74% of them are employed, while 26% of them are unemployed, as it shows Figure 13.

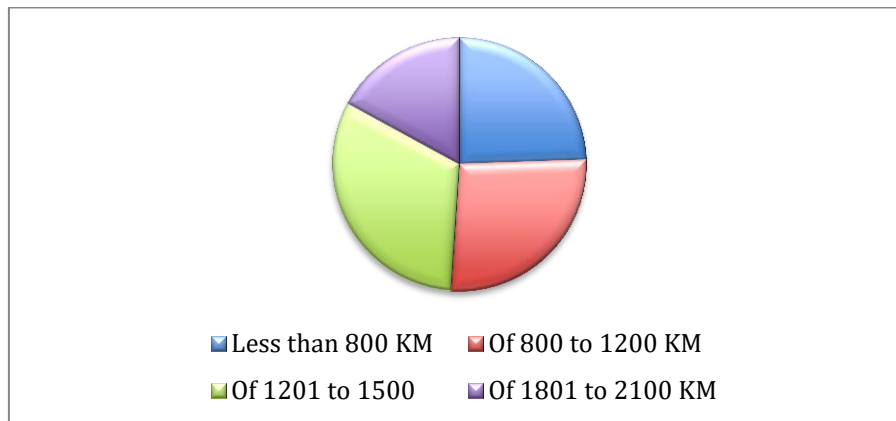
*Figure 13: Employment of the respondents*



*Source: Own work.*

From the total number of respondents, as many as 23% of them have a monthly income of less than 800 KM. 25% of them have a monthly income of 800 to 1200 KM; while 30% of them have a monthly income of 1,201 to 1,500 KM. A total of 16% of respondents have a monthly income of 1,501 to 1,800 KM, and 6% of respondents have a monthly income of 1,801 to 2,100 KM, as can be seen from Figure 14.

*Figure 14: Monthly income of the respondents*



*Source: Own work.*

## 4 ANALYSIS OF THE RESULTS

In this chapter of the thesis, the results of the questionnaire will be presented. Through this part of the work, the influences of push and pull factors that aim to animate someone to go and stay in a foreign country are analysed.

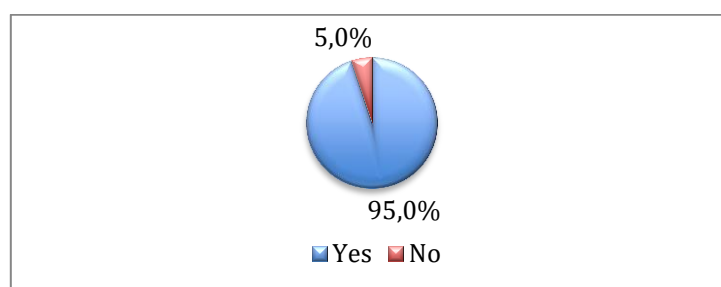
### 4.1 Report of the Findings

First of all, it was necessary to examine how many respondents are ready to leave BiH and continue their life in a foreign country. The answers to this question represent the following chart.

Out of the total number of respondents, 95% of them would be ready to leave BiH and start life in a foreign country, while 5% of them are not ready for such a step. It is important to mention that I didn't specifically target the people who wanted to leave the country for sure. That is going to be visible in the further analysis of the results, since I expressed that I was surprised with the fact that almost all of the respondents wanted to leave the country, to be precise, 95% of them, as I already mentioned.

Most of the respondents from BiH want to leave BiH and move to a foreign country, and start life there from scratch.

Figure 15: Preparedness to leave BiH and start a life in a foreign country



Source: Own work.

In Table 4 the report on the findings can be found.

Table 4: Report on the findings – Descriptives.

Descriptive Statistics	N	Mean	Std. Deviation
Leaving BiH	100	1.4600	.55814
Starting life in foreign country	100	1.0500	.21904
Low salary	100	1.0500	.21904
Fear of war	100	3.9300	1.32005
Corruption	100	3.9600	1.33273
Unemployment	100	3.880	1.38009
Unresolved housing issue	100	3.4800	1.44586
Low standard of living	100	3.5400	1.38111
Poor economic situation	100	4.0000	1.19764
Better education in a foreign country	100	3.7900	1.25766
Bad atmosphere at job	100	4.0500	1.20080
The desire for change in life	100	3.33600	1.54082
Greater security and freedom	100	4.1000	1.21023
Higher salaries in a foreign country	100	3.1000	1.40346
Better technology in a foreign country	100	4.2300	1.20483
Higher standard of living in a foreign country	100	3.6200	1.22911
A more stable political situation in a foreign country	100	4.4800	1.15889

Source: Own work.

