UNIVERSITY OF LJUBLJANA

SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

A SURVEY OF CAUSES FOR BRAIN DRAIN AND EMIGRATION OF YOUTH FROM NORTH MACEDONIA

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Ljubljana, June 2022   Aleksandar Simonovikj

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The undersigned Simona Dimitrova, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEB LU), author of this written final work of studies with the title "A survey of causes for brain drain and emigration of youth from North Macedonia, prepared under supervision of Professor Tjaša Redek

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

BEEPS - Business Environment and Enterprise Performance Survey

CPI - Corruption Perception Index

EASO - European Asylum Support Office

ECB - European Central Bank

EEA - European Economic Area

ETF - European Training Foundation

EU - European Union

FDI - Foreign Direct Investment

GDP - Gross domestic product per capita

GVC - Global Value Chain

ILO - International Labour Organization

IMF - International Monetary Fund

MPI - Migration Policy Institute

NEET - Youth not in employment, education or training

NELM - New Economics of Labour Migration

OECD - Organisation for Economic Co-operation and Development

PRIO - Peace Research Institute Oslo

SME - Small and Medium-sized enterprises

SPSS - Statistical Product and Service Solutions

UNCTAD - United Nations Conference on Trade and Development

UNHCR - United Nations High Commission for Refugees

USA - United States of America

VAT - Value Added Tax

WHO - World Health Organization

INTRODUCTION

Today, many of the world's capital cities are absolute metropoles with a mixture of nationalities, religions and cultural groups that are synchronized, cooperative and are exchanging practices, habits and norms. Almost everybody wants to hear the expression 'a little bit of everything' since it offers us new music styles, different cuisines, extravagant banquets. This is a rich societal mix of opportunities to taste.

Has it ever crossed your mind how would the world look like without people being able to leave their home countries? How your own neighborhood would look like? History showed us that migration has impacted almost every aspect of humanity as we know it today. Migration has impacted the style we wear, the food we like and enjoy, and it became the backbone of many countries worldwide. It brought to us the inventions we enjoy today, the architecture that we admire every day on the way to work. If we take a road trip through history, we will see the effects of migration on the world we know today (Europeana collections, 2017).

Human capital has always been perceived as the backbone of every country, and the countries have always tailored their policies in education and improvement of skills to accommodate and improve its own human capital. The emigration or the decrease of the human capital which is highly educated occurs through the phenomena called brain drain.

For North Macedonia emigration doesn't represent a new phenomenon. As a poorer country it has always been linked to emigration and remittances as a process of survival. But in the 1960s most of the people that emigrated were not highly educated people whose motivation for emigration was strictly financial. In the recent years especially in the last 20 years, North Macedonia has been facing with the biggest problem for its economic development, brain drain. The brain drain and the emigration of youth has been mostly because of the labour market conditions and the high unemployment, especially the youth unemployment. These issues have been addressed by the authorities with different types of policies, but the issue has become much more severe in recent years as unemployment rates have dropped to record low and the migration has been growing rapidly which endangers the economic development of the country.

The goal of the master thesis is to examine the trends, the causes and consequences of emigration and "brain drain" in North Macedonia, with particular interest on explaining:

- The trends in emigration and brain drain in North Macedonia, especially with regards to youth;
- The causes of emigration and brain drain in North Macedonia, especially with regards to youth relying on detailed micro (own survey) data;

-     Analyse the possible consequences of emigration and brain drain on future development of North Macedonia.

The purpose of the thesis is to prepare suggestions for policymakers in order to diminish the negative trends and negative long-term development problems related to emigration and brain drain.

We consider two main research approaches: 1) deductive – where we develop a theory and hypothesis and then we design a research to test those hypothesis; 2) inductive – an approach where first the data is collected and then based on the findings of the data, the research theory is developed (Saunders, Lewis & Thornill, 2009). The approach of our thesis was deductive.

The research was guided by the following research questions (hereafter RQ):

-     RQ1: What are the theoretical causes and consequences of emigration and brain drain in developing countries?
-     RQ2: What were the migration trends in North Macedonia in general, with specific sub-questions:
-     What were general trends of emigration in North Macedonia?
-     What were the trends of emigration among youth, what was their structure?
-     How does North Macedonia compare to other countries in the region with regards to emigration and brain drain?
-     RQ3: How does existing literature explain emigration surge and brain drain in North Macedonia, what are the specific reasons identified and what are the possible consequences already identified?
-     RQ4: What are the causes of emigration among the youth in North Macedonia at the moment? Answering this research question will be the core part of the master thesis and will comprise a large survey among Macedonian youth.
-     RQ5: How could the state limit the negative consequences of emigration and promote stable development of the country?

The data that was used was primary and secondary data. Secondary data was collected from different sources: literature published on variety of books, research reports, scientific articles, reports of different international institutions, magazines and also official data from government publications in North Macedonia, as well as the data from the statistical offices of North Macedonia and the preferred countries of migration for Macedonian citizens. For the collection of the primary data, a questionnaire was prepared on Google forms and it was dispersed using the snowballing method through social media where 172 responses were collected. The analysis of the questionnaire data was done with SPSS.

The biggest limitation of data for the thesis was the lack of information for brain drain from the statistical office of North Macedonia. Because of the method of collecting data where people need to fill paperwork and surrender it to the proper authorities for them to be considered as emigrants, the official data presented a positive net migration. Other limitations were in the number of respondents because the group that was targeted were people between the ages of 18-45, with good understanding of English language and well educated or still in higher education.

The rest of the thesis is organized in the following manner. Chapter one consists of the theoretical approach and literature review of the topic regarding types of migration, push and pull factors of migration, positive and negative consequences of migration. Chapter two consists of quantitative data with in detail explanation of the most important indicators regarding the economic development of North Macedonia. Chapter three consists of quantitative data on the quality of life and population development in North Macedonia and the presentation of the first data from the census in 2021. Chapter four explains the methodology and the questionnaire responses, the results and findings which confirm the hypothesis. Chapter five gives policy recommendations regarding the prevention of brain drain in North Macedonia, followed by the conclusion of the thesis, references used and appendices.

1 THE THEORY OF MIGRATION

1.1 Definitions and types of migrations

We distinguish three components of population change: mortality, fertility and migration (Thet, 2012). When the term migration is being discussed the reasoning behind it it's not so straightforward. The wide accepted opinion has drawn a parallel between migration and long-term movement. Actually, it is only a small part of the general notion of movement, including a broad diversification of the forms and varieties of mobility, individually capable of transforming into somewhat different which is a result of activities that are in most cases progressively urged by the institutions. What is chosen to be outlined as migration is often subjective and taking current events in consideration (Siddique, 2001, p. 87).

In broader terms there are two major types of migration: internal and international migration (Bhende & Kanitkar, 2006). When discussed the term internal migration it is referred to the move from one part of the country to another. By international migration it is considered the move from one country to another meaning crossing the national borders between the states. Many researchers disagree with the separation between the two types and they claim that they represent the same process and as such should be regarded and examined together (Skeldon, 1997, p. 9).

Border crossing does not imply by default the process of migration. Most of the visitor population are tourists or business travelers with no intent of permanent reallocation. Migration is generally considered when someone is a resident in the host country for a minimum period of 6 months up to a year (Castles, 2000).

According to Stephen Castles (2000) the following groups of international migrants are distinguished in the following matter:

1. *Short-term labour migrants* (known as guest-workers): limited time migration (couple of months to couple of years) in search for better employment and wages so they can send money to their families back home (remittances).
2. *Special skill set and business migrants:* people with special or unique qualifications as engineers, consultants, managers or similar, who usually move within their own international corporations and organizations (these people are also known as expatriates), or people that move because they are in high demand for their skill set which is deficient in foreign countries. A lot of countries have special programs for those types of migrants with special skills set to encourage them to relocate to their country.
3. *Illegal migrants* (or known as undocumented migrants): people who usually have entered a country with the intention of finding employment, without acquiring a permit. A lot of the migration flows are consisted of illegal migrants. In few of the cases, immigration countries allow on purpose for such a migration to occur, because it helps with recruitment of labour as a reaction to higher employer requests and especially in the developed countries because it helps to keep down the price of labour.
4. *Refugees:* in accordance with the 1951 United Nations Convention in relation to the Status of Refugees, a person is referred to as a refugee when she or he is residing outside of hers or his country of nationality and doesn't have the chance of returning home because of a 'well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion'. The signatories to the Convention carry out their commitment to protect refugees by allowing them to enter and granting temporary or permanent residence status. Refugee organizations, primarily the United Nations High Commission for Refugees (UNHCR), seek to make a clear distinction between refugees and migrants, although they have many characteristics in common regarding the social needs and cultural impacts in their designated country (UNHCR, 1997).
5. *Asylum-seekers:* These are separate group of people who do not satisfy the conditions to be called refugees by the 1951 Convention, but who are leaving their home countries for their own protection. Commonly, in countries with ongoing conflict it is very hard to make a difference between the movement of people because of prosecution and movement of people because all of their necessary conditions for normal living have been destroyed. There is a linkage between the economic and political drives and the ongoing violence as a result of the

fast processes of de-colonization and globalization, which were generally governed by the strong and developed countries (Zolberg, Suhrke & Aguayo, 1989).

6. *Forced migration:* This group incorporates not only the refugees and asylum-seekers who are a result of forced migration, but also the movement of people because of natural catastrophes and also because of huge expansion projects like new factories, power plants and so on.

7. *Family members* (referred to family reunification migrants): This group addresses the migration that brings families back together. A lot of countries like Australia, Canada, USA and mostly the EU states have acknowledged the right of family reunion for legal migrant. There are also other countries, mostly the ones with contract labour systems, that reject the rights of legal migrants for family reunification and in those cases family members may choose to enter as illegals.

8. *Return migrants:* persons who return to their home countries after spending some period in different country. Return migrants are considered to be mostly positive for the country because they often bring home acquired capital and skills that may be used as a push for economic development. A lot of countries are adopting special programs for targeting these types of migrants. There are cases of some governments especially in the developing countries that are not so ecstatic about the return migrants, because they believe that their influence can lead to political changes.

Almost none of the categories mentioned above are centered on the race or ethnical origin and there are some countries that have admitted about discriminating their migrants based on race or ethnicity. There are some countries that serve as exception because they prefer the migrants who they consider that are returning to their ancestral ground. Some of the examples are "patrials" to Britain, Jews to Israel, Nikkeijin from Brazil to Japan or Bosnian Serbs and Croatian Serbs to Serbia. Until the 1960s the biggest migrant destinations like the USA, Canada and Australia had based their selection process on national origin and race. Even though some policies for selection that are created based on economic, social or humanitarian character, they still may have undercover biases based on race and origin. So, when discussing the capability for settlement and the skills, language or possession of capital requirements it is perceived that people from some countries are deemed more favourable in comparison to others.

According to John Salt (2001) in the traditional literature, international migration was perceived as mutual benefiting relationship between people or families moving for the opportunities of better life and employment and the government as a regulator for entrance and attainment of its citizenship (Siddique, 2001, p. 88).

1.2 Causes of migration: push and pull factors

The push-pull model that has been used for explanation of the causes of migration is one of the most generally known academic concepts when referring to migration research. In its simplest form, the model points out and explains the negative or so-called push factors that causes the emigration of people from their home countries and on the other side the positive or so called pull factors that explains the attraction of the immigrants to their destination countries. The push factors contain the economic, social and political conditions in the developing countries, whereas the pull factors consist of the factors that comprise the comparative advantages of the destination countries. The size and the direction of migration is believed to be determined by the optimal combination of the pull and push factors (Portes and Böröcz, 1989). Table 1 presents the pull and push factors that are going to be elaborated further.

Table 1: Classification of push and pull factors

Push factors	Pull factors
Macroeconomic factors (poverty, unemployment)	Macroeconomic factors (more job opportunities, higher income and welfare)
Socio-economic factors (poor education, poor medical services, low government safety net)	Socio-economic factors (quality of education, quality of healthcare, government safety net)
Political factors (state prosecution, lack of political liberties, war)	Political factors (lower level of corruption, democracy and political liberties)
Cultural factors (ethnic tensions, discrimination)	Cultural factors (higher inclusion, low level of discrimination on ethnicity)
Demographic factors (higher education, overqualification)	Demographic factors (demand for high-skill workers)
Environmental factors (floods, pollution, water quality)	Environmental factors (quality of air and water, floods and other events protection and prevention)

Source: Own work.

1.2.1 Macroeconomic factors

Various additional macroeconomic factors influence the decision of migrating despite the income measured by GDP per capita. Most important factors are: development level, poverty, unemployment and relative prices. The accessibility of job opportunities in the host countries, the different job opportunities between country of birth and country of destination, typically representative by the employment rates or growth of the economy, are constantly known as an important macro micro level factor which have an impact on the decision of the people that migrate.

Restraining conditions like individual poverty and poor economic conditions may not allow people to migrate even if they wish for bigger salaries in the targeted countries (Czaika and de Haas, 2012).

Relative prices are also an important macroeconomic factor. Relative prices between the countries and the purchasing power are directly affected by the exchange rates. A more dominant foreign currency which is comparative to the currency in the place of birth, will absolutely let the people buy more goods and services in their origin countries, which will increase the net benefit of migrating. On the other way around, if the currency in the country of origin is strong that will shrink the worth of incomes earned outside of the country. Migrant's decision is under effect by the exchange rates which have their influence regarding salaries and remittances (Simpson, 2017).

The instability of the earnings determined by the business cycles, for instance the macroeconomic oscillations, or changing the employment opportunities can act as a push factor and provoke emigrants to leave their country of birth, or act as a pull factor and give incentive to immigrants to move to the destination countries. Of course, that the high unemployment in the country of birth can be a push factor. For emigrants, actually the destination countries are the ones with low unemployment (Hunt, 2006). On the other hand, when the economic recession began, high unemployment rates in the destination countries discouraged the migration of people. This was obvious during the global financial crisis from 2007 till 2009 (Simpson, 2017).

1.2.2 Socio-economic factors

The social push factors are often related with the economic factors. Some of the social push factors are connected with the deficiency of appropriate medical services in the countries of birth, also the absence of free and inexpensive education of an adequate standard, or everything else that is included in this category as well as the high crime and corruption rates in the countries of birth. The emigrants will find these factors more acceptable, with an improved and healthier standard of living in the destination country. Most of the time people are willing to emigrate in countries where they already have family ties and friends which are very important when deciding to leave the country of origin (Science Trends, 2017).

Real and predictable wage discrepancies and disparities in living standards among the countries of birth and the countries of destination arise as an important factor in determining the social movement, both internal and international, as originally planned, under variable expectations (Lewis, 1954).

Taking into account the wide acceptance on the importance of different wages when describing international movements, the disparity in wages earned between the countries is also dependent on more variables. The broader analyses have shown that disparities in wages, when in combination with different factors such as the skills a migrant possesses, good job prospects in the targeted country and the already established immigrants' networks might have a greater impact on emigration (Neto & Mullet, 1998).

Though, the significance of the factors usually differs and depends on more variables, and it wouldn't be the same between the migrants which for instance have different skill levels or household circumstances. For example, highly skilled people that emigrate might answer in a different way to increasing growth rates in the host countries, in comparison to the low-skilled (Docquier, Peri & Ruyssen, 2014); taking in consideration issues like the availableness of accommodation, also the living standards for the families in the host country might have an impact on the family level decision besides the obtainability of job opportunity (Clark & Maas, 2013).

Combining and accepting the philosophies of the NELM concept with network and evolution theory, well-known academics would agree that the globalized world today with the help of the technological advancement, which made the communication much accessible, lead to more information about the host countries and their living standard through formal and informal networks, are crucial in determining individual expectations. The existence of different kinds of networks for the future emigrants and people that already have the immigrant status can count on as a source of information (while making plans for the expedition). This is a significant factor in determining the aims and incentives of the migratory paths or making them easier. Pertinent literature can show that immigrants networks can be of vital importance for choosing the host countries (Epstein and Gang, 2006). The significance of immigrant networks may differ subject to another factors, like the duration of potential community-based connections (loosing significance in the long term) and also off-putting migrant programs in the host countries, which can counterweight the positive influence of networks (Böcker, 1994).

Taxes, transfers, and the government safety net

Taxes and other forms of government transfers like for example, social benefits, unemployment insurance and so on are often considered as pull factors for attracting migrants instead as push factors, but they can serve as both. Looking at income tax for example it can lower the return a person expects from his working contribution and by doing so, it can reduce the net benefit that a migrant would expect to receive. That is why countries who have a progressive taxation system (where they tax bigger incomes with higher tax rates) may push away the arrival of high-skilled migrants because smaller net wages will diminish the motivation to emigrate. On the other hand, the low-skilled migrants because of their lower

wages will be taxed a lot less in these types of taxation systems, so their motivation for emigrating will increase. Recent studies have shown that emigration to countries with higher tax systems is lower (Geis, Uebelmesser & Werding, 2013, p. 825). Also, other forms of taxation can affect the choice to emigrate. A typical example is the consumption tax, or also known as sales tax, which if it's higher will yield higher cost of living, in particular for the low-income migrants, because it will increase the cost of emigrating. Likewise, the taxation on capital gain can prevent the investment from migrants who are seeking for investment opportunities.

The accessibility of social insurance programs has shown to have an effect on the decision for emigrating. Having the possibility and access to better health care systems as well as better education programs in the destination country will increase the net benefit of migration and will act as a powerful pull factor. Actually, when whole families emigrate it is often because they are looking for better education for their children in comparison to their home countries (Simpson, 2017).

Generally, the countries who provide considerable government transfers very often attract migrants and are known as "welfare magnets". The hypothesis of welfare magnet lies on the assumption that migrants will choose where to inhabit relying on the social care programs provided by the governments. Welfare potential receivables are considered as a substitute for the remunerations during the period a person is looking for employment. That is why these types of transfers will potentially attract distinguished types of migrants that will be qualified for receiving them. Nowadays, foreign governments are raising the bar for these types of transfers, including different factors affecting the decision for receiving them, such as the minimum period of time a migrant has been in the country before she or he can receive these types of transfers. That is why, immigrants will have to be employed for a certain period of time before being considered qualified to receive social benefits. The empirical research has shown surprisingly that is not always the case that generous social aid transfers countries will attract more immigrants (Pedersen, Pytlikova & Smith, 2008). Nevertheless, that is not the case for all types of migrants, because it looks like the migrants from the poorer countries will be highly motivated to move to a country with generous social programs.

1.2.3 Political factors

A relative degree of agreement on political factors can be seen as an important determining factor of migration more represented in the literature of forced and irregular migration. Conflict, violence, not feeling secure and politically stable and civil rights exploitations are recognized as important fundamental reasons of migration in some regions, when considering applying a specific approach regarding the context (EASO, 2016).

State Persecution

State persecution includes the harassment, prejudice and torture of individuals who have opposite opinions with their government, are members of a religious or ethnic minority. Since the situation in their country is insecure, they must migrate involuntary to country where the environment is more safe. When the migrants are outflowing to a democratic country because they are facing a kind of oppression in their home countries, they are asylum seekers (Castles, 2000). The Migration Policy Institute says that the country that actually accepted the highest asylum requests is the United Kingdom (555,310 or 15 percent of the entire world asylum applications in 2002). These sums which are remaining constant, are showing the increase in claims of harassments in countries like Somalia, Zimbabwe, Iraq, Afghanistan and China (Sciencing, 2018).

Lack of Political Liberties

The need for political rights, and widespread corruption system are acting as a push factor for the people who are in search for better conditions for living, and freedom. Despite the fact that they aren't mistreated in their origin countries, they are faced with fear for their own freedom and this is the reason why they are leaving. When the political situation is adverse, the economic conditions are expected to be poor. These are the reasons that cause the migration. As already mentioned, democratic countries are the right choice for these people where they can progress in their professions, achieve better education and feel free (OECD, 2009).

War

Many times, war or dictatorial (autocratic) authorities can be seen as a push factor of migrating. And because of this, migrants often choose another country of living to escape the political fight or more likely political harassment (Science Trends, 2017).

Looking back at the history, war was actually the main reason for the migration flows. Governments with their oppressive character somehow pressured the people to migrate and leave their home countries (increasing the net present value of migration). Otherwise, they would have lived in constant fear of being prosecuted. When a country has a corruptive system it's bad for the people who don't want to be involved in the bribery system, so their costs of doing business are increasing and they are pushed from their country and pulled into the destination countries which have well-known property rights and rules of law. Civil wars, disturbances and violating the human rights are recognized as a push factors (Hatton & Williamson, 2011).

Based on the National Geographic' Earth Pulse review about 42 million people globally migrate being forced during war. War and the armed battle have various reasons, but all of

these issues are impacted by the politics. Typical countries for migration are United States, United Kingdom, Canada and Australia, but the people are also migrating inside their own geographic regions (National Geographic Society, 2010).

1.2.4 Demographic factors

The characteristics of future migrants are remaining an essential part of the explanation who is migrating and who's not. It's worth mentioning that there is a difference between the emigrants who leave their home country because of work motives and those ones who leave their country for family reunion. Each one of the people that is migrating is different and unique looking at his/her demographic characteristics, including age, marital status, the education that he/she has accomplished, etc. Most of the migrants are often younger age, so they will be able and will have time to determine the anticipated benefits of migration. Usually, in the history labour migrants were working-age men, but, as the time pass migrant flows are growing involving the women and families which are looking for employment in a foreign country, or sometimes join and get together with the family which is by that time in the destination country. Marital status is crucial too, since people that are married are unlikely to leave their country by themselves and there is a possibility for fast return back home (Simpson, 2017).

The motives that drive the migratory movement decisions may distinguish regarding the migrant's educational status and competences. Actually, there are significant disparities concerning the present migrant flows based on the gender, country of birth, and skill status. For instance, temporary revenue ups and downs are pulling the male immigrants with low level of education into the USA, while long-term revenue tendency is pushing the male immigrants with low level of education away from their countries of birth (Simpson & Sparber, 2013, p. 414). Furthermore, typical studies of researchers found out that migrants are in better health than people that are not migrating in the country of birth and the residents in the destination country (Kennedy, Kidd, Mcdonald & Biddle, 2015, p. 317), and rates of migrating are greater between population who talks the same language as the destination countries. Taking this in consideration - migrants talking the same language and being healthier, might diminish the negative effects, given that moving into the new culture and work is simpler.

According to Simpsons (2017) in general, almost every research of migration, acknowledges demographic characteristics in the explanation of the people that emigrate. The group of characteristics mostly differs considerably over time and between particular migrant flows. In the near future, the language barrier is not considered to be an issue because it is presumed that English will be the dominant language.

1.2.5 Other factors

Cultural factors

Unstable political environment as an effect of culture mixture may cause for people of different cultural attachments to relocate themselves from one part of the country to another or maybe even to leave the country. The effect of a war or ethnic conflict can cause different ethnic groups to be forced to share their habitat. The inflow of different ethnic group can dislocate another ethnic group. Also, governments can play a key role in forcing certain culture groups to relocate so they can have better political influence by only influencing one or few cultural groups (Sciencing, 2018).

Environmental factors

Environmental push factors are becoming more and more important in recent years. People are moving to countries or areas where there are less life-threatening climate circumstances. Another environmental motive for emigration contains an effort to keep away from or to escape the natural catastrophes like earthquakes, hurricanes, tsunamis, and so on (OECD, 2009).

In the foreseeable future, climate change might boost even bigger mass influx. World Bank (2018) review shares the information that more than 143 million people can turn into potential "climate migrants", pushed from their home countries by droughts, floods and water shortage. Actually, lot of people are migrating and this isn't just because of one factor, but mixture of various motives for migrating affected by few factors, since these factors are often mutually connected (Science Trends, 2017).

1.3 Development and economic effects of migration on the country of origin

The universal opinion has been fluctuating among good and unfavourable views – a paradigm which was explained as the migration and development 'pendulum' (de Haas, 2012). A positive view from the 1960s yielded a pessimistically views from the mid-1970s forward. With the beginning of the new millennia, the prevalent mood was seen as an optimistic conviction in the developed benefit of migration, reaching its climax in the 2009 Human Development Report. Now the tendency is more inclined to the pessimistic perspective (Gamlen, 2010, 2014; UNDP 2009).

In the following, based on a PRIO paper by Carling and Talleraas (2016) the well-known concept known as migration-development connection suggests that there is an existence of an interconnected connection because migration affects development as well as development affects migration. When considering political action, it must be associated to the connection as a whole.

Migration and its flows and the process of development affect each other in a more that one way. This collection of connections is known as the migration-development nexus (Faist, 2008; Sørensen, Van Hear & Engberg-Pedersen, 2002). This so called "nexus" has been the reason for two big research and policy debates, which are shown below in Table 2.

Table 2: Answers to the two key questions in the migration–development nexus

Key question	General conclusions from academic research	Policy implications
1. How does development affect migration?	Development tends to increase migration rates until countries reach a relatively high income level	Reducing migration through promoting development is a strategy marred with contradictions
2. How does migration affect development?	Assessment of the overall effect varies substantially	Policy interventions can potentially increase the development benefits of migration

Source: Carling & Talleraas (2016).

Note: 'Emigration' refers to out migration and 'development' concerns the countries of origin.

Looking at the answers of the two important questions it can be observed that they are in nature more complicated than the ones the tables provides. The results are often depended on circumstances, or what is indicated by "development" and what is the shape of "migration". Nevertheless, overall findings are significant for policy development.

The trends that will be mostly addressed are in concern with the second question as there is more focus on the effect that migration has on development. These effects that have been considered so far are representing the out-migration and they do not only affect migration in different ways, but also in a contradictory manner. For example, the migration of the female gender may cause some issues in the short run, but it can have a beneficial impact in the gender relations in the long-term.

It seems that the changes in the perspective of the effect of migration on development were highly influenced by changes in the economic and political atmosphere. This shouldn't come as a surprise because it is almost impossible to outline the whole effect of migration on development (Carling, 1996). In occasions when the view on immigration was viewed as problematic, the negative perception was put on the development effects. The examples we've witnessed are the oil crises in the 1970s and more recently in the aftermath of the global financial crisis from 2008 (Gamlen, 2014). This negative tendency was also highly affected by the Mediterranean migration and the current refugee crisis that began in 2015. There is a

disagreement between academics and researchers about how to direct the empirical research so they can inform the overall assessment and accordingly policy implications.

Even though the migration and development topic was considered to be an area of interest to researchers and policy makers since the 1960s, it reached its climax on the international development program in the beginning of the 2000s. In those times there were various other elements that contributed, besides the already ongoing immigration to Europe and North America. Also, the migration and development was seen as a possibility from the international community to tackle the migration without addressing the more quarrelsome matters that were wraparound the migration as a separate issue. This gave the opportunity of establishing the 'Global Forum on Migration and Development' as for example a 'Global Forum on Migration' itself would have been considered unrealizable at that point in time.

In this context, most of the political debate on migration and development was not involved directly regarding the flow of migration, but it was somewhat concentrated on enhancing the migration effect on development. Looking at the case of Europe and her connection with the surrounding regions, the migration management targets and the accompanied development concerns were considered in a thorough but also fragmented approach (Carling & Talleraas, 2016).

Through the century, international emigration has increased significantly and has taken shapes that were not expected by the authorities and planners and has numerous consequences on economic development (summary of consequences in the Table 3).

Table 3: The consequences of migration for economic development of the country of origin

Positive	Negative
Remittances	Brain drain
Lower unemployment	Low reintegration of return migrants
Transfer of know-how	Reduction in labour supply

Source: Own work.

These consequences will be discussed further in detail with focus on the two consequences with the biggest impact in our opinion: brain drain and remittances.

1.3.1 Positive consequences of migration on development

Remittances

For the countries of origin, the benefit of sending migrants abroad is located in remittances. The remittances represent capital that is earned abroad by the emigrants and send to their

families back home in order to provide support and conditions for normal life. Based on the World Bank report, remittances totaled $ 520 billion globally in 2012, from which $401 billion was money sent into the developing countries (2013). These numbers only represent the money sent via formal channels, so it is believed that the total sum of remittances is quite bigger that the official numbers indicate. The World Bank in their disclosure points out that the remittances sent via informal channels would probably add about 50 per cent to the worldwide flow of remittances (UNCTAD, 2011).

The effect of remittances that were sent to the developing countries and their view as a direct development aid where one of the factors for researchers to connect migration and development. At first, it was stated that the remittances represented a bigger money inflow than aid – being considered as a fact that stressed the economic significance of migration (Gammeltoft, 2002).

For most, the resolution for migration is a joint family decision. The household will have to decide if they will move as an entire unit, or if they will have to rely on a single member from the family. Looking at the emigration from this perspective it can be classified as a type of insurance from uncertainty regarding possible macro and micro shocks. The transfers in the form of remittances are classified as an insurance policy for migrant households. They enable the emigrants who work abroad with the possibility of sending part of their earnings to their families. On the other hand, the households and families are often the main source for help in financing the initial cost of moving that the emigrant worker faces. Families back home are usually driven by the insurance that working abroad gives to them, whether is in the form of smooth transition through bad macroeconomic periods or through cash and cash equivalents transfers that they will get from the family migrant worker. In general, the migration can be used as an insurance on the household level that can help ease the transitory shocks a family will face and provide steady income inflow to the family. This will potentially lead to an increase to the net benefit of migrating. In most of the families from the poorer countries, remittances represent a custom way and are viewed as a big part of family income (Simpson, 2017).

From a recent UNCTAD report the following can be concluded:

-    Remittances are regarded as consistent and anticipated when in comparison to different financial flows and they are counter-cyclical acting as a shock absorber against economic crises. When we are facing conflict or post-conflict circumstances, remittances can act as a vital source for survival, support, recovery and rebuilding. The primary function of the remittances is to enable normal conditions for living and they are normally spent on consumption goods financing indirectly the small business of the local communities. The biggest share of remittances is spent on house constructions, health care and education,

together with savings in banks, and they generate the biggest employment opportunities in these sectors. Furthermore, they contribute with their foreign exchange earnings, which can stimulate economic growth by improving the credit rating of the country and allowing bigger access to international capital markets (UNCTAD, 2011).

- Regular bank transfers of remittances are needed, or else the remittances will find their way through irregular or for a lot of migrants' conventional way in the form of cash. Money that are actually going through the banks can be more beneficial for making an investment than cash payment. For this kind of transfers to come to life there is a need for reasonable exchange rates, low bank fees and accessible financial services both in the country of destination and the country of origin. The native country should plan an investment programs and special regulations, so the migrants that are sending the remittances are willing to establish companies and are interested in infrastructure projects at home. These types of schemes are not always successful like the example of Turkish migrants setting up companies in Turkey in the 1970s (Castles, 2000).

Lower unemployment

Countries that are importing labour and countries that are exporting labour both often seek to accomplish temporary goals. Destination countries are worried with gaining a low-cost labour workforce which is flexible. While countries of origin are worried with creating work for an under used workforce and with receiving the highest available amount of worker remittances (Castles, 2000).

Transfer of know-how

The transfer of know-how raised future challenges for society and political leaders globally. One of the crucial questions for countries of birth is if migration helps or impedes development. Emigration might impede development by losing the skilled people (known as 'brain drain'), eliminating the energetic young personnel and lowering pressure for social development. Emigration usually includes allocation of the most valued economic resource - human capital from poorer to richer countries. The family, regional communities and country of birth have carried the cost for the background of education of the migrant to his adult age and the destination country will get the benefit of this investment. Usually, emigrants are returning in their native countries since they have completed their work abroad and then the home country has the duty of being again responsible for them. It will be beneficial for the emigration country only if the potential transfer of capital from the workers abroad and the transfer of know-how on their return will outweigh the potential loss of human capital and the costs associated with that loss (Castles, 2000).

1.3.2 Negative consequences of migration on development

Brain drain

Brain drain has been defined by many as migration of skilled individuals within countries and abroad in search of usually better conditions of service and life. Kerr, Kerr, Özden, and Parsons (2016) in their paper argue about the great emphasis that has been put on understanding how the global allocation of human capital is occurring and how does this migration outflows further affect the poorer countries. The migratory forms that we are seeing today are the outcome of a complicated cluster of companies and other legal entities looking for rare talents, authorities attempting to control those flows using policies, and individuals searching for their best possible opportunities taking into consideration the restrictions levied on them.

In general, rates of international migration were steady at almost 3 percent during the last 60 years. But bellow this observed steadiness are clear persistent asymmetrical patterns, particularly with regards to human capital. There have been around 28 million highly-skilled migrants (the ones with at least one year of tertiary education) in OECD countries in 2010, showing a rise of approximately 130 percent after 1990. This remarkable increase is the outcome of various factors, like decreasing communication and transportation costs (especially air transportation costs) and the increase of international students through various exchange programs (Kerr, Kerr, Özden & Parsons, 2016).

Even though the OECD countries constitute for a fifth of the global population, they are the home of almost two-thirds of the world's high skilled migrants. Between the OECD destinations the allocation of migrants is even more distorted. The United States of America, The United Kingdom, Australia and Canada – all of them English speaking countries, represent the destination of choice for almost 70 percent of all high-skilled migrants migrating in the OECD countries. The United States itself is the destination country for almost half of all skilled migrants moving to the OECD countries. The obvious attraction to these states for the highly-skilled migrants has forced the other countries like France, Germany and Spain to make their policies even more welcoming for these types of migrants (Kerr, Kerr, Özden & Parsons, 2016).

Accumulation of world talented people in the countries is even clearer at the biggest level. The number of Nobel Prizes in Chemistry, Medicine, Physics, and Economics serves as a great example. From the period of World War II onwards the percentage of Nobel Prizes awarded to academics who were part of U.S. institutions is more than 65 percent. Only half of these academics were actually born in the U.S. Also, from all of these Nobel Prize winners, a third of them were immigrants, and more than half have been associated with U.S. institutions (Kerr, Kerr, Özden & Parsons, 2016).

The high-skilled migrants that are going to most of the destination countries are concentrated in specific fields or occupations. Taking some of the well-known destination countries as an example, we can see that the immigration population accounts for 57 percent of scientists in Switzerland, 38 percent in the United States and 45 percent in Australia. Also, non-natives represent for 27 percent of all physicians and surgeons and more than 35 percent of currently residing medical staff in the United States (Kerr, Kerr, Özden & Parsons, 2016).

The problem that arises is that the countries of origin have limited sources in finance and small educational capacities to train and replace the high-skilled migrants that have already left the countries. States that have pretty high percentages of people leaving the country to move to the OECD counties are usually small, island states with low salaries, like for example Guyana (93 percent emigration rate) and Haiti (82 percent emigration rate). It is obvious that there is an opposite correlation between the skilled labour emigration rates and the size of the country. The "brain drain" problem began to draw attention because of the problem of small and low-income countries facing very high emigration rates of highly-skilled people (Kerr, Kerr, Özden & Parsons, 2016).

The accumulation of highly-skilled immigrants in one place is explained with the motivations of high skilled people, no matter if they are immigrants or natives, to work together, because it creates a process of knowledge transfer and produces positive externalities as a side effect. These bundles of skilled people produce technology exchange, more in debt specialization of the labour market and better complementary inputs (Kerr, Kerr, Özden & Parsons, 2016).

The factors for agglomeration and their impact on economic growth make the distinction between the high-skilled and the low-skilled migration. Also, the impact of the companies and educational institutions is still not examined in accordance to their significance. The data needed to perform these types of research is now becoming more available, so the research possibilities are enormous (Kerr, Kerr, Özden & Parsons, 2016).

The following are considered to be the causes of brain drain:

- *Low salaries and inefficient working conditions:* these conditions in the country of origin are definitely a big motivation factor in brain drain. Majority of the high-skilled workers who aren't receiving the proper remuneration have the higher tendency to move to countries where their skill sets are better recognized by higher salaries and better working conditions. For example, in the more developed countries, researchers are provided with higher funding and all the necessary equipment for the requirements of their research and study. This has proven to attract the researchers from developing countries who are deprived of these conditions. As a result of these conditions big number of scientists in underdeveloped and developing

countries who do not have easy access to facilities and funds decide to move to developed countries which provide these facilities (Lowell, 2022).

- *Political instability:* this condition in the countries of origins shutters the people's confidence in their governments and future prospects for a better life. Affected people can be individuals who are experiencing difficulties as a result of their ethnic, cultural, religion belongings or because of being a member of opposition political assemblies in their home countries. Political turbulence can be linked to the failure of economic development. At the pressure of poverty, rapid population growth, diseases and environmental crisis, there is a production of volatile cocktail of insecurities which result into war, riots and different forms of political instability. This can lead to the displacement of large share of the population in the form of migrants, refugees or asylum seeker to other countries. According to Papadimitriou both internal and regional conflicts, which are often on the basis of religion and ethnicity, are precipitating unprecedented high levels of brain drain (Gordon, 1998).

- *Search for further quality education:* brain drain happens mostly in the process where individuals from undeveloped countries relocate to the countries in the need for further extension of their studies. As a consequence, most of these people opt not to return to their countries of origin but decide to live and work in the foreign countries after acquiring the necessary skills. Lack of proper educational systems has also resulted to the inadequacy of educational facilities and their offerings. This has pushed most of the young people to move to other countries where education systems are more advanced and the schools have proper and relevant facilities for education (Baruch, Budhwar & Khatri, 2007).

Discussing the consequences of brain drain, the following are considered as most important:

- *Reduction of human capital:* at first glance, when people move to other countries, they are more energetic and vibrant which plays a great role in the development of the economy of that country. In the long run it is evident that these countries grow in terms of development due to the availability of qualified and skilled individuals in different fields. However, the country of origin has a reduction in skilled personnel, so it lacks even further behind in terms of development and growth of the economy (Tevera, 2004).

- *Lower investments and growth:* logically, brain drain slows down the rate of investments in a country. This can be attributed to the fact that investments move with people (Gordon, 1998). Consequently, with higher percentage of people relocating to other countries, they also relocate their investments, thus adding up to under-development or under investment in the country of origin.

- *Reduced tax income:* with higher percentage of migration, consequently there is a reduction in the fiscal revenue in the form of personal tax and contributions that the country of origin is collecting. This consequence is even higher for brain drain, because usually these people receive higher salaries, which leads to higher reduction in fiscal revenue, especially if the

country of origin has a progressive taxation rate. The reduction is also visible in the collection of goods and service tax, as these people usually have higher incomes, they are keen to spend more on other goods and services. These represents even a bigger issue if the country of origin is dependent on this fiscal revenue to tackle down poverty (OECD, 2008).

Low reintegration of return migrants

In most of the emigration countries there is an absence of strategies for reintegrating the return migrants. A lot of those returnees are often upon returning with no idea about what they should do, and they have very few chances in finding employment and transferring the know-how they have learned abroad. That is why they often find themselves running some small turn-over business and are spending their earned capital on consumptions and dowries. Investment is not always a first choice. So, it is obvious that through introducing policies governments can help the returnees with guidance and counseling upon their return, so it will help the returnees to maximize the utilization of their hard-earned capital abroad and employ it in the best fit for themselves and the best fit for the growth of the whole economy. A key role in this mission needs to be carry out by the governments and the non-governmental agencies who can provide a guidance for successful reintegration. Also, a big role needs to be played by the social connections between the home and destination countries so the diaspora can still feel connected with the home country (United Nations, 1998). But most of all, the biggest role is played by the institutions in the home country, because if the returnees don't trust the institutions, they will never invest their hard earn money.

Reduction in labour supply

Even though the remittances provide financial support and stability to the receivers, they can also have a negative effect in the reduction of labour supply. Remittances can become a substitute for labour income, especially for low-skilled labour, which can lead to the increase in the 'reservation wage' - a minimum payment for which individuals will be willing to accept to work. This will decrease the incentives for work in the recipient households (OECD,2016). Senders of remittances do not have a control of how the remittances are being used and receivers want to make the flow of remittances as regular as possible. By not working, recipients become eligible for future transfers.

1.3.3 Economic effects of migration on the countries of origin

For some birth and host countries, migration has a several positive and negative economic effects. In particular cases, we can observe the counter effect of emigration, like for example the remittances. The outflow of capital from the destination country can have a negative effect on that economy, while the inflow of capital can cause a positive effect in the receiving country. But even if that is the case, they won't have the same significance because they are usually

used in different ways. This differentiation might be more obvious with regard to the international movement of human capital that migration includes: the impact of losing skilled people for the country of birth might be larger than the benefit to the host country (United Nations, 2004). In Table 4 there is a summarization of all the economic effects of migration on the country of origin.

Table 4: The economic effects of migration for the country of origin

Positive	Negative
Offers possibilities for work that are not available in the country of origin;	Losing the specialized high-skill workforce and with that lowering the quality of services provided;
Helps to release the pressure of the home market labour from oversupply;	Lower growth and productivity rates as a result of loss in human capital and the externalities associated with that loss;
Provides transfer of capital and foreign exchange through remittances;	The rate of return from investing in public education is lower;
The diaspora contributes in the form of technology transfer, capital and investments;	Emigration that is particular may lead to bigger income inequality in the country of origin;
Builds a bridge for increased trading between the country of sending and receiving;	Lower fiscal revenues as a result of lower income tax revenue;
Stimulates investments in the home country's educational system and individual investments regarding human capital;	The inflow of remittances may eventually be reduced with time.
Possible returnees can enrich the human capital, in the form of transfer of know-how and providing connections with foreign networks.	

Source: UN/DESA, (2002).

2 ECONOMIC DEVELOPMENT OF NORTH MACEDONIA

For a country like North Macedonia, to achieve a rapid and inclusive development it needs progress in a wide range of development reforms. Here we are going to identify the limitations for development in North Macedonia. We are going to take a look at three of the five pillars: People, Prosperity, Partnerships and financing, Peace and institutions and Planet which are a part of the Sustainable Development Strategy for 2030 of North Macedonia. We are going to take a look at each pillar and highlight the key areas where we think that the potential for development has not been achieved.

The data displayed, whenever relevant, compares North Macedonia with a set of economies used as a benchmark. The comparison is with countries from the region (Serbia, Albania, Kosovo, Montenegro and Bosnia and Herzegovina), the OECD and EU members. The data includes regional averages for the Western Balkans and OECD and EU members.