Table 5: Analysis of push factors

Push factors	N	Mean	Std. deviation
Low salary	100	1.050	0.219
Fear of war	100	3.930	1.320
Corruption	100	3.960	1.333
Unemployment	100	3.880	1.380
Unresolved housing issue	100	3.480	1.445
Low standard of living	100	3.540	1.381
Poor economic situation	100	4.000	1.198
Better education in a foreign country	100	3.790	1.258
Bad atmosphere at job	100	4.050	1.201
The desire for change in life	100	3.336	1.541
Greater security and freedom	100	4.100	1.210

Source: Own work.

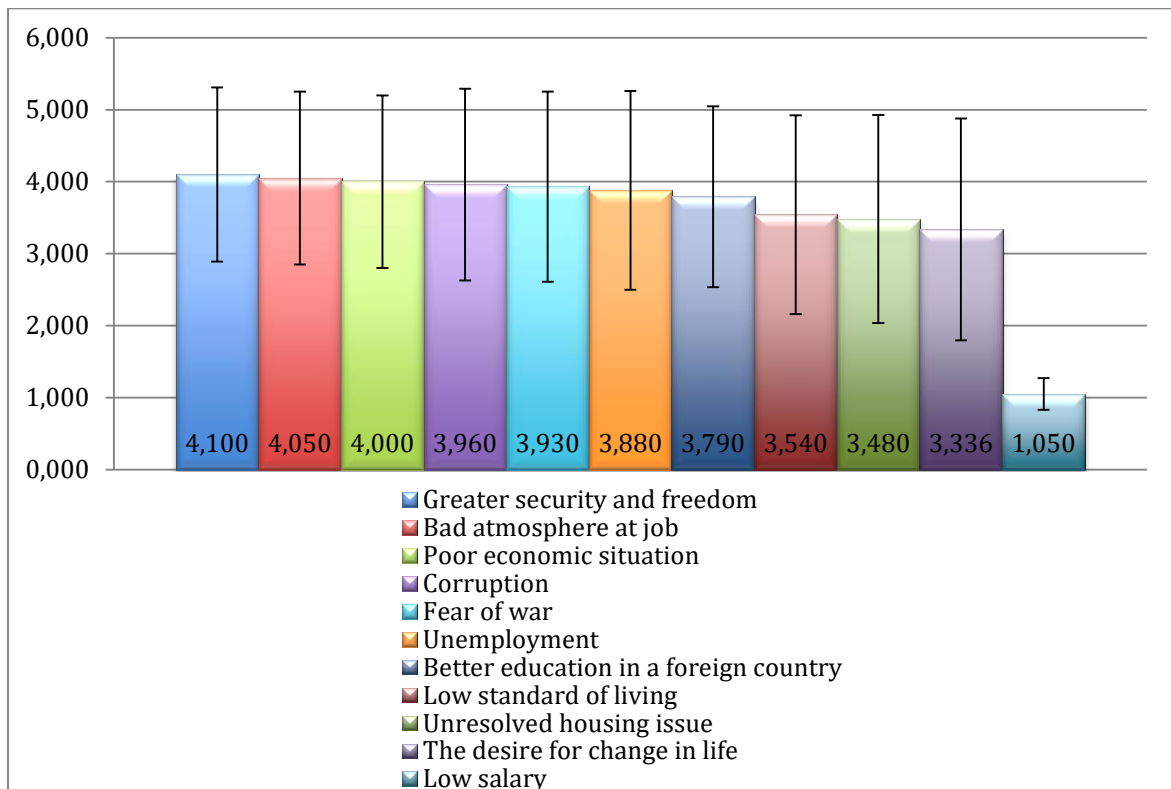
Analysis of push factors which are considered responsible for leaving the country indicate that the respondent agrees the most with the following factors: “Greater security and freedom” with mean of  $4.1 \pm 1.21$ , followed by “Bad atmosphere at job” with mean of  $4.05 \pm 1.201$ , and “Poor economic situation” with mean of  $4.0 \pm 1.198$  and which correspond to answer “I agree” on a Likert scale.

In the range of means from 3.5 to 3.9 the respondents agree the most with the factor “Corruption” –  $3.96 \pm 1.333$ , followed by “Fear of war” –  $3.93 \pm 1.32$ , “Unemployment” –  $3.88 \pm 1.38$ , “Better education in a foreign country” –  $3.79 \pm 1.258$  and “Low standard of living” –  $3.54 \pm 1.38$ .

In the range from 3.3 to 3.5 (I have no opinion) the respondents rated the following factors: “Unresolved housing issue” –  $3.48 \pm 1.445$  and “The desire to change life” –  $3.336 \pm 1.541$ .

The lowest agreement, the respondents showed with the factor “Low salary” with mean of  $1.05 \pm 0.219$ , which correspond to the answer “I do not agree” on a Likert scale.

Figure 16: Analysis of push factors



Source: Own work.

In Figure 16 are presented push factors, ranking from the most presented to least presented: greater security and freedom, bad atmosphere at job, poor economic situation, corruption, fear of war, unemployment, better education in a foreign country, low standard of living, unresolved housing issue, the desire for change in life and low salary.

Table 6: Analysis of pull factors

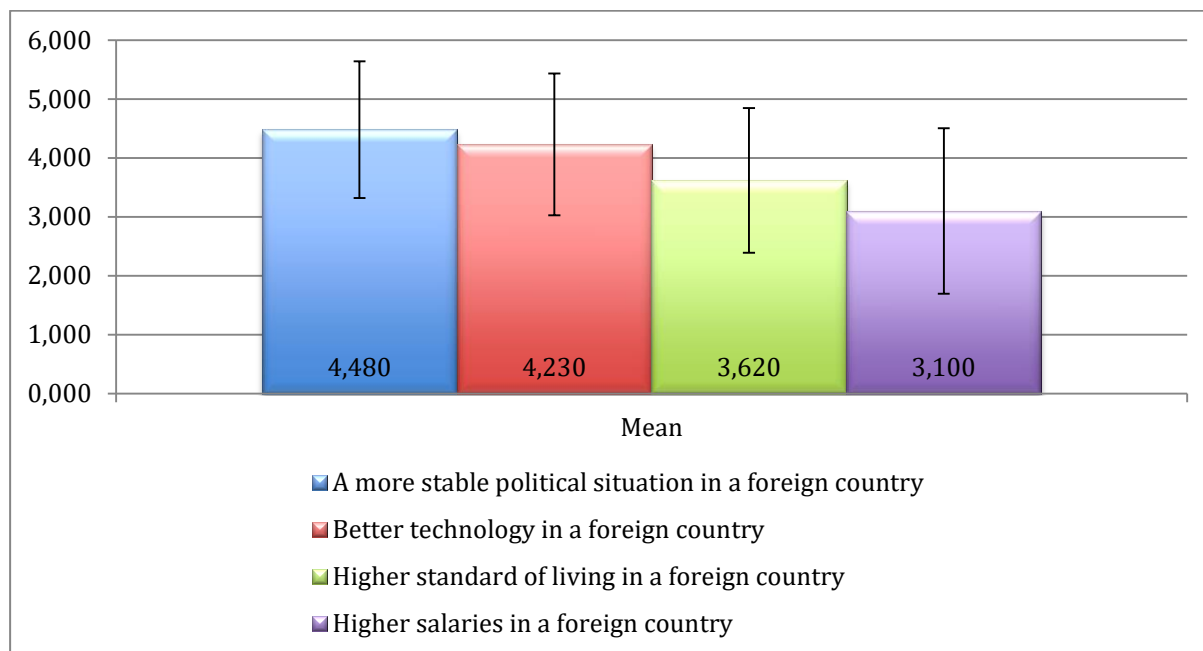
Pull factors	N	Mean	Std. deviation
Higher salaries in a foreign country	100	3.100	1.403
Better technology in a foreign country	100	4.230	1.205
Higher standard of living in a foreign country	100	3.620	1.229
A more stable political situation in a foreign country	100	4.480	1.159

Source: Own work.

Analysis of the pull factors which are considered responsible for stay in the foreign country the respondents agreed the most with the factor “A more stable political situation in a foreign country” –  $4.48 \pm 1.159$ , followed by “Better technology in a foreign country” –  $4.23 \pm 1.205$ , “Higher standard of living in a foreign country” –  $3.62 \pm 1.229$ . The least

agreement the respondents had with the factor “Higher salaries in a foreign country” –  $3.1 \pm 1.403$  which correspond to the “I have no opinion” on the Likert scale.

*Figure 17: Analysis of pull factors*



*Source: Own work.*

In Figure 17 are presented pull factors, ranking from the most presented to least presented: a more stable political situation in a foreign country, better technology in a foreign country, higher standard of living in a foreign country and higher salaries in a foreign country.