2.1 Macroeconomic situation

From the analysis of Figure 1 in the time frame from 1996-2020, it is visible that GDP per capita of North Macedonia has increased more than two times in value, in 1996 it was USD 2.333 to USD 5.917 in 2020. In comparison with the key destinations, all of them developed countries, it is visible that their GDP per capita has risen far more in real value, for example Switzerland USD 48.144 in 1996 to USD 87.100 in 2020, followed by USA USD 29.996 in 1996 to USD 63.206 in 2020, then by Australia USD 21.904 in 1996 to USD 51.680 in 2020. Looking at the EU countries, Austria has had USD 29.809 in 1996 to 48.588 in 2020, followed by Germany USD 30.485 in 1996 to 46.252 in 2020, then by Italy which had USD 23.081 in 1996 to USD 31.769 in 2020.

An important analysis of the data for GDP per capita has been made with a country who has become a destination of choosing for young migrants and has the similar population of North Macedonia. Also, the analysis shows the comparison between North Macedonia and Slovenia. The two countries have been a part of Yugoslavia, a federation of republics, and have gotten their independence in about the same time (1991). Figure 1 shows that in 1996 the GDP per capita in Slovenia was USD 10.815, while in North Macedonia it was USD 2.333. That is more than 4 times difference. When looking at the data up until 2008 (Global financial crisis) the GDP per capita of Slovenia was USD 27.595, while for North Macedonia it was USD 4.841. This shows that the gap has increased way further where Slovenia had almost 7 times bigger GPD per capita. When looking at the data in 2020, that gap has narrowed, mostly because Slovenia was affected way more from the Global financial crisis and their GDP per capita was USD 25.489 (still not the maximum from 2008), while North Macedonia's GDP per capita was USD 5.917, which still gives us the gap from more than four times bigger GDP per capita as it was in 1996.

As it is visible from the Figure 1 even though North Macedonia GDP per capita has been growing at a steady pace, it hasn't been growing enough for a developing country so it would be in a position to catch up with the developed countries.

Figure 1: Comparison of GDP per capita between North Macedonia and key destination countries in real US$ over 25 years
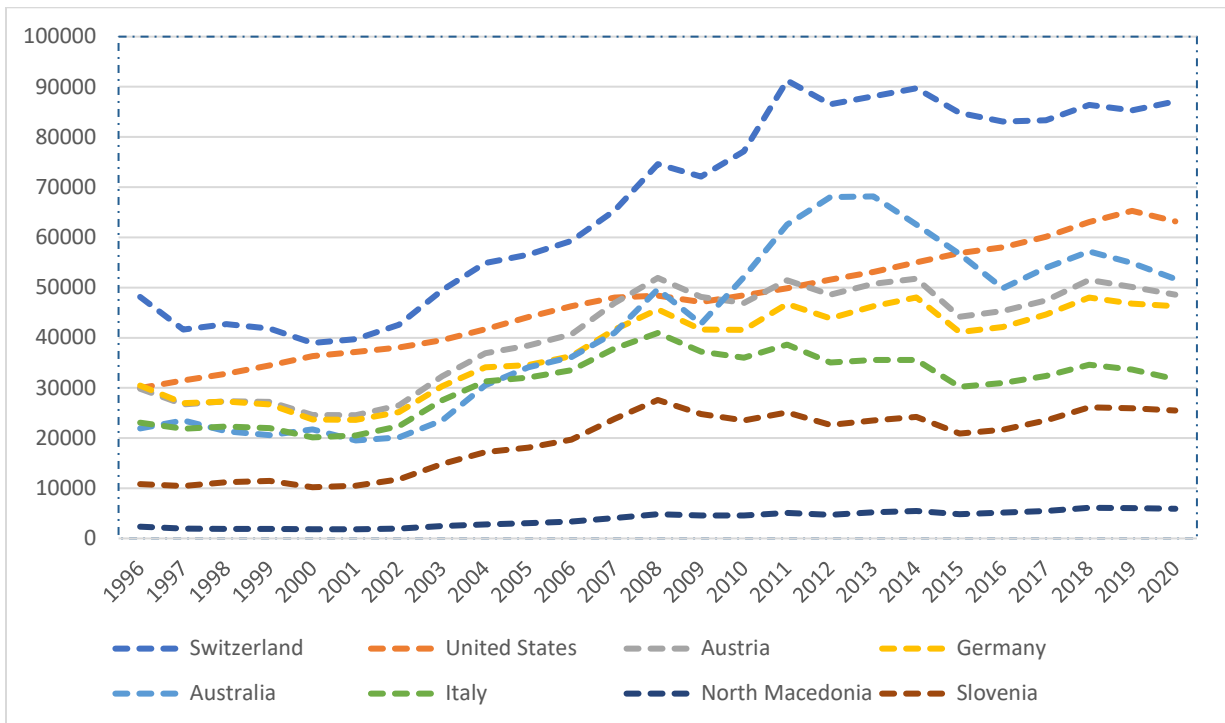
Source: World Bank (2022a).

In the past 20 years, the economy of North Macedonia has been growing at a steady pace, in average 2.9% per year. As expected, the growth in the period before the global financial crisis, was relatively higher (as shown in Figure 2), mostly as an effect of higher private consumption and investment (as shown in Figure 3), which came as a result mostly by private transfers and credit growth financed by deposits as well as higher FDI inflows in the finance sector. In the period between 2003 and 2008, the credit growth averaged 28% on annual bases, annual remittance growth averaged 26% and private consumption and investment were increased cumulatively by 35% and 49%, respectively (World Bank, 2020a).

After the crisis period, the GDP growth as a percentage has fluctuated a lot and weakened (as shown in Figure 2), but in same time it has become broader, with a strong share from exports and private investments (as shown in Figure 3). From the data its conclusive that between 2008 and 2018, exports of goods and services has increased by 2.3 times (as shown in Figure 3), and their participation in GDP almost doubled, from 33% to 60% (as shown in Figure 3). Investments went up by 66% in the period from 2009 to 2018 (as shown in Figure 3), mostly led by investments from the private sector, which now accounts for 80% of total investment. Public investment also had a big growth and provided a big push to the economy after the financial crisis (as shown in Figure 3) (World Bank, 2020a).

Figure 2: GDP growth in the period 2000-2020, for North Macedonia and average for EU, OECD and Western Balkans, in %
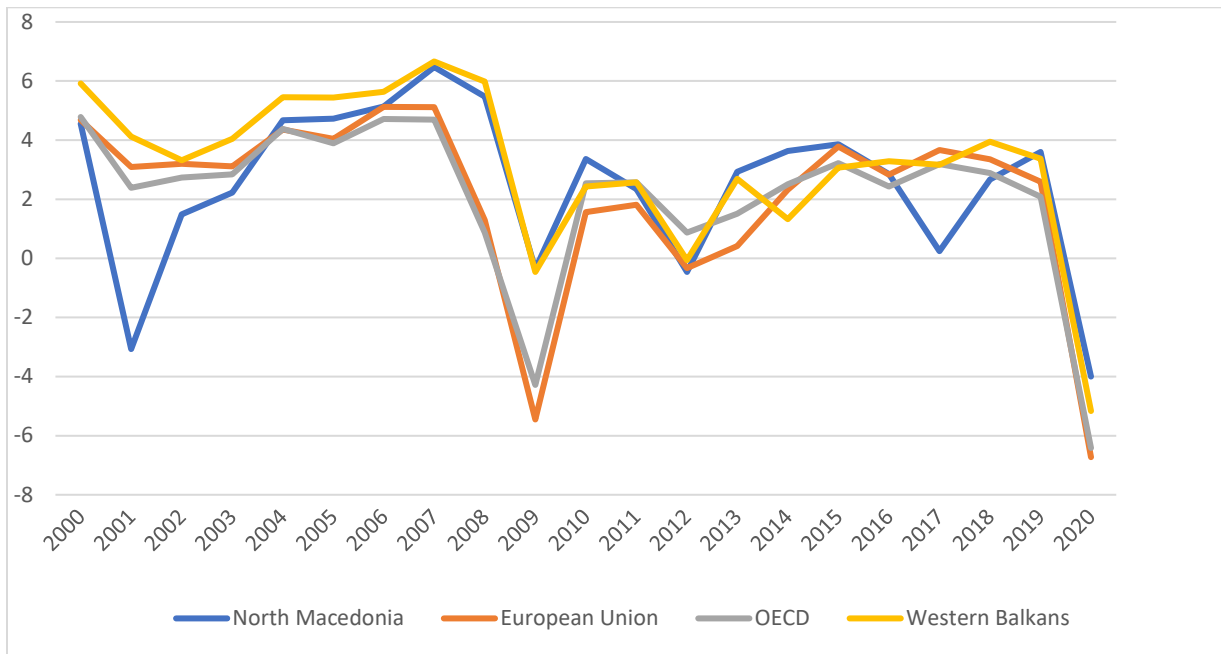
Source: World Bank (2020a); IMF (2020a).

Figure 3: Growth of components of GDP for North Macedonia in the period 1999-2018, 1999 as a reference point
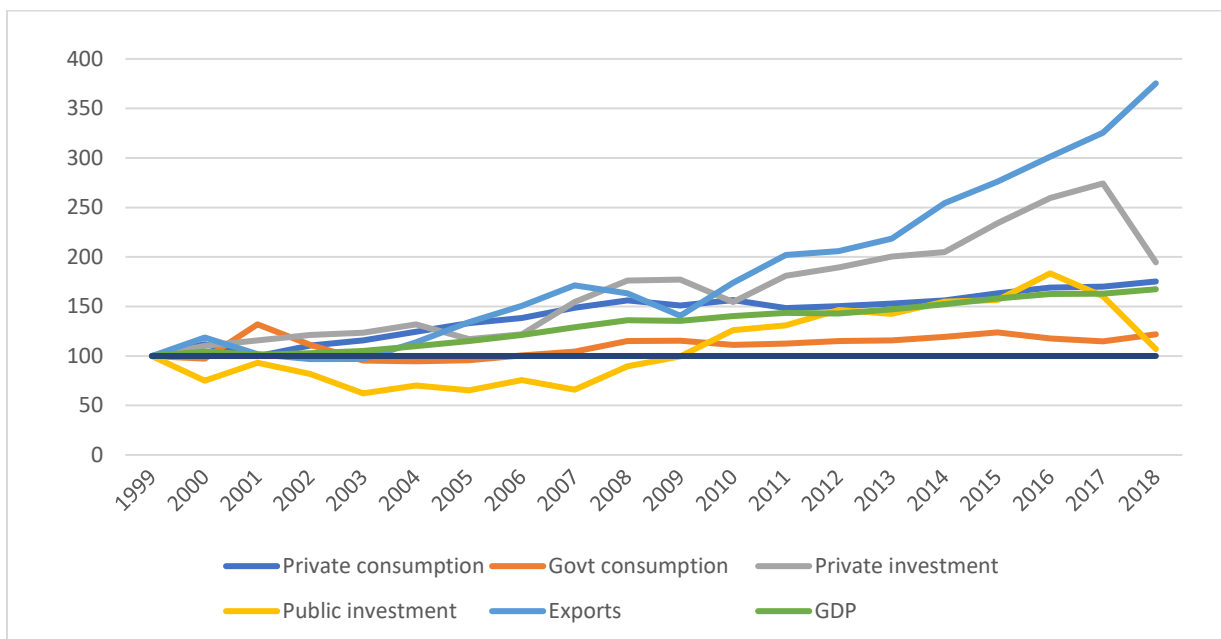
Source: World Bank (2020a); IMF (2020a).

FDI in automotive sector have been one of the main drivers of the transformation of the economy. In the past 10 years, the automotive sector's share in value added in manufacturing increased the most, together with the food processing sector (as shown in Figure 4).

Figure 4: Share in value added by industry as a % of GDP for the years 2008, 2017
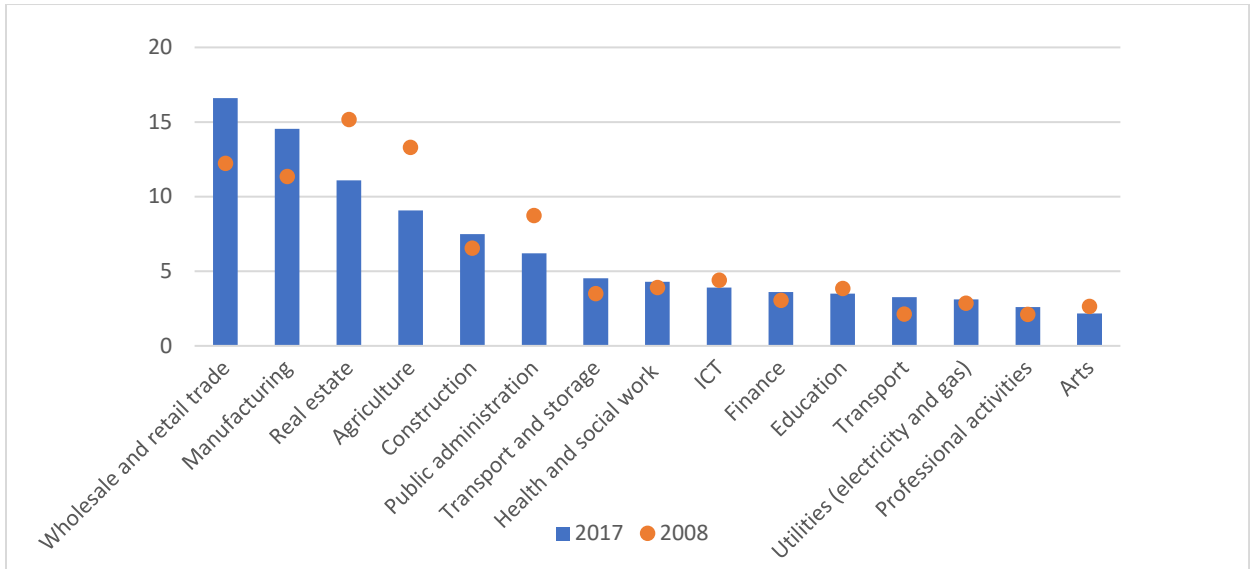
Adopted from State Statistical Office (2020a).

Agricultural productivity, which in our data is measured as value added per worker, hasn't seen an improvement in the past decade and is still low in comparison to regional peers and the OECD and EU averages (as shown in Figure 5).

Figure 5: Productivity in the agriculture sector (value added per worker) in comparison to regional peers in real USD millions
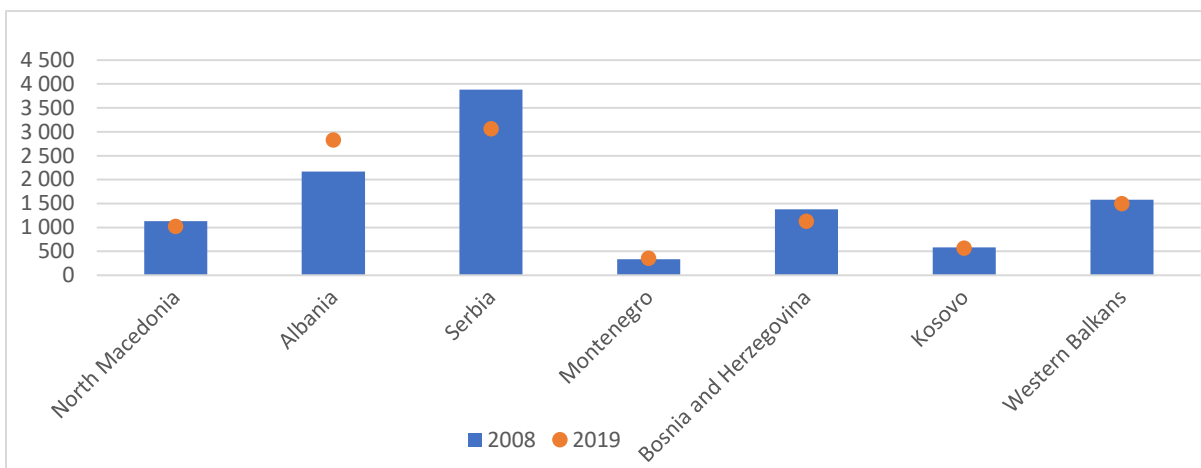
Source: World Bank (2020a).

Looking at the optimal inflation rates there are different opinions by different institutions, but the Bank of England targets the inflation to be in the range of 1.7% to 2% (Billi & Kahn, 2008). The ECB (European Central Bank) also states that the optimal inflation rate it pursues is 2%. As visible in Figure 6 shown below for the inflation rate of North Macedonia for the period of 2010 -2020, the country has witnessed different extremes, from 3,9 % in 2011 being the highest and -0,31% in 2015 being the lowest rate. The inflation rate in North Macedonia had been in the preferred range since 2017. In 2019 it was 0,8 % and in 2020 the inflation rate was 1,2 %. The data for 2021 shows a slight increase as a consequence of the Covid-19 crisis.

Figure 6: Annual inflation percentage in North Macedonia (2009-2020)
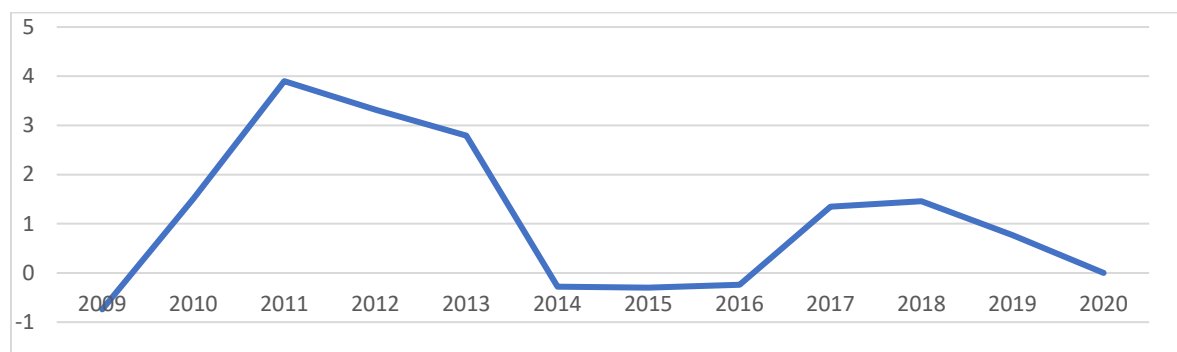
Source: World Bank (2022b).

2.2 International trade and FDI

Exports and imports represent the main indicators for the economic performance of the country. Every country's goal is to have higher exports than imports with which it will have a trade surplus. This is very rare in today's world, with only some developed countries still being able to achieve it. In North Macedonia the situation is very similar with the other developing countries and the country is experiencing a trade deficit. The Figure 7 shows that the imports have been increasing from 58% of GDP in 2010 to 70% in 2020. The highest level was in 2019 with 76% of GDP imports. The exports have been also rising with the same pace with 39% in 2010 to 58% of GDP in 2020. The highest level was in 2019 with 62% of GDP exports. North Macedonia had a 76,1% imports coverage by exports in 2020. North Macedonia's exports and imports increase is highly interconnected because of the FDI in the country which are highly reliant on imports of materials and majority of the products is manufactured for exports, mainly in the countries of the EU.

Source: World Bank (2022a).

North Macedonia's external balance has been improved mostly because of its growth in exports. In exports as a % of GDP North Macedonia sits higher than its regional peers and also the EU and OECD averages (as shown in Figure 8). The trade deficit has been steadily declining from 25% of GDP in 2008 to 14% in 2019, and the current account deficit was 3.2% in 2019 after a historical low of 0.2% of GDP in 2018, as shown in Figure 9 (World Bank, 2020a). North Macedonia's export is compromising more than 62% of GDP in 2019, and it's integrated with the EU markets, which consists of about 80% of North Macedonia's exports (State statistical office, 2020a).

Figure 8: Exports as a percentage of GDP for North Macedonia and comparing peers 2000, 2019

Source: World Bank (2020a).

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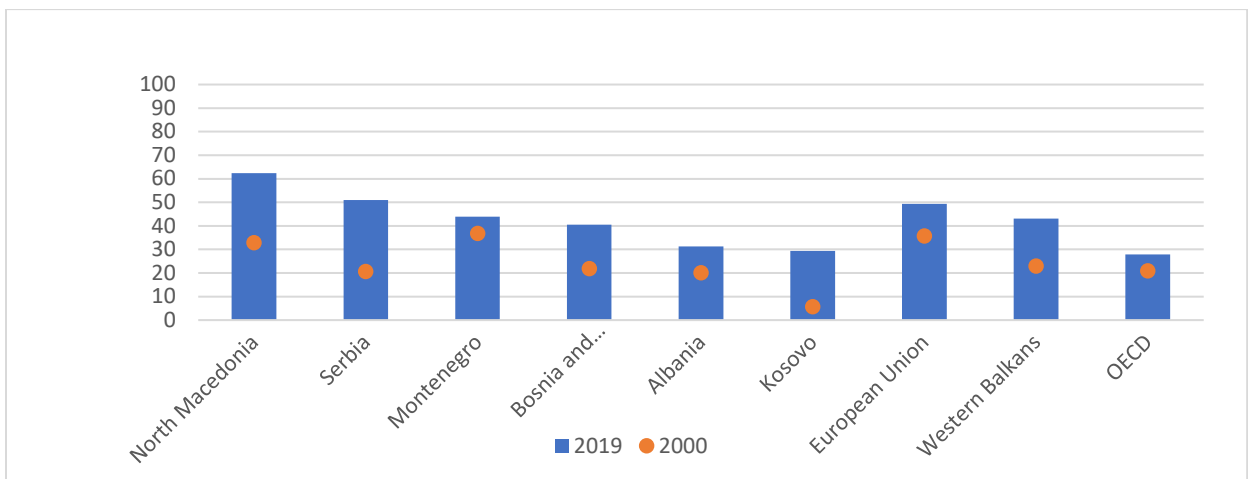
Figure 9: Current account deficit as a % of GDP for North Macedonia and comparing peers, 2019
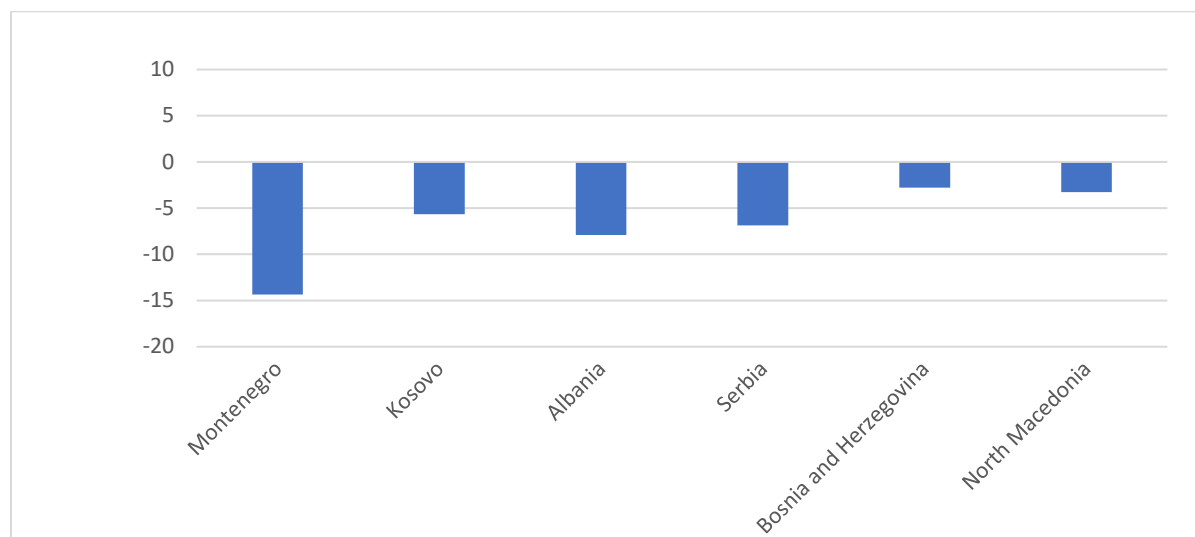
Source: World Bank (2020a).

The data for exports (as shown in Figure 8) and current account deficit (as shown in Figure 9) was set to 2019, even though there was available data for 2020, because of the Covid-19 crisis which shows distortion in the data as its effect. The data for Kosovo and Serbia for exports as a % of GDP was used for the year 2002.

Most of the exports have been a result of FDI in the automotive and associated industries in the free economic zones, which has had an impact on the diversification and upgrade of the trade sector and even deeper integration into global value chains. In 2005, before the expansion of FDI only the traditional two product categories iron/steel and apparel, represented over 50% of North Macedonia's exports, with the rest top exports which included products with low technological content (petroleum, tobacco). In 2019 the data shows a different picture for North Macedonia, the exports grew in all of these categories since then, with the exception of petroleum, which is directly correlated to the shutdown of operations for the oil refinery OKTA. The exports in 2019 are much more diversified and sophisticated with the automotive sector as a result of FDI. The automotive industry now represents the majority of top exports including chemicals (reaction and catalytic products), electrical machinery, industrial machinery and vehicles (as shown in Figure 10).
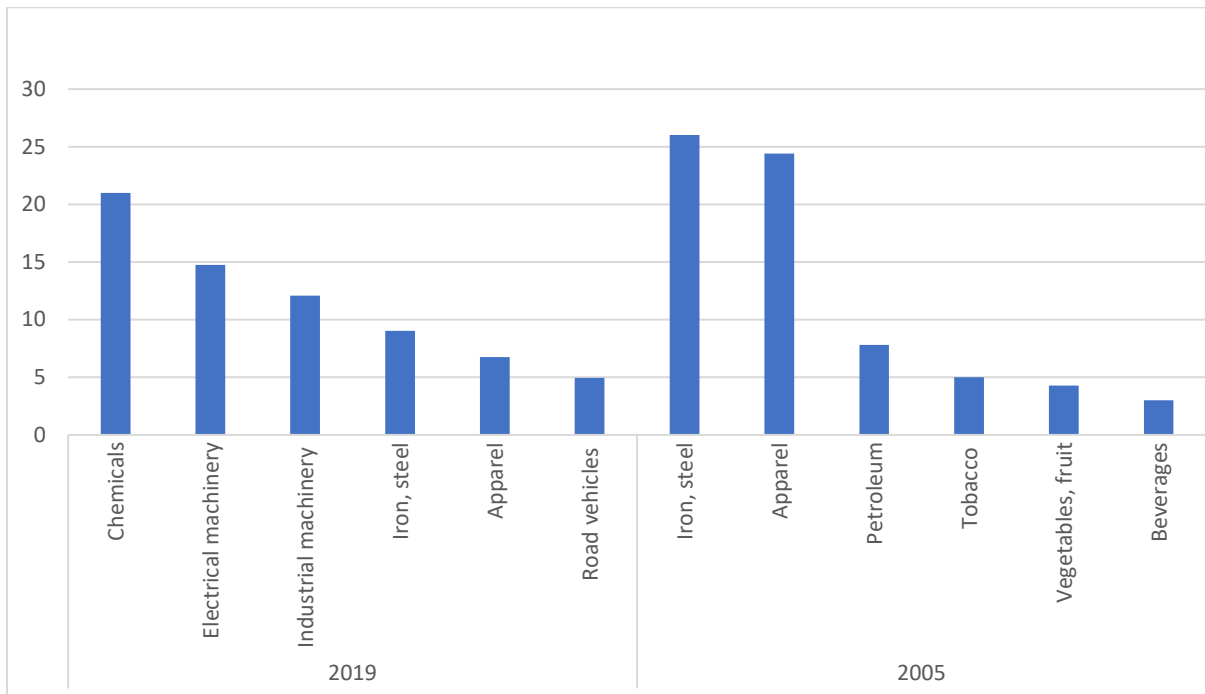
Adopted from State Statistical Office (2020a).

Foreign Direct Investment has been perceived as a great source of capital, bringing new job opportunities and helping the overall economic growth (Chowdhury & Mavrotas, 2006). The negative effects of the FDI are that they are perceived as a competition for domestic firms and in most countries having preferable legislation and conditions. North Macedonia has had an increase in the FDI from 2006 all up to 2020. The amount of FDI has been volatile partly due to the uncertain political situation and in the past years as a consequence of the pandemic. The lowest level of FDI inflows as percentage of GDP in recent years has been in 2020 at 0.06% as a consequence of the pandemic and in 2014 with 0.54%. The highest percentage of FDI inflows was in 2016 with 5.15% of GDP (as shown in Figure 11). The national strategy of the country's development has been strongly associated with FDI. The FDI in North Macedonia have received very favourable conditions. Some of those conditions are: 0% profit tax in the first five years, lower customs of the imported materials, free land with infrastructure for the industrial complexes and many more. Though there have been many debates for the overall benefit of these types of FDI, they have in general contributed for a lower unemployment rate, but because they rely heavily on imports, have not succeeded to implement local firms in the supply management system.

Figure 11: FDI inflows as a % of GDP in North Macedonia (2009-2020)
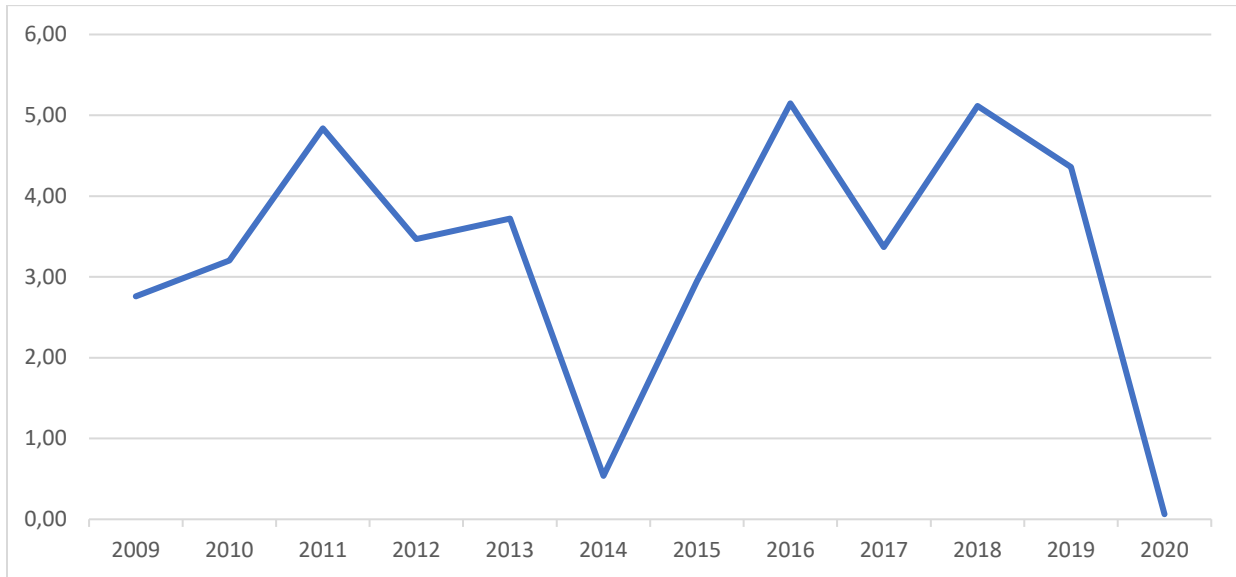
Source: World Bank (2022b).

The FDI spillovers didn't came as it was expected in the economy. The FDIs inputs have been mostly source from abroad (as shown in Figure 12) and have managed to establish very few supplier relationships with the local economy. This limited growth can be attributed to a large number of low value-added activities in the manufacturing, mostly involved in labour-intensive assembly (World Bank, 2020d).

Figure 12: Inputs in the sectors by origin in MKD millions, 2019
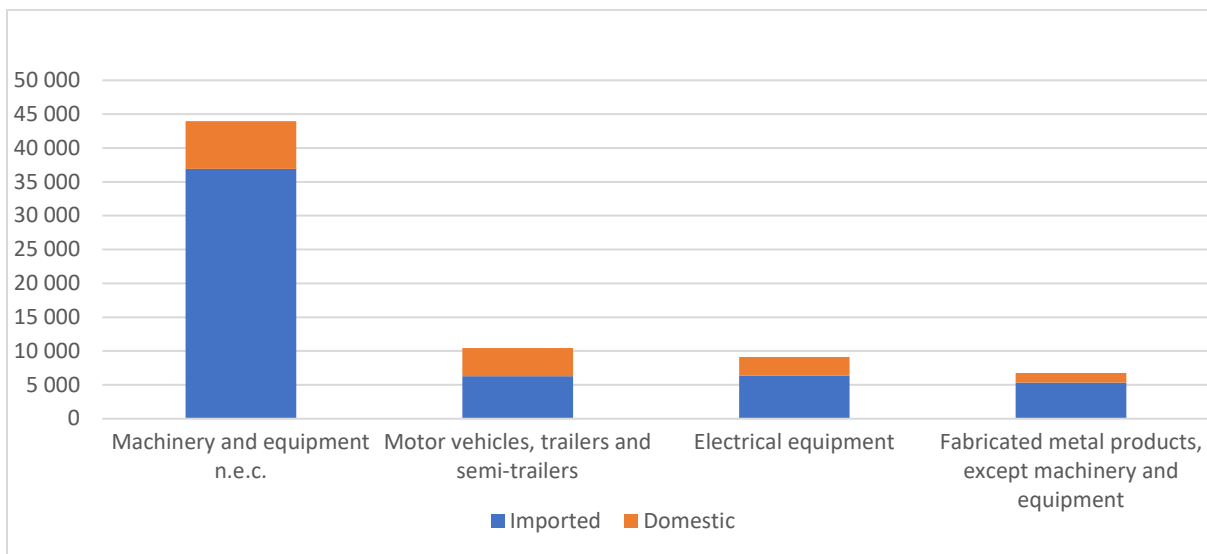
Adopted from State Statistical Office (2020a).

2.3 Financial system development and debt financing

In the financing area, North Macedonia is facing big challenges in the process of improving its public sector revenue performance, achieving the planned public capital expenditures and making improvements to the accessibility of finance for the SME sector. Looking at the public sector, the increase in public debt in the past decade has put limitations on its fiscal space, which if we add the economy's currency attachment to the euro and consequently limitations on monetary policy options we see an important constraint. Public finance is affected as well from structural constraints. Revenue performance has remained slow due to high informality and tax evasion, huge amounts of fiscal subsidies and exemptions, and low tax rates, on the other hand we had inefficient current expenditures which limited the scope for growth of capital expenditures. For the private sector side, other than banking financing is almost non existing, and the access to for SMEs, start-ups and innovative projects is constrained. The rise in public debt is also worsening the situation, as higher government financing is reducing the bank lending to the private sector.

Government Debt to GDP represents an important indicator that shows the condition of the economy and also is considered as a key factor for the sustainability of government finance. The benchmark proposed by the OECD is 50% of GDP (OECD, 2020). Government Debt to GDP in North Macedonia has been increasing since 2009. The level of 2009 was 23,6%, while in 2020 the level was 51,9% (as shown in Figure 13). Part of the government debt increase in 2020 was due to the pandemic, but the evident trend shows that the debt to GDP has doubled since 2009, which shows level of distress even though North Macedonia is still far below the EU average of 90% in 2020.

Figure 13: Government debt to GDP as a % for North Macedonia (2009-2020)
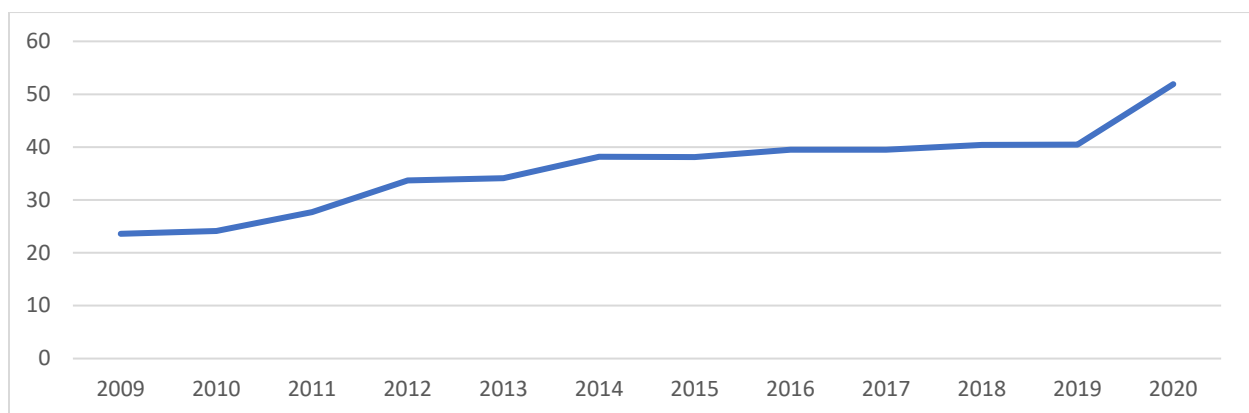
Source: World Bank (2022b).

In the past decade, North Macedonia's economy was heavily reliant on external financing. Since 2008, external debt has risen to 73.3% of GDP which is a result of rising public and also private debt (as shown in Figure 14), which in 2019 accounted for 45% and 55% of total external debt, respectively.

In this period there was a big increase in FDI inflows. FDI in the retail, financial and other sectors helped the consumption/driven growth. After the crisis, one of the main drivers for the strong growth and the transformation of the economy was manufacturing FDI.

Figure 14: External financing of the public and private sectors, domestic public debt and FDI stock in EUR millions, 2004-19
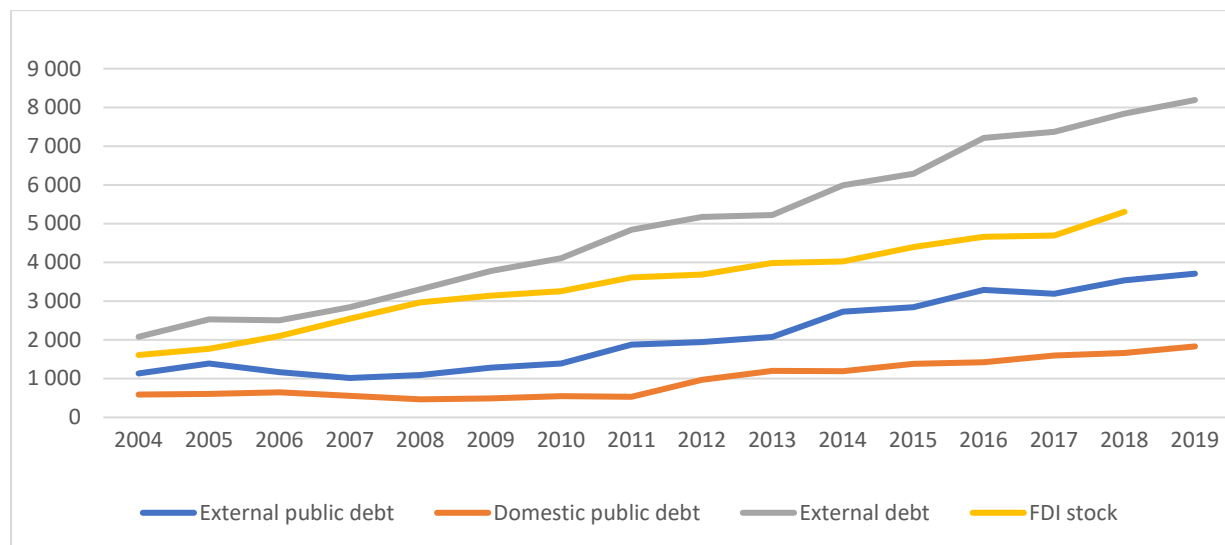
Source: Author's own work based on data provided by the Ministry of Finance and the National Bank of the Republic of North Macedonia.

In the past decade there was a big increase in public debt as a consequence of government reliance on fiscal stimulus for the support of the economic growth and job creation as a result of the global financial crisis. The measures taken were in public investment, mostly in infrastructure and civil construction projects, new fiscal incentives for attraction of FDI in the free economic zones, employment-related subsidies and higher employment in the public sector (World Bank, 2018).

Accompanied with slower revenue performance due to slower economic growth as a result of the financial crisis, all of these measures led to a big increase in the fiscal deficits (as shown in Figure 15) and to almost doubling of the public debt between 2008 and 2019 (as shown in Figure 16).

Even though, at about 41% of GDP, the government debt is not considered high in comparison with regional standards (as shown in Figure 16), the reduce of the fiscal space has had some implications in the last couple of years. Because the MKD is attached to the euro, the Central Bank has her hands tight in maneuvering the monetary policy for the stimulation in times of crisis. Also, with about 80% of government expenditures associated to public wages, social transfers and subsidies, all of which are pretty necessary, the governments' ability to manage spending in times of crisis has become even more limited.

Figure 15: Fiscal deficits as a % of GDP 2005-2019
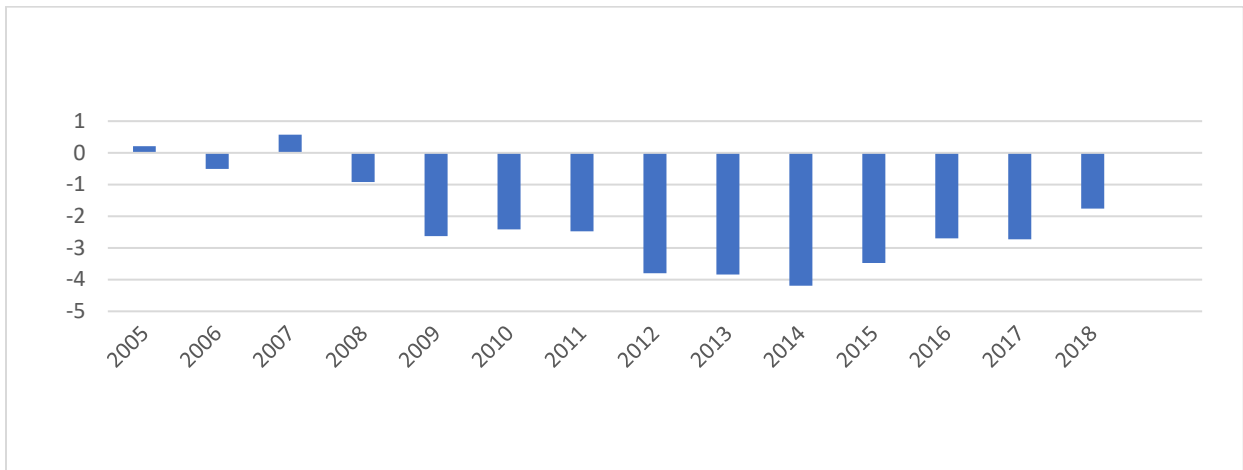
Source: Ministry of Finance of North Macedonia (2020); IMF (2019).