## 5 DISCUSSION AND RECOMMENDATIONS

### 5.1 Discussion

This section will highlight some of the most significant items observed in this study. First of all, it is important to put to evidence the fact that, even though I did not specifically target the people who want to leave the country, results showed that 95% of the respondents wanted to leave BiH. Since it was not expected, nor the respondents who surely wanted to leave the country were aimed, I can say that these results are pretty alarming.

The research defies the standard expectation that people from BiH go abroad with the exclusive purpose to find a job. Still, following the existing statistics about emigrations from BiH in the last few years, these results were expected. Given that 73,3% of respondents are employed, it is clear that unemployment is not the main motive or push

factor for respondents to go abroad, which shows us that this problem is very complex, multidimensional and that it involves different human needs, that are individual.

The second important part of my questionnaire, and the results too, is the interplay between push and pull factors. I expected that the prevalent push factor would be low salary or low monthly income, but the results showed the opposite. Even the respondents who have high monthly incomes, also want to leave.

As for my expectations, as prevalent push factor I expected it to be low salary, but, regarding the descriptive statistics from the Table 4 and Table 5 above, with the results represented in Figure 16 and Figure 17, I can put to evidence that Mean regarding push factors would be as following: greater security and freedom (4,100), bad atmosphere at job (4,050), poor economic situation (4,000), corruption (3,960), fear of war (3,930), unemployment (3,880), better education in a foreign country (3,790), low standard of living (3,540), unresolved housing issue (3,480), the desire for a change in life (3,336) and low salary (1,050).

On the other hand, the most important pull factors that emerged in my research, even though I expected them to be dominantly better work conditions or bigger salaries, are: a more political situation (4,480), better technology in a foreign country (4,230), higher standard of living in a foreign country (3,620) and, in the end, higher salaries in a foreign country (3,100).

Based on the results above this was expected, since the political situation in BiH is complicated for decades, even today, without significant improvements. Regarding technology, I could say that this factor shows us that BiH still lags behind the modern technological development and digitalisation, available in other world countries. Striving for better living standards is normal and desirable for every individual, especially for those who are educated and skilled. If they do not have good enough living conditions in their homeland, taking into account their wishes and expectations, it is normal that they will want to go abroad. In the end, consumerism, inflation and high prices along with high costs of living push the people to search for jobs which are better paid than in their homelands, since salaries in BiH are not that high, sometimes not even enough. This shows that higher salaries in a foreign country is a significant pull factor.

Since I already mentioned, the factor desire for change in life is rather analysed from a psychological aspect and not taken as a real push factor, so it is not analysed in this section. It showed me that people are not always compelled by “real” push factors to leave the country, such as poor economic situation, unemployment, low salary, etc. In fact, through this psychological research I realized that people would want to leave the country only to change the environment, gain new education and skills, meet new people and new cultures. They also want to live somewhere where it is not obligated to follow the culture and tradition they are used to.

## **5.2 Limitations of the Research**

Basic limitation regarding my research was insufficient sample. Although the sample is 100 respondents ( $n = 100$ ), it is still advisable to expand the sample, and to analyse this topic on a larger number of respondents. The sample was not limited by age, nor gender, and the respondents were mostly well educated. When it comes to my opinion, I am content with the number and age of respondents, since the most emigrations occur in the lives of young people or middle-aged people. When it comes to the response of those 100 people I am also content, since the questionnaire was not obligated to answer and it was divided online. On the other side, the number of respondents is not sufficient, and it was limited only to those who had an access to an online survey and are informatically educated. It is desirable to expand the number of push and pull factors, and to determine whether some other factors have an impact on the emergence of brain drain in BiH. The collection of primary data was done exclusively online. Another limitation could also be the lack of perspective of people who moved abroad.

## **5.3 Suggestion for Future Research**

Recommendations for future research are:

- Expand the sample: since the number of respondents in my questionnaire was not that large, having the total of 100 respondents, it is necessary to expand it, in order to have a broader picture. 100 of respondents is not enough to represent completely the opinion of the entire young, employed population;
- Expand the list of push factors and include it in new research: although push factors in general are almost the same, I would suggest to expand them and maybe explore potential new push factors, appeared since I have conducted my research;
- Expand the list of pull factors and include it in new research: as well as for push factors, I would also suggest to explore potential new pull factors that allure the young and skilled population to move, but also to explore potential new receiving countries that have become interesting for possible emigrants;
- Explore the experiences of people who left BiH and the conditions under which they would return: even though this is almost the final recommendation, I would say that it is important, given that only people who already experienced migration, compelled by push factors and allured by pull factors could say what would be the optimal conditions under which they would come back to BiH;
- Investigate what measures the government has taken to retain young people in BiH: like I already proposed, it is important to see into adequate measures taken by governments and authorities, taking into account that those already given don't change the situation for the better.

## **5.4 Policy Implication for the Government**

The basic guidelines that can be given to the government, based on the results of the questionnaire are evidenced in the following subchapters.

### **5.4.1 Low Salary**

Low salaries, both in the private and public sectors, are one of the primary reasons why the educated, able-bodied population is emigrating. Such thinking, but also the results of research, lead to the emergence of the need for stronger state engagement in terms of salaries. There are two ways to increase workers' salaries. One is to reduce taxes, and for the state to co-finance certain industries. On the other hand, the state can influence the prices of basic goods and services, with laws and regulations, and regulate the level of inflation, which will increase trust in the state and reduce brain gain and brain drain. This problem can be solved, as Luxembourg is doing, by increasing the coefficient for salaries, since this country strives for its workers to have the highest salaries in Europe, as the latest data tell us (Nomad Capitalist, 2023). It is important to mention that Luxembourg increased salaries both for skilled and unskilled workers. Of course, this is conditioned by organizing the state, investing money within the state, the efficiency of government, valuing work, paying taxes, etc.

### **5.4.2 Unresolved Housing Issue**

Taking into account complex government administration levels within the country, it should be recognised that Canton Sarajevo participates in helping young people under the age of 35, when buying their first-time housing units with funds up to 12,000 BAM (Zugić, 2023). This type of assistance is insufficient and can only be found in one canton (Canton of Sarajevo), but it is a good precedent for future policies. It is necessary to help young people and young families in every part of the country when buying housing units for the first time. In this way, young people will be encouraged to buy their first housing units in a faster and more efficient way. In addition to state aid, which is either one-term or impossible to provide to all applicants, this problem can be solved by reducing the prices of apartments and houses, as Portugal is doing, according to reports from the end of last year (Benoit Properties, 2022). Prices, even after the corona virus pandemic, are lower than they were before the pandemic itself.

### **5.4.3 Bad economic situation**

Generally speaking, weak and long-term economic situation in BiH is present. This forces young people to leave the country. Therefore, it is necessary to work on this phenomenon with laws and bylaws, in order to keep young people in their homeland. It is necessary to introduce various benefits for young people to motivate them to stay in the country, not to leave it. What is alarming is that payroll taxes are one of the highest in Europe according to UPFBiH and are up to 70%. Conditionally, this has to change where UPFBiH suggested

nearly 40 proposals and regulations on all administrative levels of the country on how to approach and regulate this issue (Udruženje poslodavaca Federacije Bosne i Hercegovine, 2023). In addition to solutions concerning salary increases, which is a basic step in improving the economic situation, in the debate held recently, it was proposed that, first of all, the rate of inflation, which has affected the whole world, should be reduced. Additionally, it was proposed to work on price and fiscal stability, and to work on improving the skills and the knowledge of the people who make up the economy of individual European countries (International Monetary Fund, 2023).

#### 5.4.4 Bad Atmosphere at Work

Bad atmosphere at work is a factor that the state cannot influence much. However, there are various trainings, which can be provided by the state, to employees of different companies, to learn how to better allocate time at work, how to learn interpersonal skills, to motivate, have better relations with colleagues, and provide an overall improved workplace atmosphere. Although dissatisfaction at work in Europe is sometimes considered a cultural legacy, it is quite clear that workers want to have clear expectations, detailed and clear instructions, support from a team or bosses, but also that they want to find purpose in their work. Sometimes, in fact, very often, workers do not get any of the above, which leads to dissatisfaction, and if we also mention bad interpersonal relations at work, the situation at work will be expectedly bad. Some of the ideas that could improve the bad atmosphere at work would be greater commitment of the leader and his communication with the workers regarding all aspects of work, dedication to the mental and physical health of the workers, encouraging positive and friendly relations within the team, valuing work, improving work conditions within the company, incentives for workers and rewards in the form of increased salaries, bonuses, team buildings and additional training aimed at connecting colleagues, with, of course, respect for everyone's integrity and the culture to which they belong (Gallup, 2022).