Figure 16: General government debt as a % of GDP 2010,2019
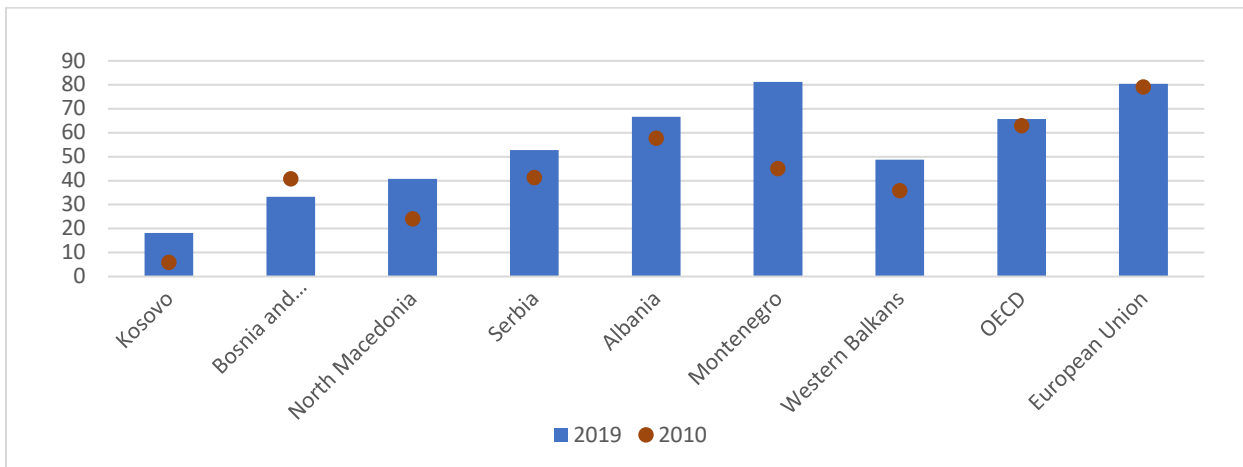
Source: Ministry of Finance of North Macedonia (2020); IMF (2019).

After the financial crisis, revenue performance worsen in North Macedonia. Revenues as a share of GDP declined from 32,9% in 2008 to 28.6% in 2018, mostly due to lower performance

in the VAT collection and import duties. Revenues are also lower in comparison with regional peers, except Albania and Kosovo, and mostly due to the collection of personal income tax and social contributions (as shown in Figure 17), which can be associated with governments subsidies. Also in this period, North Macedonia had the biggest changes in the revenue proportions in comparison with other Western Balkan countries, with an increase in the tax revenue share and a decline in the share of grants and other non-tax revenues. Also, there was a change in the tax revenue proportions with the increase of excise and profit tax revenues, while there was a reduction in the VAT contribution.

In the past couple of years, the government went for a reform to reduce informal economy and improve revenue. They introduced a VAT refund scheme which purpose was for customers to demand fiscal receipts from the merchants, and by scanning those receipts they were eligible for the refund of the VAT they paid. The return amount is 20% from the VAT for domestic products and services and 10% for foreign products and services. The reform hasn't seen its potential yet because of the Covid-19 crisis and the reduced spending so results still can't be comparable. Another reform for which we can't still see the effects due to Covid-19, it's the reform for subsidizing the social security contributions for wage increases, reducing the envelope wages practice.

Figure 17: Revenue collection as a % of GDP, for North Macedonia and regional peers, 2019
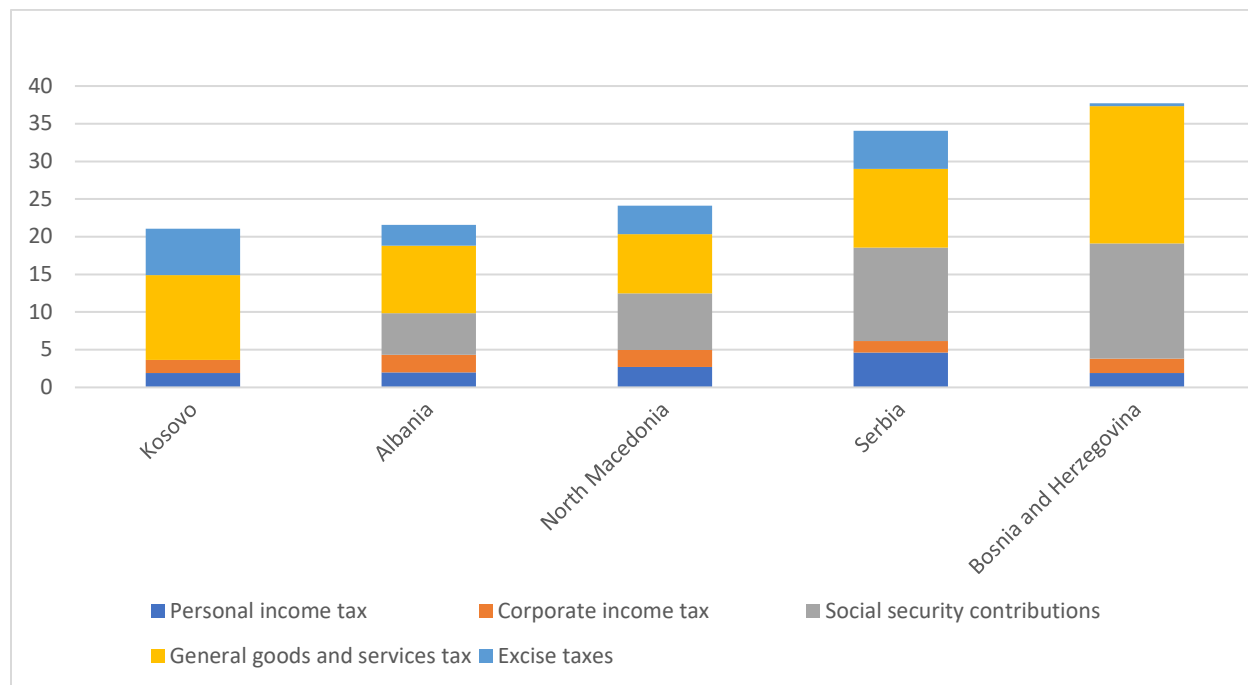
Source: Authors' own work based on IMF (2020b) - International Financial Statistics.

34

Most of the lower revenue performance is reflected through low tax rates. North Macedonia has some of the lowest tax rates in comparison with the regional peers and the EU and OECD average. The personal income tax rate is flat at 10%, as well as the corporate income and capital gains tax rate. In the beginning of 2020, the government decided to postpone the introduction of progressive tax rate for personal income and the increase of the tax rate for capital gains to 15%, as a result of the analysis from the public revenue office that it would lead to higher tax evasion and the impact on the income inequality would have been very small (as shown in Figure 18).

Figure 18: Tax contributions as a % of commercial profits, for North Macedonia and EU, OECD and regional peers, 2019
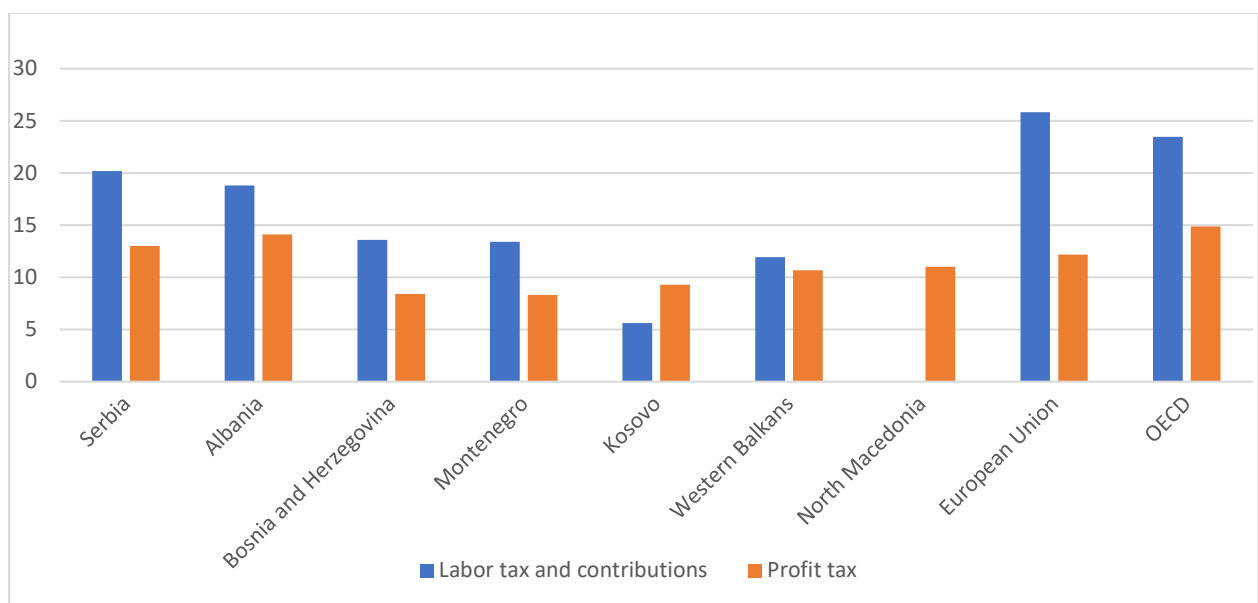
Source: World Bank (2020a).

Part of the slow revenue growth is due to the big fiscal incentives that the government offers for FDI in its free economic zones. These incentives include no corporate income tax in the first 5 years, government subsidized personal income tax on all employees and exclusion from VAT on traded goods and services in the zones (Public Revenue Office, 2020).

Enterprises in North Macedonia received their financing mostly from commercial banks. Although the banking sector has been declining as a share in the total financial sector assets it still holds high position at over 81%, and the remaining percentage belongs to pension funds. Also, banks represent 98% of the SME financing (European Investment Bank, 2016).

The banking sector which is largely foreign owned is liquid, has good capitalization and it is profitable, with the non-performing loans representing a very small 4,6% of total loans (World

Bank, 2020a). Although the credit growth was pretty good with annual growth rate of 7% between 2012 and 2019, the biggest share has been lending to households, which has increased its fourfold since 2017 and now it accounts for about 50% of total loans (as shown in Figure 19). The government financing has increased in considerable amount since, especially after the global financial crisis. It also accelerated even further in the crisis caused by Covid-19 pandemic. On the other side lending for enterprises has remained stagnant, despite the growing demand from the private sector (National Bank of the Republic of North Macedonia, 2020a), especially as an effect of lower interest rates, which are low by regional standards.

Figure 19: Lending to households, government and enterprises in the period from 2007-2020, 2007M01 as a reference point
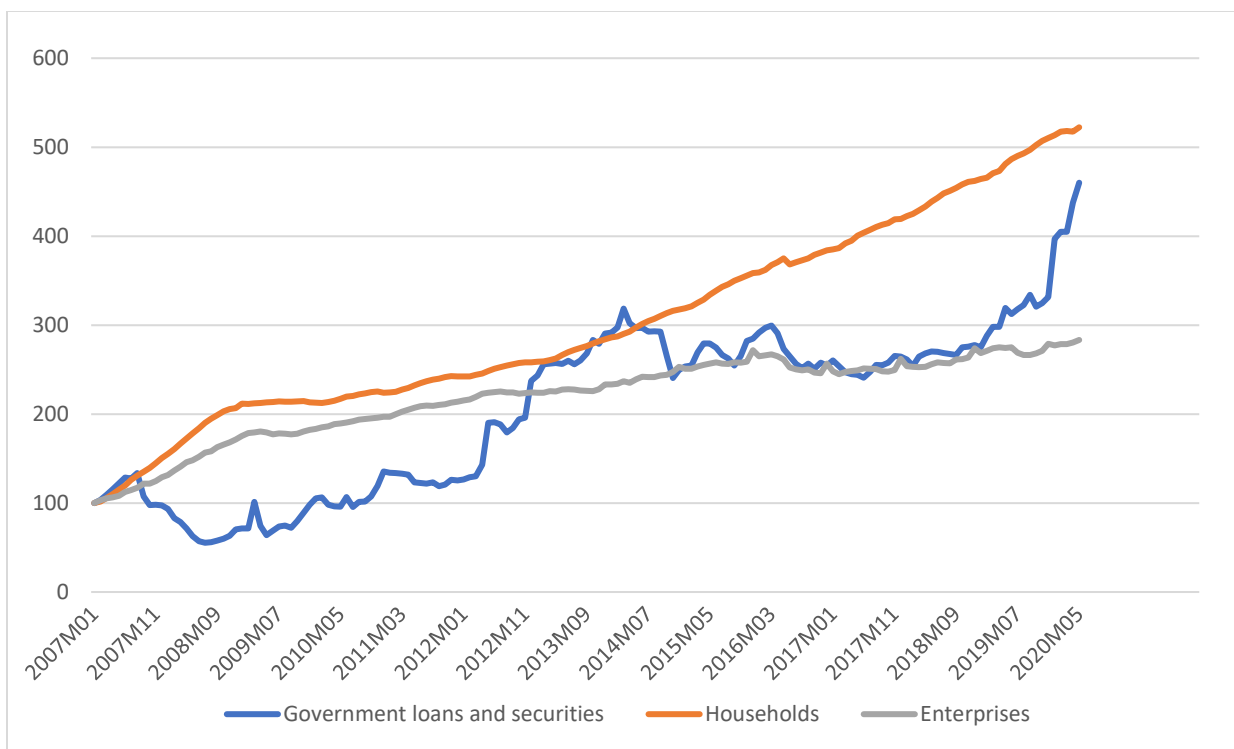
Source: National Bank of the Republic of North Macedonia (2020b).

After the crisis borrowings have been almost constrained for SMEs. This is due to the fact that banks have achieved decent profitability through the mortgage and customer-lending segment and because of issuing of high-yield government bonds. Therefore, there hasn't been much incentive for banks to diversify their portfolio onto SMEs, because they have been considered much riskier investments.

The borrowings to the SMEs are also constrained by high collateral requirements. Almost all of the borrowings to this sector require securitization, which the SMEs do not have. Collateral

requirements go as high as 180% of the value of the loan (World Bank, 2020b). This also reflects the difficulties of executing a collateral, which it takes 1.5 years to resolve insolvency and the recovery rate is at 48%, which in comparison to 70% recovery rate for OECD high-income economies is very low (World Bank, 2020c).

Also, the non-bank financing is still undeveloped. For equity, as a key type of non-bank finance, there are a number of regional investments funds that are operational in North Macedonia. But, except for few projects, their portfolio is pretty small. Because of that, most of the SME non-bank financing comes from the government.

For the private-sector side, it is noticeable that in the past decade there was some increase in the domestic savings, which was a result of declining consumption as a share of GDP. The gross savings went up from 23.8% in 2010 to 26,34% in 2020 (as shown in Figure 20).

After the crisis, remittances have reduced considerably. Even though remittances were not contributing to the economy as significantly as they did in most of the regional peers (at the 2010 peak, they amounted to 4% of GDP), their strong influence supported consumption after the crisis, and the decline of over 25% since 2010 is significant (as shown in Figure 21).

Figure 20: Gross savings as a % of GDP for North Macedonia, EU, OECD and regional peers 2010, 2020
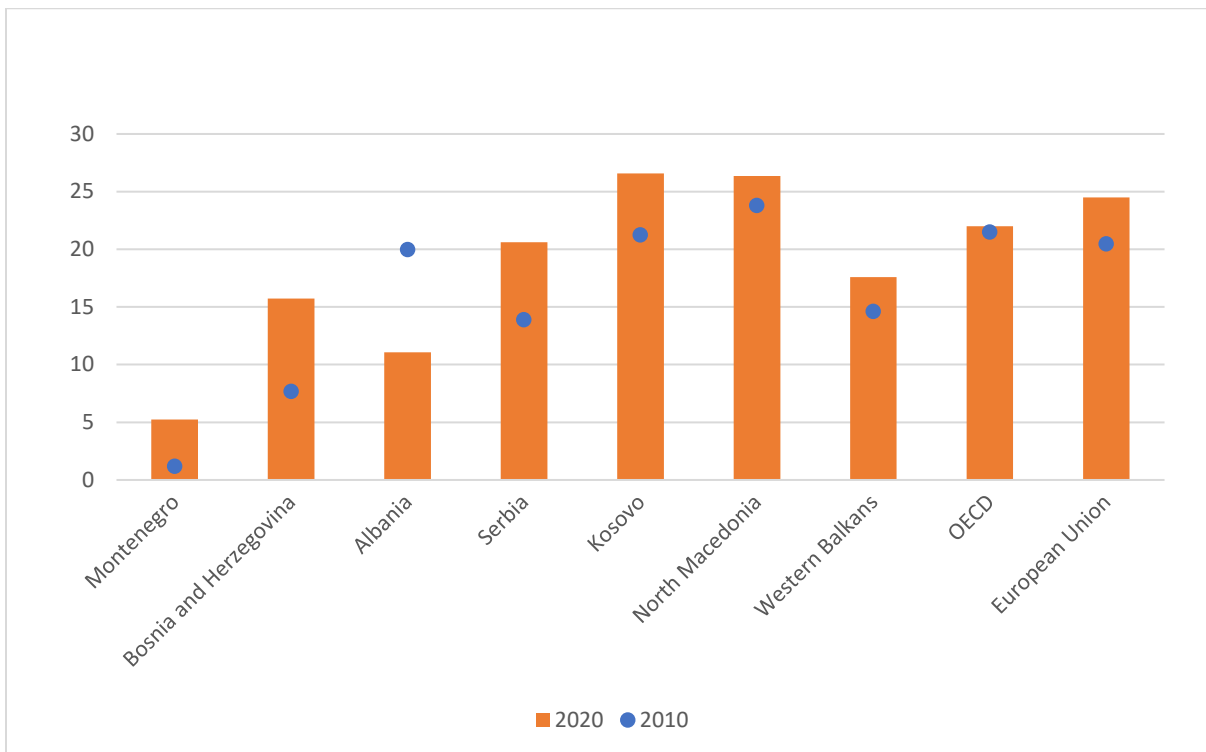
Source: World Bank (2020a).

Figure 21: Personal remittances as a % of GDP for North Macedonia, EU, OECD and regional peers 2010, 2020
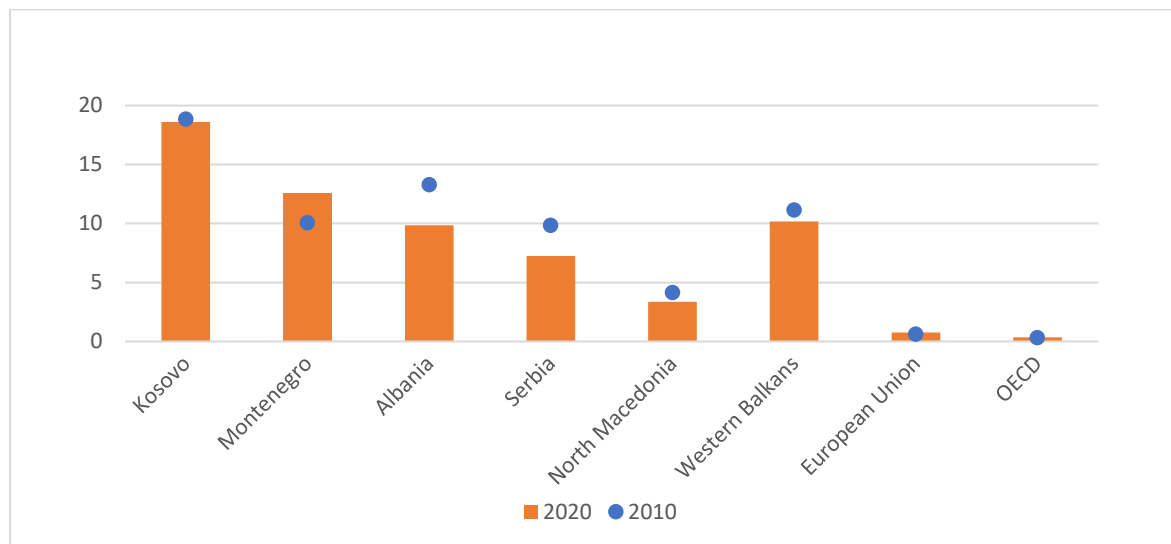
Source: World Bank (2020a).

2.4 Political situation and competitiveness

Political situation is still a major constraint for the investment and growth in North Macedonia. With high polarized political climate, the country has had 6 parliamentary elections in the last 15 years, with results being regularly contested, obstructive opposition behavior and high political uncertainty. The best example of the effect of the political climate on the growth has been shown in the political crisis of 2016-17, which resulted in lower domestic demand, decline of mainly private and public investment, which declined by 6% in 2017, and a decline in GDP growth to very low 1.1%. In the last Business Environment and Enterprise Performance Survey (BEEPS), the political instability was named as one of the biggest constraints of doing business by almost a third of all surveyed firms (World Bank, 2020b).

North Macedonia also has a big informal sector, which the governments have been fighting for years. This is also referred to as one of the biggest constraints for doing business. In the last BEEPS, more than half of the surveyed firms noted their competition was in the informal or unregistered firms (World Bank, 2020b).