#### 5.4.5 Desire for Change in Life

The desire for change in life is completely justified. However, it is important to insist on temporary migration, which would include going abroad for training, education, study, training, and specialisation, and return back to the home country, in order to further develop the country and society. Life without knowledge is not possible, since the knowledge is the noblest virtue. This factor could be considered as both push and pull factor, but in reality, given that it is question of will or desire, it is subjective and relative, so I would rather consider it from a psychological aspect, as I already did in the first chapter.

## CONCLUSION

Since the phenomenon of young and educated people going abroad is more and more present, it is evident that they leave to start their life in another, more developed, safer and more organised country. There are many reasons for this type of decision-making. As mentioned, numerous times during my thesis, the brain drain is an extreme loss for the state, especially in human capital, which is followed by everything else. Qualified, young and enthusiastic workers are leaving the country. Workers who graduated from a university in their home country, as fully educated and qualified workers in their respective fields, will search, leave and in the end earn money on the foreign markets bringing with them all the benefits to a receiving country.

BiH is a very complex administrative country, which has its own specifics and it is a recovering state in transition, with a bloody past, especially in the early 90s. One of the biggest problems of this country is the departure of young and able-bodied people who are supposed to be the next generation, that will take the country forward after years of turmoil. Their departure is a great loss for the state of BiH, which is left without its most valuable capital, and that is definitely the people of this beautiful country. For a comparison, regarding the Heinrich Stiftung Foundation report data, the number of people who left BiH until 2016 is at least 2 million people (Heinrich Stiftung Foundation Report, 2017). In 2019 alone, more than 60 thousand people left the country (IOM, 2022).

Because of that, in this thesis, before everything else, I attempted to explain the term brain drain, but also terms brain waste and brain gain. Also, I attempted to discover the main pull and push factors of brain drain when it comes to young people in BiH. My research was based on a survey questionnaire, conducted online and responded by 100 people. The thesis tried to answer the basic research questions related to identifying the reasons for brain drain, push and pull factors, and examining the attitude of young people in BiH about leaving and possibly returning to BiH.

Significant findings were made on the basis of the conducted research. Among them, first of all, is the fact that the brain drain in BiH is not related to the lack of work, as expected. Respondents, i.e., young people, are leaving for other reasons. Another important finding is that contrary to recent arguments, the fear of war is not an important motivator for leaving the country, as also expected. Contrary to expectations, respondents want a better life, greater security and a better education. As a coincidence, the thesis further found that as many as 95% of the respondents are actively thinking about leaving BiH, although I did not aim on the people who wanted to leave BiH for sure. It was discovered that the most important push factors are: greater security and freedom, bad atmosphere at job, poor economic situation, corruption, fear of war, unemployment, better education in a foreign country, low standard of living, unresolved housing issue, the desire for change in life and low salary. The most important pull factor is a more stable political situation in a foreign country, followed by better technology in a foreign country, higher standard of living in a

foreign country and higher salaries in a foreign country. To this conclusion, I would like to add that push and pull factors are not conditioned only by material gain, as I saw both from the questionnaire and the results, as well as from the interpretation of the same factors from a psychological aspect, which I did in the first chapter of the thesis. For analysis of the results, I used descriptive and SPSS statistics. Also, I analysed results from the independent variables using the Likert scale.

Furthermore, in the discussion section, most important pull factors were analysed, where: a more stable political situation, better technology, higher standard of living in a foreign country showed to be significant. Even though I did not specifically aim at the respondents who wanted to leave the country, the results showed that almost all of them wanted to leave BiH. Major part of them is employed, so I can say that the unemployment and low salary are not the most valid reason for departure, as I expected. The most important push and pull factors are listed above. In fact, through my psychological overview I realized that people would want to leave the country not only to change the environment, gain new education and skills, meet new people and new cultures, but also to live somewhere else, where it is not obligated to follow the culture and tradition they are used to.

After the analysis of the results, I gave some recommendations on how to prevent brain drain in BiH. Some of them are:

- To expand the sample of the questionnaire;
- To expand the list of push factors;
- To expand the list of pull factors;
- To explore the experiences of people who left BiH and the conditions under which they would return;
- To investigate what measures the government has taken to retain young people in BiH.

Following the recommendations, the BiH government can do much to improve the situation in this country. It could influence young people to stay in the country through laws, bylaws, and numerous regulations. The government can influence the reduction of corruption, greater transparency, etc., as well as help young people financially, and stimulate them through various free forms of education.

Unfortunately, given the complex political situation in BiH that has been going on for decades, it is difficult to predict whether something concrete and pragmatic will be done in the near future when it comes to improving education, opportunities for training, passing new and more favourable labour and employment laws, and providing relief for independence and improvement of living conditions. Indeed, the Government has a plethora of measures available, and it needs to decide what it is that they will use to ensure that the most valuable assets of the state remain in the country.

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## **APPENDICES**

## **Appendix 1: Povzetek (summary in Slovene language)**

Ker so migracije postale vsakdanji dogodek in tudi proces, ki ima velik vpliv na globalni trg in delovno silo, je pomembno govoriti o posledicah in pojavu pojava, imenovanega "brain drain". Sam izraz se nanaša na mednarodni prenos virov človeškega kapitala, nanaša pa se predvsem na migracije visoko izobraženih posameznikov iz držav v razvoju v razvite države. Vzroki za nastanek tega pojava so različni in o njih bom podrobneje spregovoril v diplomskem delu. Glavni cilj in namen tega dela je opozoriti na resnost bega možganov, ki se trenutno dogaja v Bosni in Hercegovini, identificirati osnovne pojme, povezane z migracijami in begom možganov, predstaviti dosedanje znanje o tej temi, preučiti stališča mladih v BiH o morebitnem odhodu iz BiH, identifikaciji glavnih push in pull dejavnikov med mladimi v BiH, identifikaciji pogojev za morebitno vrnitev v BiH in izdelavi predloga za nadaljnje raziskave. Nekatere od metod, uporabljenih v tem delu, so: metode analize in sinteze, metode indukcije in dedukcije, primerjalne metode in statistične metode.

**KLJUČNE BESEDE:** migracije, brain drain, brain gain, dejavniki potiska in vlečenja.

## **Appendix 2. Anketni vprašalnik v slovenščini - priloga 2. Anketni vprašalnik**

Ker so migracije v preteklih letih, predvsem v zadnjih nekaj letih, povzročile beg možganov v svetu, pa tudi v Bosni in Hercegovini, sem želela z izdelavo tega vprašalnika preveriti razloge za to. V tem vprašalniku se boste soočili z vrsto vprašanj, začnši z osnovnimi: spol, starost, diploma, zaposlitev, dohodek, zakonski status in pripravljenost zapustiti Bosno in Hercegovino. V drugem delu vprašalnika bom preveril razloge za vaše morebitno bivanje v drugi državi oziroma tako imenovane push and pull dejavnike.

1. Spol:

- a) Moški
- b) Ženska

2. Starost:

- a) 18 - 25
- b) 26 - 35
- c) 36 – 40

3. Dokončana stopnja izobrazbe:

- a) Srednja šola
- b) 1. stopnja izobrazbe – dodiplomski študij
- c) 2. stopnja izobrazbe – podiplomski študij
- d) 3. stopnja izobrazbe – doktorski študij

4. Ali ste zaposleni?

- a) Da
- b) Ne

5. Znesek mesečnega dohodka (v KM):

- a) Manj kot 800 KM
- b) 800 - 1.200 KM
- c) 1.201 - 1.500 KM
- d) 1.501. - 1.800 KM
- e) 1.801 - 2.100 KM
- f) Več kot 2.100 KM

6. V katero navedeno skupino spadate?

- a) Samski
- b) Poročen/a
- c) Poročen/a z otroci

7. Ali želite zapustiti Bosno in Hercegovino?

- a) Da
- b) Ne

8. Ali želite začeti novo življenje v tuji državi?

- a) Da
- b) Ne

Potisni (PUSH) dejavniki

Ocenite naslednje push factors (dejavnike za odhod iz BiH) na lestvici od 1 do 5 (Likertova lestvica; 1 je najslabši rezultat, 5 je najboljši rezultat). Za vsako posamezno trditev anketiranec izrazi stopnjo strinjanja ali nestrinjanja, praviloma: "Sploh se ne strinjam", "Ne strinjam se", "Nimam mnenj", "Strinjam se", "Popolnoma se strinjam".

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Nizka plača.

- 1. Sploh se ne strinjam
- 2. Ne strinjam se
- 3. Nimam mnenj
- 4. Strinjam se
- 5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Strah pred vojno, negotovostjo in socialnimi nemiri.

- 1. Sploh se ne strinjam
- 2. Ne strinjam se
- 3. Nimam mnenj
- 4. Strinjam se
- 5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Korupcija v vseh sferah družbe.

- 1. Sploh se ne strinjam
- 2. Ne strinjam se
- 3. Nimam mnenj
- 4. Strinjam se
- 5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Brezposelnost.