Corruption is still an important obstacle to investment and growth for North Macedonia. The score and ranking in Transparency International Corruption Perception Index (CPI) has been declining in the last couple of years. The lowest position the country received in 2020 when it ranked 111 out of 198 economies globally and was far below the regional peers. In the newest

data for 2021 the country was able to move up the ranks for 39 positions up to 87 place ranking, which indicates an improvement (Transparency International, 2021).

The firm investment in R&D at 0.1% is low in comparison to regional peers and it sits below the EU benchmark of 1.5% (as shown in Figure 22). North Macedonia is also ranked far below than the aspirational peers in innovation capability indicators on the World Economic Forum Global Competitiveness Index, of which multi-stakeholder collaboration within companies was ranked 125 out of 140 economies, then university-business collaboration 116 and by the number of patent applications was ranked 74, which is only better position than Albania regarding its regional peers.

Figure 22: Firm investment in R&D in North Macedonia, EU member states and other aspirational peers as a % of GDP, 2020
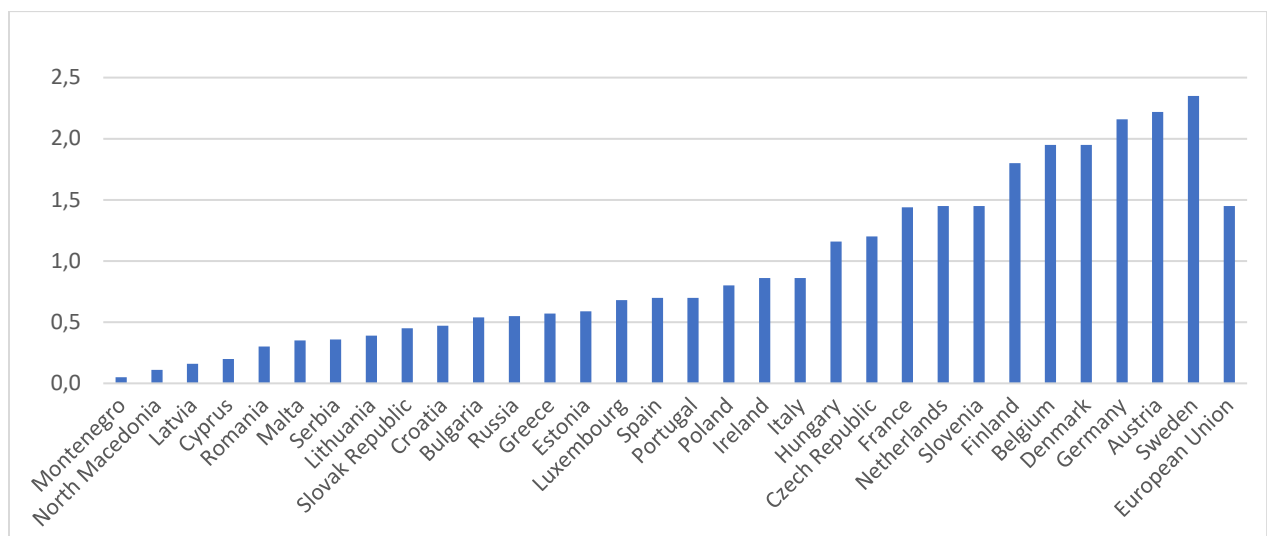
Source: Eurostat (2020).

3 POPULATION DEVELOPMENT AND QUALITY OF LIFE IN NORTH MACEDONIA

North Macedonia's population development has been debated for many years, especially as a result of lacking data from the State Statistical office. After the cancelation of the 2011 census due to political issues, the country finally performed a successful census in late 2021. The data from the census is believed that it will serve for further analysis for the introduction of properly tailored policies for improving the quality of life for every specific group of its population.

3.1 Population development and social conditions

North Macedonia has made its successful census in 2021 after the last census in 2002. The data in the new census it still not complete and we are going to be working with the preliminary results. For the first time the data shows resident and non-resident population for North Macedonia (as shown in Figure 23). From the data it is visible that North Macedonia has lost 200.000 people of its resident population from 2002.

Figure 23: Population in North Macedonia – census 2021 vs 2002
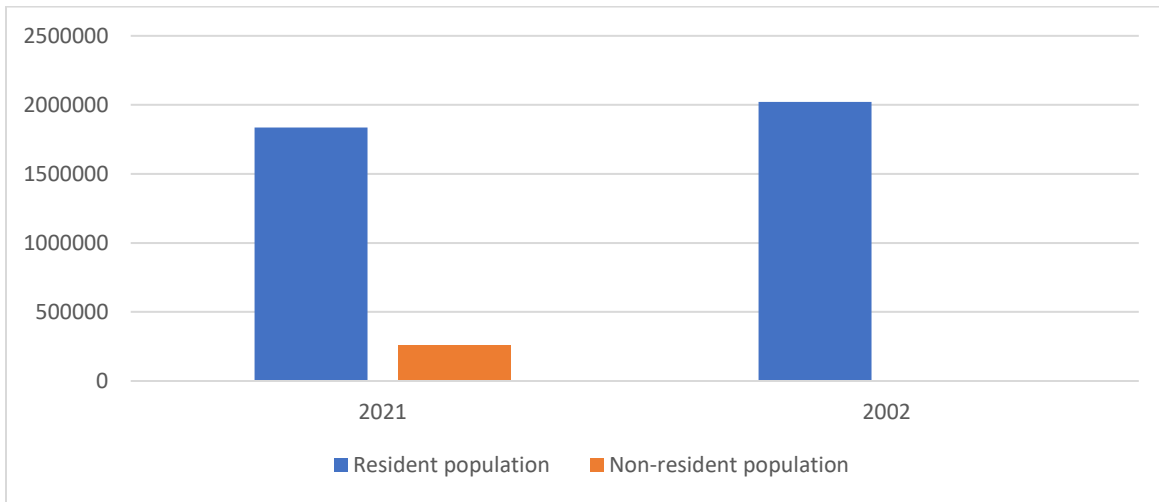
Source: Statistical office of North Macedonia (2022).

Figure 24: Population projection in thousands by age groups for North Macedonia, 2020
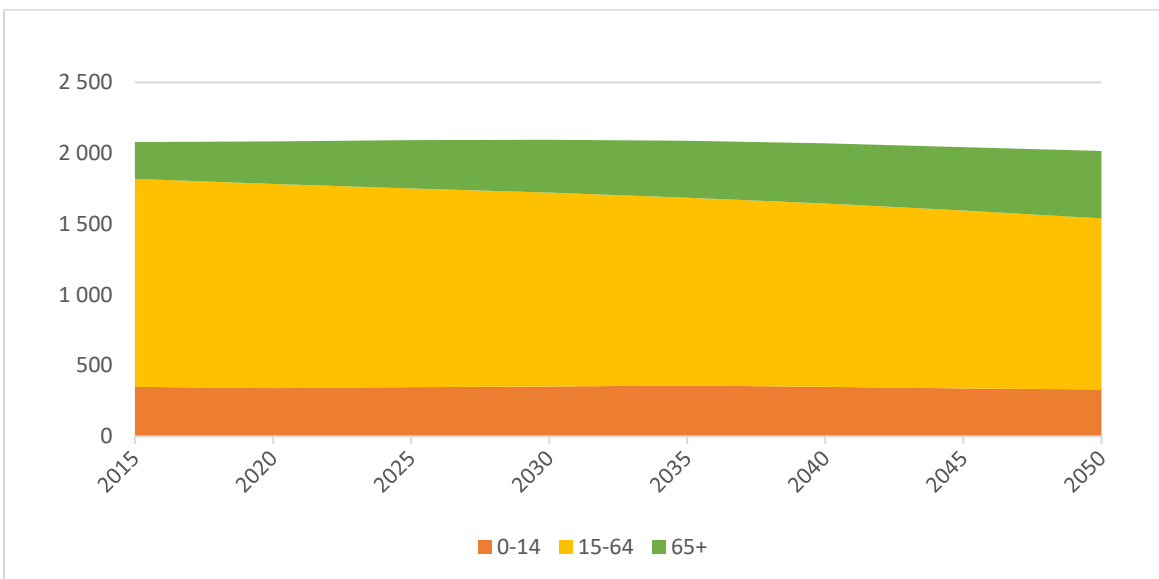
Source: United Nations (2020).

40

Although the old-age dependency ratio is less than the Western Balkans average, and far below the OECD and EU average, the projection from the data from United Nations shows high increase which follows the trend of the developed countries and may cause serious disruptions for a developing country like North Macedonia (as shown in Figure 24). Working-age population is projected to reduce from 71% in 2015 to 57% in 2050, and as a consequence the share of the older populations is to expand from 12,5% to 24,5% (as shown in Figure 25).

Figure 25: Old-age dependency ratio projections (ratio of population age 65+ per 100 population aged 20 to 64, %)
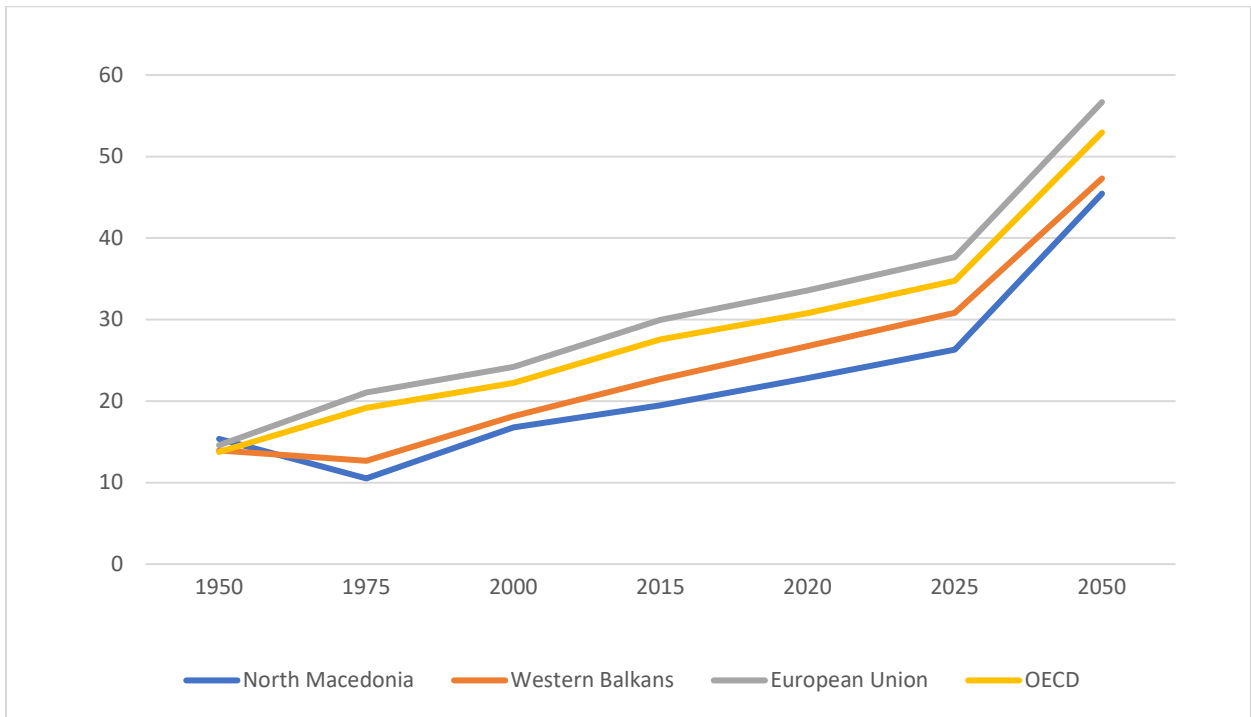
Source: United Nations (2020).

The comparison of the data from the census in 2021 vs the census in 2002 for North Macedonia shows that North Macedonia has the problem of the more developed nations of aging population and reduced number in newborns and youth population (as shown in Figure 26). The data shows that the biggest reduction of resident population is between the ages of 5 and 34.

Figure 26: Census comparison of resident population between 2002 and 2021 by age
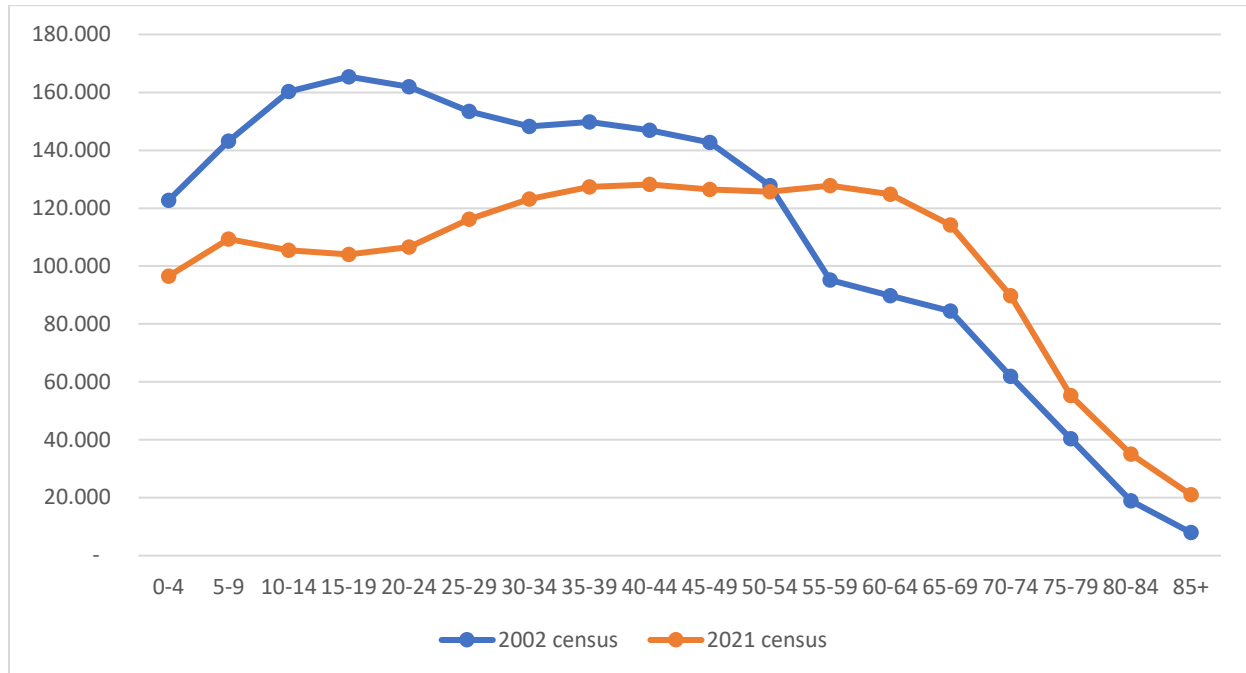
Source: Statistical office of North Macedonia (2022).

The standard of living, demonstrated by higher GDP per capita and increased household consumption over the past 15 years has improved for the people of North Macedonia, but the issues of poverty and inequality still remain. Poverty rates have decreased significantly from 2008 but they remain still high, with 18% of the population that lives on less than USD 5.5 a day (as shown in Figure 27) (World Bank, 2020a). Even though the disposable income inequality is comparable to the regional countries, North Macedonia has the highest market income inequality among the benchmark economies that we are reviewing (as shown in Figure 28). This can be the result of the tax system and also an indication that a large number of households are on low-market income, which can be correlated with age, emigration or unemployment. The two measures of inequality have not changed a lot since 2008 (Solt, 2019).

The perception of the citizens confirms the dormant pattern in the standard of living. In the 2016 Life in Transition conducted survey only 8% of Macedonian residents considered an improvement on their position in the income distribution (World Bank, 2018)**.** Also, even though the life satisfaction in general has improved since 2010, the average from the responses on a scale from 1-10 was 5 in 2019, compared to 7.4 in OECD economies (OECD, 2020). Still, 65% of the people were optimistic about the future of their children and grandchildren in 2016, which was higher than the EU28 average of 57%. Also, on a scale 1-10, the trust in other people was in average 3 in 2016, which was lower that the EU average of 5.2 (Eurofund, 2018).

Source: World Bank (2020a).

Figure 28: Income inequality for North Macedonia and comparing peers, 2018 or latest available year in %
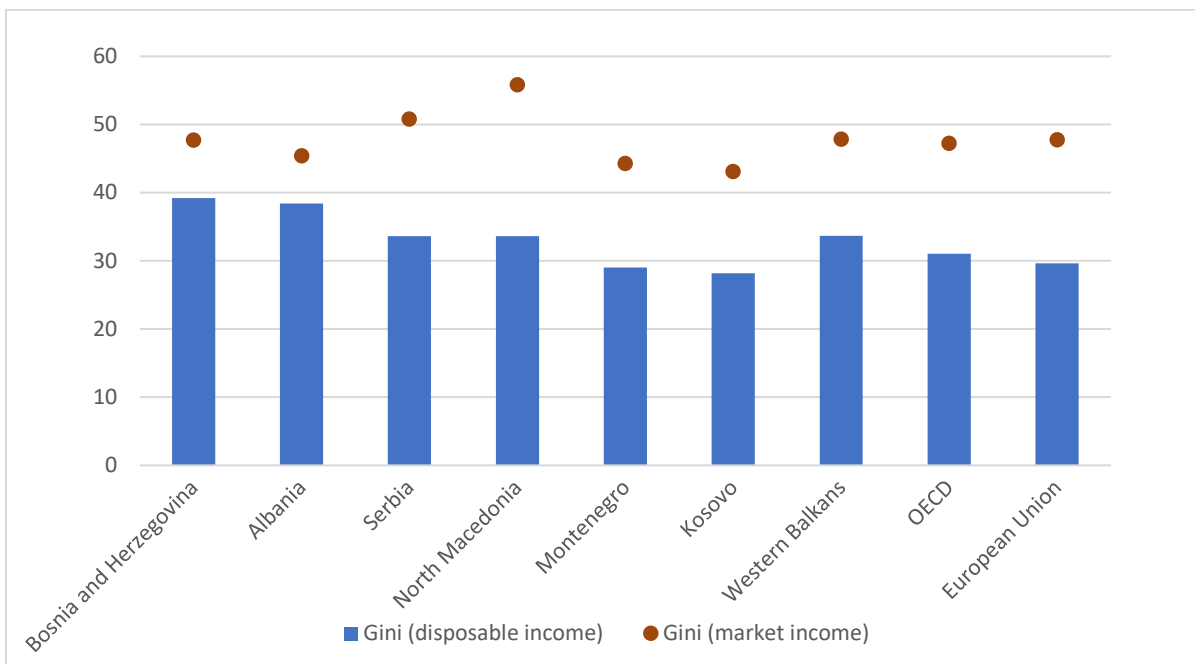
Source: World Bank (2020a).

Macedonian's well-being is highly dependent on their place of residence. The regions (as shown in Table 5) that are correlated with high poverty are mostly located in the north of the country, which represents more than half of the country's population, including Skopje, Northeast regions and Polog, where the poverty rates go as high as 42.8%. The north of the country is highly dependent on agriculture, and about 33% of the working low income are included in this sector, in comparison with the 13% of the working non-poor (World Bank, 2018). For the infant mortality rates, which especially in North Macedonia represent a concern for the economy as a whole, also differ between the regions, in the range from 3,4% in the Southwest region to 9,3% in the Southeast region, according to national statistics for 2020 (as shown in Table 5).

Table 5: Selected indicators for regions of North Macedonia, 2020

Regions	Population	Population (%)	GDP per capita (USD)	Annual gross earnings (USD)	Poverty	Infant mortality rate (per 1 000 live births)
Vardar Region	150.319	7%	7030	7.108	14.0%	5,6
East Region	172.277	8%	6177	7.181	14.0%	6
Southwest Region	218.114	11%	4830	7.024	13.2%	3,4
Southeast Region	171.840	8%	6770	7.198	23.5%	9,3
Pelagonia Region	224.670	11%	6401	7.936	10.7%	7,3
Polog Region	322.166	16%	3032	7.415	38.1%	5
Northeast Region	175.171	8%	3564	6.375	42.8%	4,7
Skopje Region	634.251	31%	8938	10.348	23.8%	5,6

Adopted from State Statistical Office (2020b).

3.2 Education and the labour markets

Even though the level of primary enrolment education rates is high, North Macedonia has the lowest secondary and tertiary education enrolment rates compared to regional peers and the OECD and EU averages. From the data shown in Figure 29 and Figure 30 (Kosovo and Bosnia

and Herzegovina were excluded because no new data was available) it is evident that North Macedonia has lower enrolment rates than the Western Balkans average. It is also evident that it lacks behind also in comparison with the OECD and EU averages.

Figure 29: Secondary school enrolment (% gross), 2018
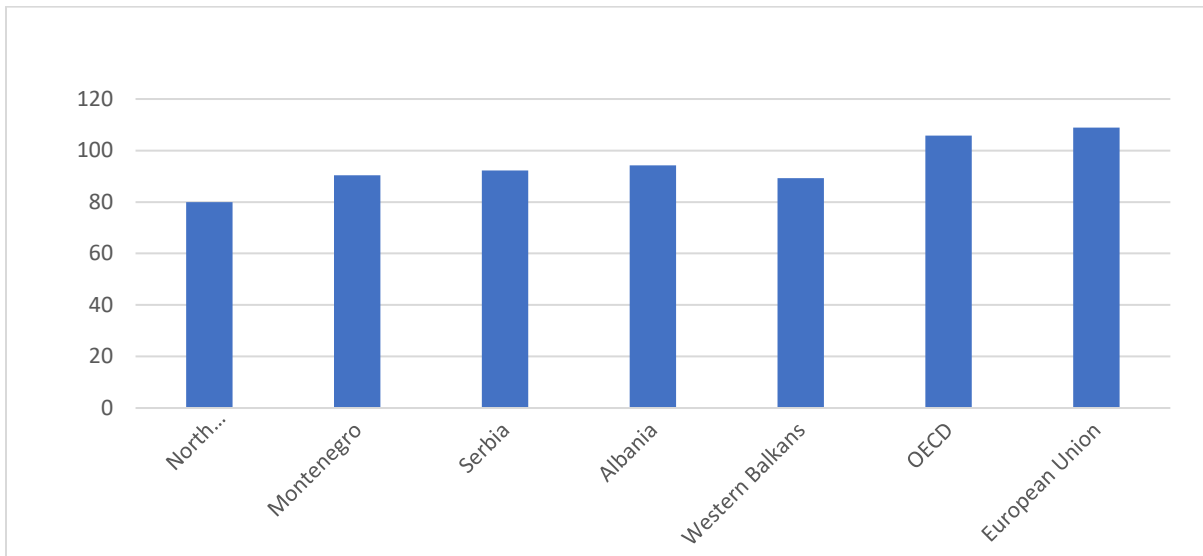
Source: World Bank (2020a).

The levels of tertiary education enrolment are the lowest for North Macedonia in comparison with regional peers and the EU and OECD average (as shown in Figure 30). This can be contributed partially to the increased number of students choosing to study abroad.

Figure 30: Tertiary school enrolment (% gross), 2018
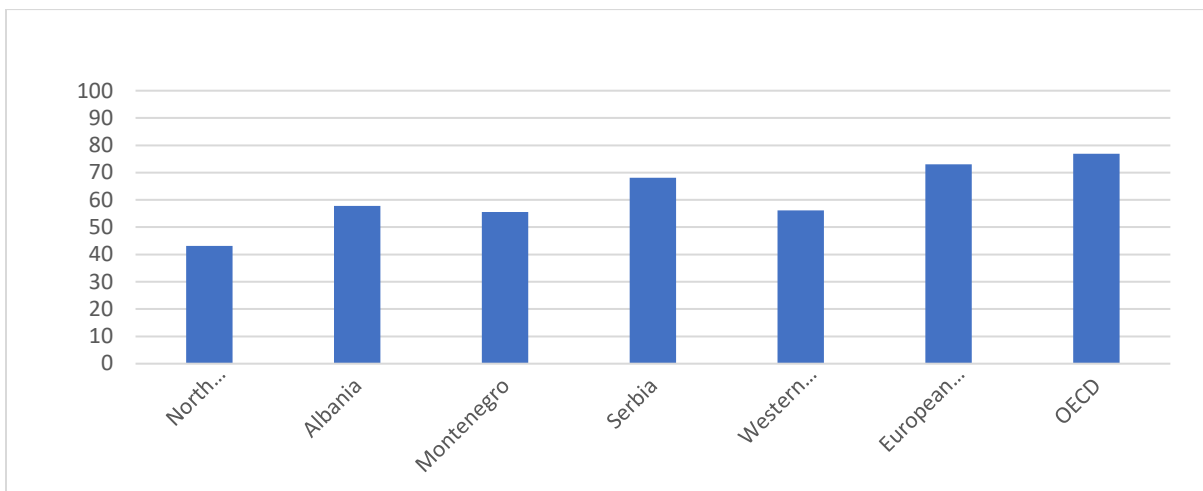
Source: World Bank (2020a).

Even though around 20% of university graduates are considered unemployed, a lot of the employers have complaints that they lack the adequate work force, and they are not able to find people with required skills (ETF, 2017). Around a third of the graduates with tertiary education who manage to find a job, have a qualification which does not equal their current place of work, while also another third are over-educated for their position. This can come as a consequence of too many theoretical programs, no practical experience, and poor choice of career paths (World Bank, 2018).

Unemployment represents also one of the often used indicators when the economic performance of a country is analysed as well as well-being as it directly impacts the well-being of individuals. As shown in the Figure 31, the North Macedonia's unemployment rate has been far above the "natural" rate, some years even four or five times higher. In the period 2010-2020, the highest unemployment rate was 32% in 2010 and it was gradually getting down up to 16,4% in 2020 (State Statistical office, 2020b). In 2020 the job vacancy rate was 1,57%, or 7.916 free job positions (State Statistical office, 2020c). The problem with the job positions especially in the public sector is still present and is often mentioned in the European Commission yearly report. In the report for 2020 the EU welcomes the 2019-2021 Transparency strategy, but the monitoring reports on the implementation of the Public Administration Reform Strategy show that the country still hasn't achieved the level of reforms needed. The corruption and nepotism are still widely present.

Figure 31: Unemployment as a percentage of total labour force in North Macedonia (2009-2020)
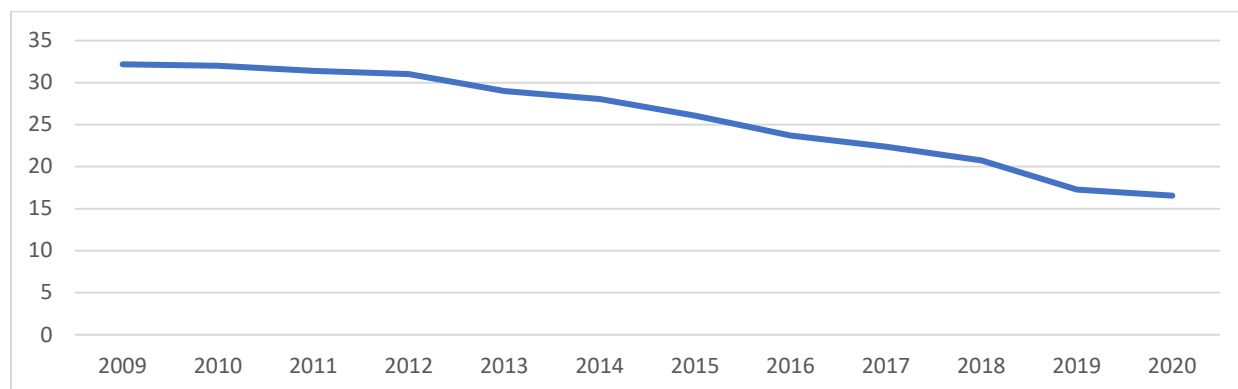
Source: World Bank (2022b).

From the data shown in Figure 32 is evident that North Macedonia was able to increase its employment rate for people age 15+ and has performed better than Western Balkans countries like Kosovo, Bosnia and Herzegovina and Montenegro. The country is also above the Western Balkan average in 2020. It is also evident that the country is still far behind the EU and OECD

average. But the employment still remains low, and these number also come as a direct result of emigration, considering that the highest percentage of emigrants are working-age people.

Figure 32: Employment rate as a % of total working population, age 15+ for 2020 and 2010
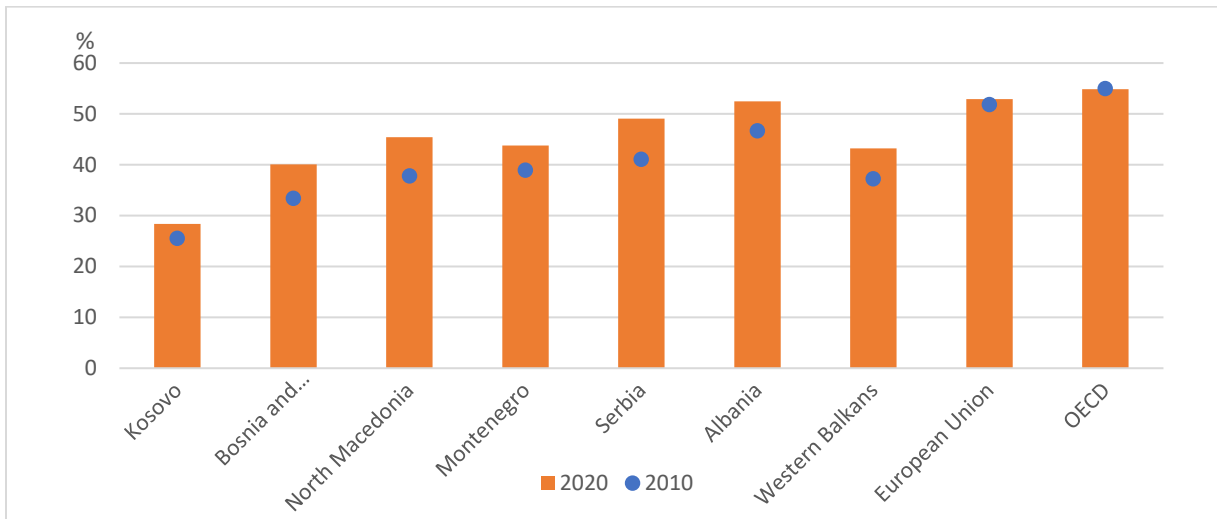
Source: World Bank (2020a); Kosovo Agency of Statistics (2020).

In Figure 33 it is also evident that North Macedonia was able to reduce its unemployment rate, which was highest among the comparing countries in 2010, while in 2020 the country has outperformed Kosovo and Montenegro. North Macedonia is in 2020 slightly above the average of the Western Balkans countries and still far from achieving the levels of unemployment that the OECD and EU countries hold.

Figure 33: Unemployment rate, total (% of total labour force) for 2020 and 2010

Source: World Bank (2020a); Kosovo Agency of Statistics (2020).

47
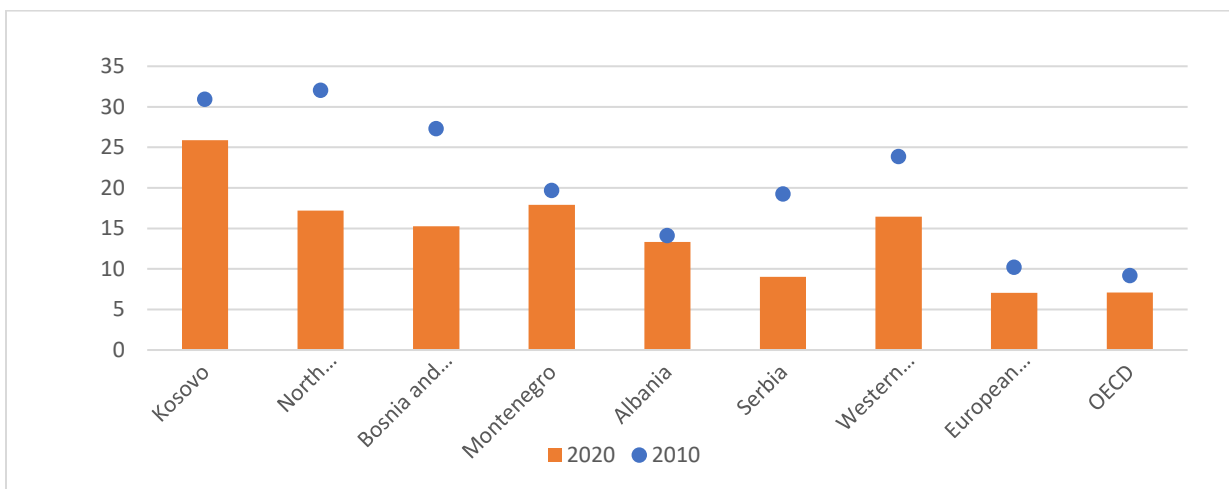
The productive human capital is not utilized properly, which is evident by the amount of young people who are not active in the labour market (as shown in Figure 34). In 2020, the active population of young people 15-24 was 30.9% and the employment rate was 19.8% (State Statistical Office, 2020b). Also, the share of NEET youth was 20,6 in 2020, which is better than most of its regional peers (only Serbia had a better result with 16,2 %), but the country is still far from the EU and OECD averages of 11,1 and 11,3 % respectively (as shown in Figure 35).

Figure 34: Labour force participation rate (% of total population age 15-24)
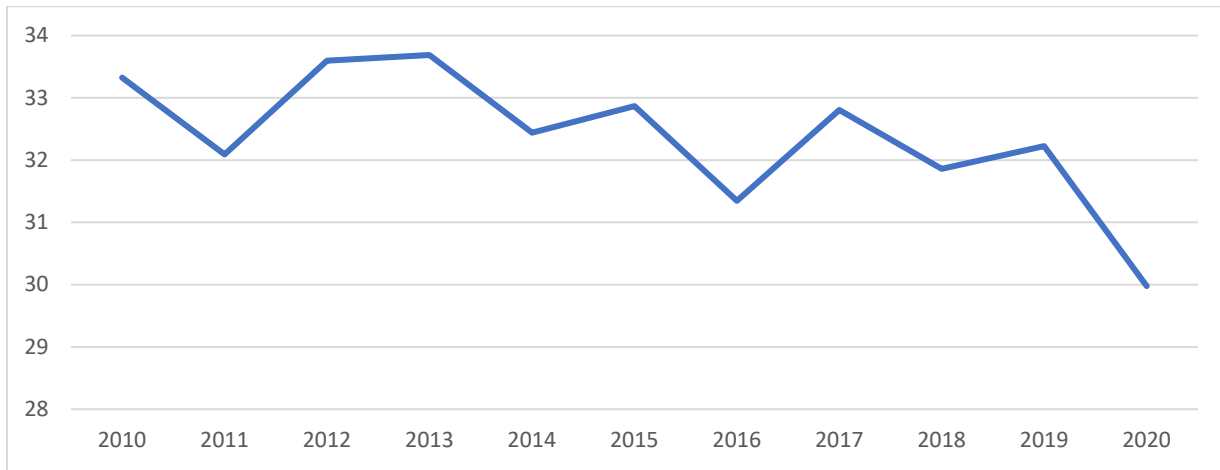
Source: World Bank (2020a).

Figure 35: NEET youth (aged 15 to 24), % of total for North Macedonia, EU, OECD and regional peers
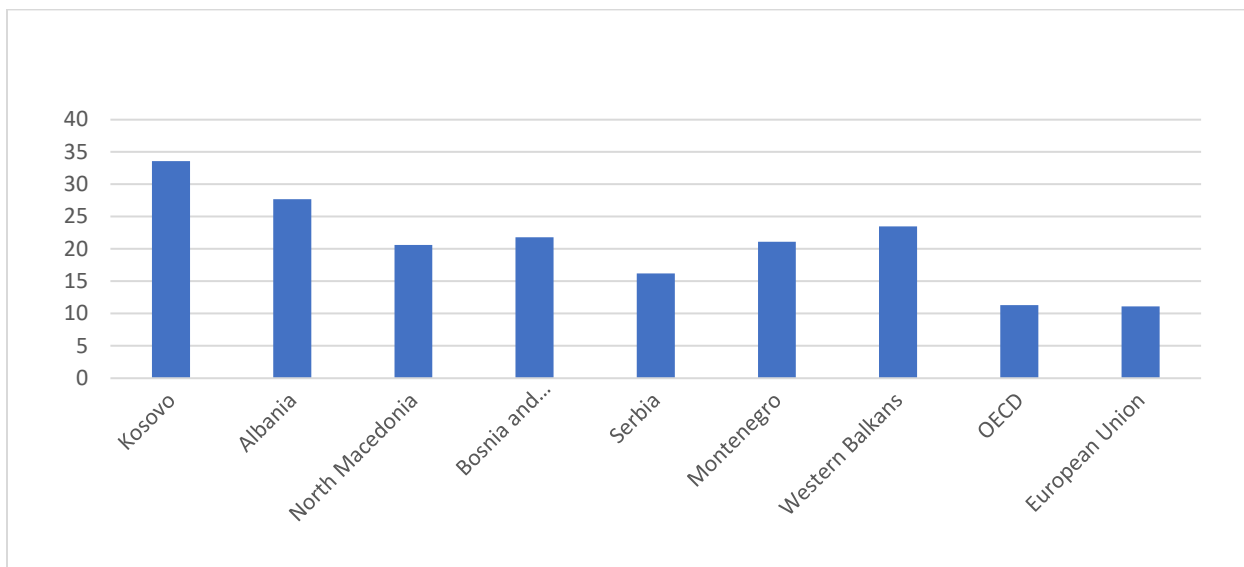
Source: World Bank (2020a); ILO (2020); Kosovo Agency of Statistics (2020).

For the employment rates there is a big gap between the regions. The range from 36% in the Polog region up to 62,5% in the Southeast region. Labour force rates are as well pretty low in some of the regions, which indicates a big share of people who are not economically active. The participation rates for the labour force were the lowest in the Polog and Northeast regions (47,9% and 54,7% in 2020, respectively) and were the highest in the Southeast region 65,3% in 2020 (as shown in Table 6).

Table 6: Employment and labour participation by regions, 2020

Regions	Population	Population (%)	Employment rate (%)	Labour force participation rate (%)
Vardar Region	150.319	7	53,7	60,4
East Region	172.277	8	53,1	57,7
Southwest Region	218.114	11	42,1	55,4
Southeast Region	171.840	8	62,5	65,3
Pelagonia Region	224.670	11	55,1	63,7
Polog Region	322.166	16	36	47,9
Northeast Region	175.171	8	37	54,7
Skopje Region	634.251	31	47,3	55,2

Adopted from State Statistical Office (2020c).

Employment per sectors has changed in the recent years and the biggest employer currently is the manufacturing sector with 20%, followed by wholesale and retail trade with 15% and agriculture steadily dropping to 12% (as shown in Figure 36).

Figure 36: Employment by sector as a % of total for the year 2020
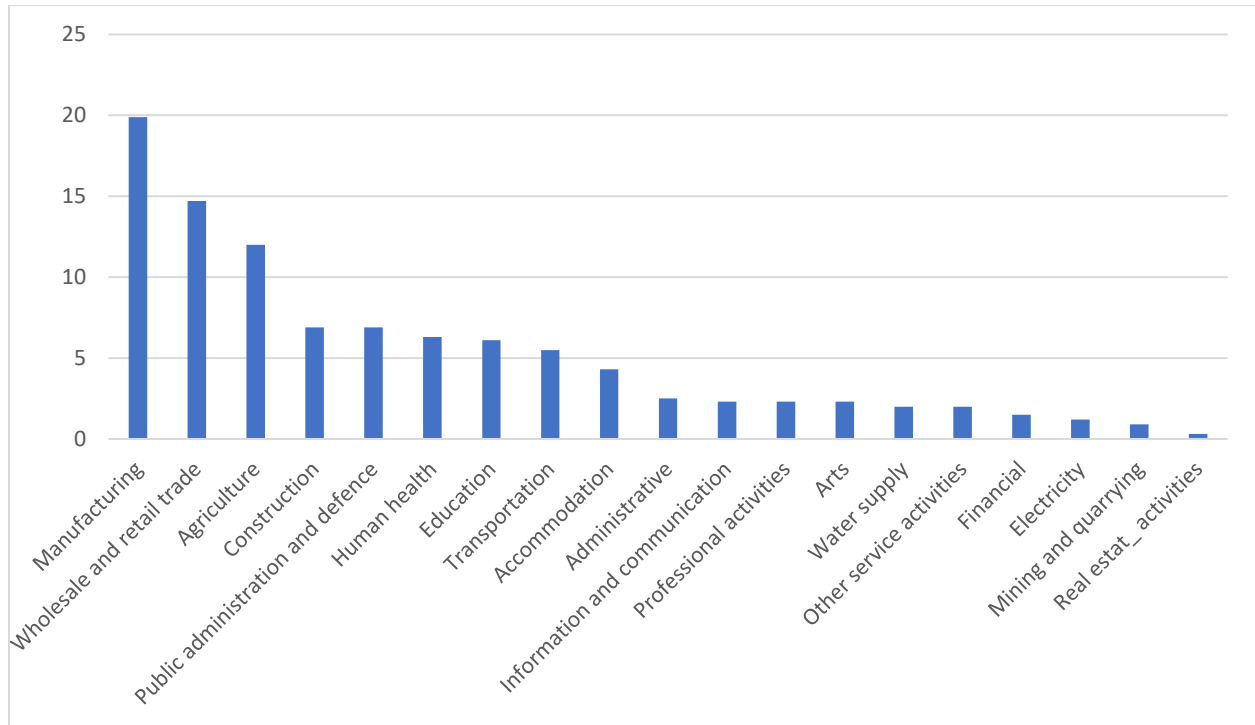
Adopted from State Statistical Office (2020c).

3.3 Migration

In this chapter the concentration will mostly be on the results from the official census in 2021 in regard to the census in 2002. Because of the scarcity of information from the Statistical office of North Macedonia on migration, different sources from the most probable countries of migration for people of North Macedonia will be used.

The official data from the Statistical Office of North Macedonia on net migration does not represent the true picture. That is mainly because of methodology that is being used, which consider for a person to be emigrated from the country if it has all of his paperwork fulfilled and given to the proper authorities. From the Figure 37 it is also visible that North Macedonia has had very small emigration and that it has a positive net migration.