- 1. Sploh se ne strinjam
- 2. Ne strinjam se

3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Nerešeno stanovanjsko vprašanje.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Nizek življenjski standard.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Slabe gospodarske razmere v državi.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Boljši izobraževalni sistem v tujini.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Slabo vzdušje na trenutnem delovnem mestu.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Želja po spremembi v življenju.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Večja varnost in svoboda.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

## 12. Dejavniki potega (PULL)

Ocenite naslednje pull factors (dejavnike, ki pritegnejo ljudi, da gredo v tujo državo) na lestvici od 1 do 5 (Likertova lestvica; 1 je najslabši rezultat, 5 je najboljši rezultat). Za vsako posamezno trditev anketiranec izrazi stopnjo strinjanja ali nestrinjanja, praviloma: "Sploh se ne strinjam", "Ne strinjam se", "Nimam mnenj", "Strinjam se", "Popolnoma se strinjam".

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Višja plača v tuji državi.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Boljša tehnologija v tuji državi.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Višja raven življenja v tuji državi.

1. Sploh se ne strinjam

2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

Glede omenjenega dejavnika na lestvici od 1 do 5 ocenite njegovo zastopanost pri vaši odločitvi za odhod iz BiH: Bolj stabilna politična situacija v tuji državi.

1. Sploh se ne strinjam
2. Ne strinjam se
3. Nimam mnenj
4. Strinjam se
5. Popolnoma se strinjam

### **Appendix 3. Survey questionnaire in english - appendix 3. Survey questionnaire**

Since migrations over the years, especially in the last few years, have caused a brain drain in the world, as well as in BiH, I wanted to examine the reasons for it by creating this questionnaire. In this questionnaire you will confront with a series of questions, starting with the basic ones: gender, age, degree, employment, income, marriage status and willing to leave BiH. In other part of the questionnaire, I am going to check the reasons for your possible living in another country, or, so called, push and pull factors.

1. Gender:

- a) Male
- b) Female

2. Age:

- a) 18 – 25
- b) 26 – 35
- c) 36 – 40

3. Last completed degree:

- a) High school
- b) 1<sup>st</sup> cycle of study – Bachelor
- c) 2<sup>nd</sup> cycle of study – Master
- d) 3<sup>rd</sup> cycle of study – PhD

4. Are you employed?

- a) Yes
- b) No

5. Amount of monthly income (KM):

- a) less than 800 KM
- b) 800 – 1.200 KM
- c) 1.201 – 1.500 KM
- d) 1.501. – 1.800 KM
- e) 1.801 – 2.100 KM
- f) over 2.100 KM

6. Which of the following categories do you belong to?

- a) Single
- b) Married
- c) Married with kids

7. Do you want to leave Bosnia and Herzegovina?

- a) Yes
- b) No

8. Do you want to start your life in a foreign country?

- a) Yes
- b) No

9. PUSH factors

Rate the following push factors (factors for leaving BiH) on a scale of 1 to 5 (Likert scale; 1 is the worst score, 5 is the best score). For each individual statement, the respondent expresses the degree of agreement or disagreement, as a rule: "I do not agree at all", "I do not agree", "I have no opinion", "I agree", "I completely agree".

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Low salary.

- 1. I do not agree at all
- 2. I do not agree
- 3. I have no opinion
- 4. I agree
- 5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Fear of war, uncertainty and social unrest.

- 1. I do not agree at all
- 2. I do not agree
- 3. I have no opinion
- 4. I agree
- 5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Corruption in all spheres of society.

- 1. I do not agree at all
- 2. I do not agree
- 3. I have no opinion
- 4. I agree
- 5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Unemployment.

- 1. I do not agree at all
- 2. I do not agree
- 3. I have no opinion
- 4. I agree

5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Unresolved housing issue.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Low standard of living.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Poor economic situation in the country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Better education in a foreign country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Bad atmosphere at the current job.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: The desire for change in life.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Greater security and freedom.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

## 12. PULL factors

Rate the following pull factors (factors which attract people to go in a foreign country on a scale of 1 to 5 (Likert scale; 1 is the worst score, 5 is the best score). For each individual statement, the respondent expresses the degree of agreement or disagreement, as a rule: “I do not agree at all”, “I do not agree”, “I have no opinion”, “I agree”, “I completely agree”.

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Higher salaries in a foreign country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Better technology in a foreign country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: Higher standard of living in a foreign country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree

Regarding the mentioned factor, on a scale of 1 to 5, rate its representation in your decision to leave BiH: A more stable political situation in a foreign country.

1. I do not agree at all
2. I do not agree
3. I have no opinion
4. I agree
5. I completely agree