Figure 37: Immigration, emigration and net migration for North Macedonia in the period 2014-2020
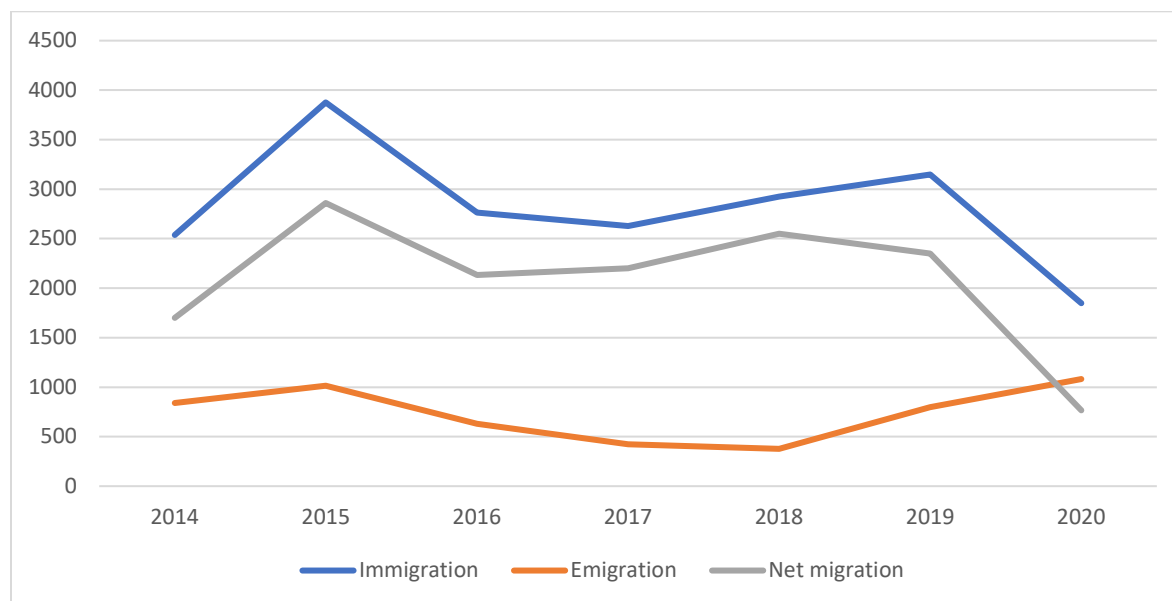
Source: Statistical Office of North Macedonia (2022).

Also, there is no available data in the Statistical Office of North Macedonia for the number of people with dual citizenship and also number of people who have renounce their citizenship. From the data available on Eurostat (as shown in Figure 38) it is shown that 71.643 people have received an EU or EEA citizenship in the period from 2011 to 2020. From the data available, it is shown that in the same period at least 4.220 people have renounced their citizenship because Austria and Slovenia do not allow for a dual citizenship. Most of the people who have gained these citizenships are currently living and working abroad. Most of the gained citizenships have been concentrated in three countries: Italy, Switzerland and Germany.

Figure 38: Acquisition of citizenship in European countries by former citizenship (North Macedonia) in the period 2011-2020
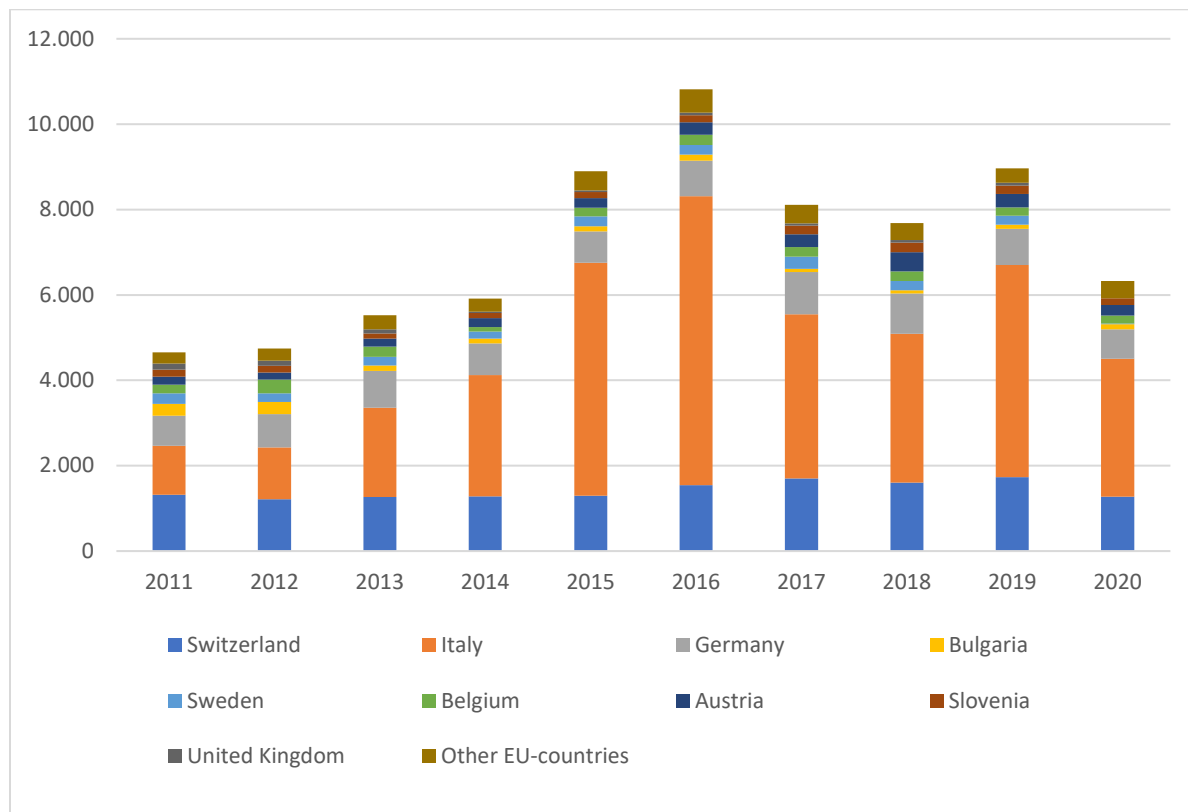
Source: Eurostat (2020).

Emigration of people from North Macedonia has been constant in the past 15 years. From the data available on Eurostat for immigration by country of birth it is shown that 59.094 people have emigrated to EU and other Balkan countries in the period from 2008 to 2020. This data contradicts the data of the Statistical office of North Macedonia, and it shows that North Macedonia has indeed a negative net migration and not a positive one.

From the migration in the period 2008-2020 around 75% of that population represents the population from 15-44 of age. In Figure 39 it is shown the structure of the population that has emigrated in the European countries, and as visible the biggest number of that population is between 20 and 24 years of age.

Figure 39: Immigrant population by age in the EU for the period 2008-2020 from North Macedonia
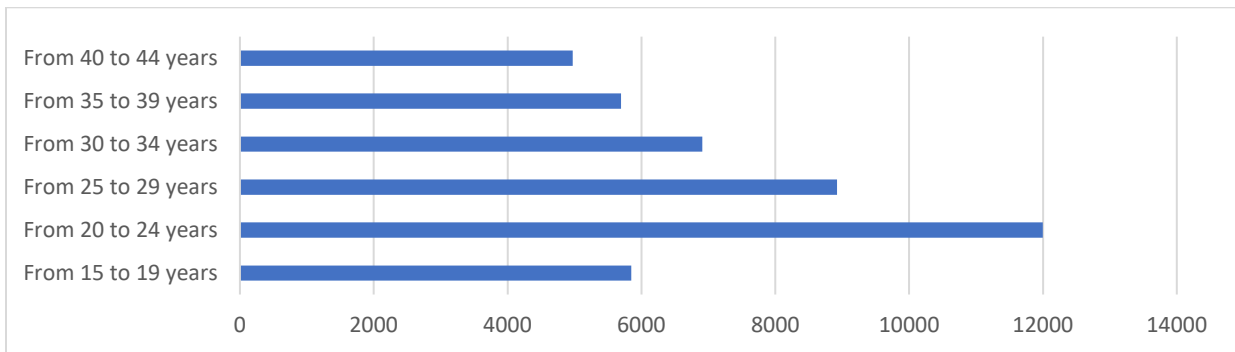
Source: Eurostat (2020).

For the real representation of data, a comparison of the census data from the 2002 and the last available data from the census of 2021 has been made. Because the census data for 2021 is not complete yet, there are only the preliminary results that are being compared for our intended groups, the number of people in a certain age group and then shows the number of people from that group 20 years later (new census in 2021) shown in Figure 40. For more real results the prediction has been adjusted for the average mortality for the same group. Here our group of interest has been taken, so the age from 20-49, because this group shows our youth and working age people who might have migrated abroad in the last 20 years. As shown in the prediction only in these age groups North Macedonia has lost 151.121 people due to migration.

Figure 40: Prediction of resident population in 2021 based on the 2002 census, adjusted for mortality and compared with 2021 census for the age groups 20-49
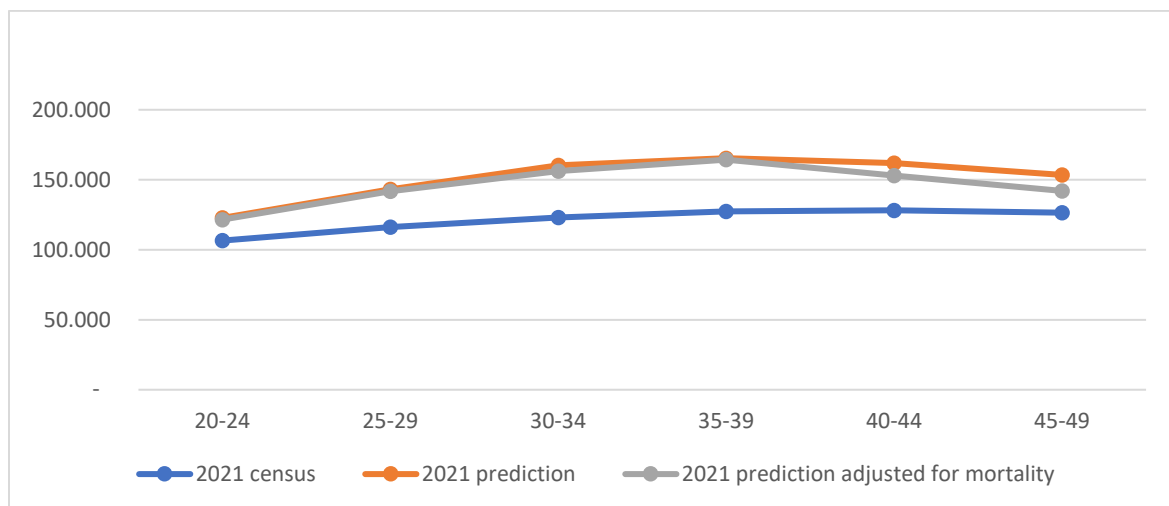
Source: Own work; Statistical Office of North Macedonia (2022).

53

To confirm the prediction and to compare the census population, especially for the people that have migrated abroad, research has been made on the Statistical office websites of the favorite destination countries for the people of North Macedonia. The data has been gathered from these countries and displayed in Figure 41. In these 7 countries the total population that has Macedonian citizenship amounts to 334.637 people in 2020. Germany has the biggest percentage of resident population with Macedonian citizenship from the countries reviewed, which in accordance with their national statistical office the number of people with Macedonian citizenship has doubled in the last 10 years (61.794 in 2011 to 117.969 in 2020).

Figure 41: Foreigners with Macedonian citizenship in population of the destination countries in 2020
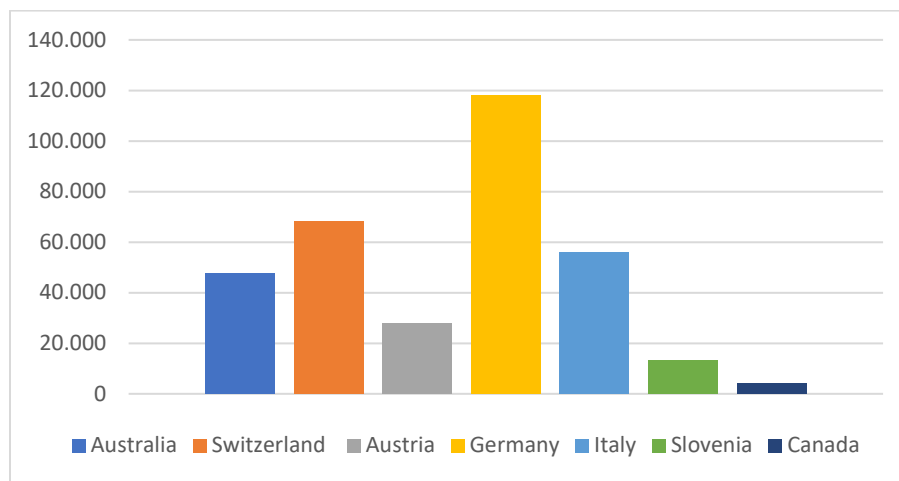
Source: Statistical office of Australia, Switzerland, Austria, Italy, Germany, Slovenia, Canada.

Because the data available in the Statistical offices of these foreign countries is often scarce and not comparable because of their own statistical methods, for further analysis has been chosen only the data for Germany and Switzerland as the two countries with the biggest migration population with Macedonian citizenship. As visible from the data in Figure 42 almost 70% of the population with Macedonian citizenship in Germany is in the age range between 15-50 years old. Also, it is visible that the Macedonian population has doubled in the last 10 years in Germany, from 61.794 residents in 2011 to 117.969 residents in 2020. The obvious concerning fact for North Macedonia and its youth emigration problem is that the resident population in the age range from 18-50 has doubled in the last 10 years from 36.889 residents in 2011 to 71.757 residents in 2020. Limitations of the data here are represented in the fact that there is no available data on the education level of these residents in Germany and also the other countries so we can't compare the brain drain directly onto the German resident population.

The situation with Switzerland data is a bit different. The population with Macedonian citizenship here in the age range 15-44 has increased by 10% in the last 10 years (as shown in Figure 43), which follows the natural increase of 10% of total Macedonian immigrant population in Switzerland. Here the limitations of data on education levels also do not allow for research on the brain drain from North Macedonia to Switzerland.

Figure 42: Population with Macedonian citizenship by age categories in Germany
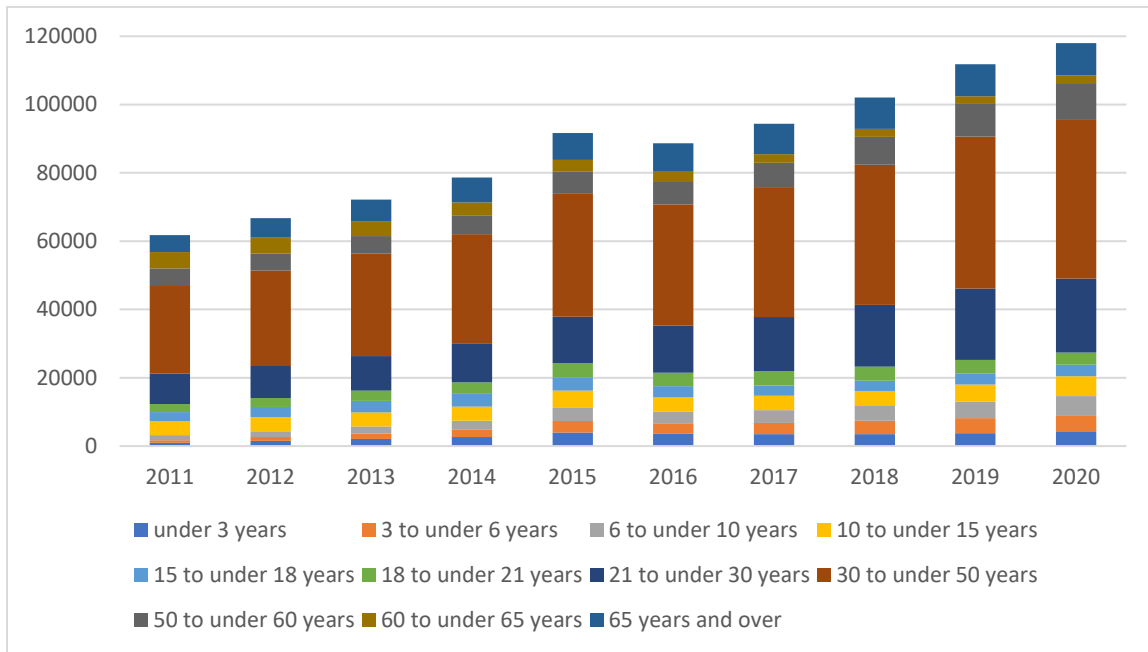
Source: Statistical office of Germany (2020).

Figure 43: Population with Macedonian citizenship by age categories in Switzerland
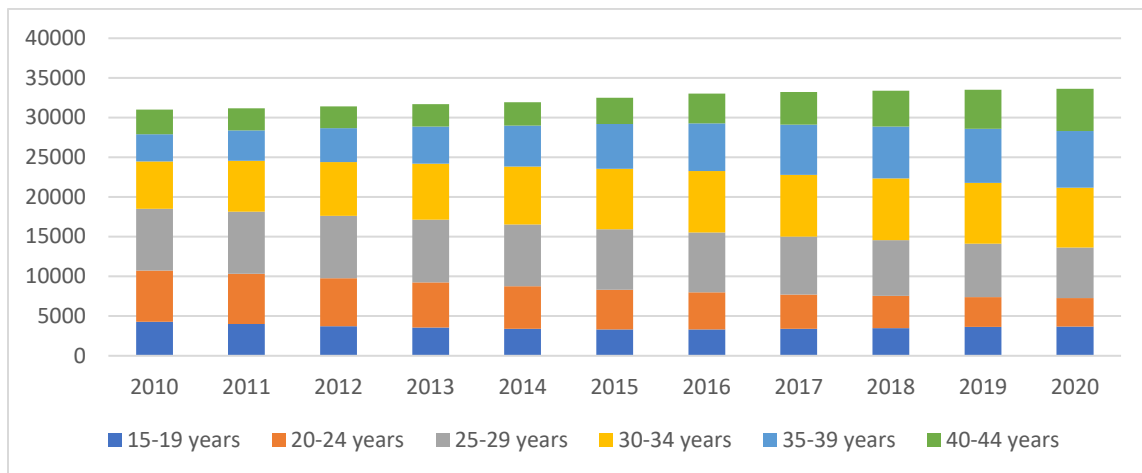
Source: Statistical office of Switzerland (2020).

The biggest limitation of data that can't be underestimated is the number of Macedonian citizens which hold Bulgarian passports and have dual citizenship. This number is according to the European Commission 86.566 in the last 15 years (European Commission, 2022a). Most of these people that have acquired these citizenships are believed that are already leaving abroad in the EU. Because all of those people with Bulgarian citizenship are reported as Bulgarians in the local Statistical offices in the EU countries, the real picture of Macedonian citizens living abroad is underestimated.

3.4 Factors affecting migration in Macedonia with special focus on tax policies

The tax system in North Macedonia in the income tax area is characterized by a flat taxation personal income tax, as well as for the corporate income tax, with two of them standing on a rate of 10% at the moment. Exemptions are provided only in the taxed income from games of chance which are taxed at 15% tax rate. The flat tax system was firstly introduced on January 1st, 2007, with a flat rate of 12%, which was further lowered to 10% as of January 1st, 2008. Prior, in the year 2006 the tax rate on corporate income was proportional and amounted to 15%, while the personal income tax had a low but still progressive tax rate, with rates of 15%,18% and 24% (Ministry of Finance of North Macedonia, 2020a).

The fact that the North Macedonia is a country with high income inequality and poverty was probably the key motive of the new Government to introduce progressive personal income taxation. The aim of this measure was to reduce the income gap between the rich and the poor. If this measure went according to plan in the near future richer people would have to pay more taxes, and the government would redistribute those funds to fight poverty.

The new law on the North Macedonia tax system was introduced and was supposed to be in effect as of January 1st 2019, characterized by a progressive taxation in the personal income tax – incomes from labour are taxed with only two rates: 10% for incomes up to 90.000 MKD per month and a higher rate of 18% for the amounts above that threshold, while capital incomes were taxed with a flat rate of 15%, and the flat rate of 10% on corporate income remained. The purpose of the reform was to decrease inequality and provide the means for income distribution (Ministry of Finance of North Macedonia, 2020b).

The supposed effects from the introduction of the progressive and higher tax rates were analysed based on preliminary data for the period between January 1st - June 30th, 2019 and compared to the same period in 2018. The findings from the analysis showed that even though the reform could increase fiscal revenue, the revenue generated could have been 51% higher, haven't there been a change in the behavior of the taxpayers as a consequence of the introduction of progressive taxation.

In accordance with the government estimates, the progressive taxation aimed to affect the 1% of the wealthier citizens, and the expected revenues from this reform were estimated at 1.558 million MKD (25 million EUR). The further analysis indicated that tax avoidance most likely occurred. The most likely common ways of tax avoidance include opening up bank accounts in neighboring countries, and transfer of earned incomes to other people like relatives and friends who won't reach the progressive tax threshold. Therefore, with such outcome the analysis showed that income distribution was artificially improved, significantly undermining the fiscal effect. The commitment of the government to fight, not increase the informal economy led to the decision to suspend the reform for 36 months starting as of January 1st, 2020 (Ministry of Finance of North Macedonia, 2020c).

With such behavior from the residents of North Macedonia it is evident that the progressive taxation could lead to even bigger brain drain in North Macedonia, because it can become a push factor for the highly skilled people in the country like the IT sector to move abroad, where there is so much need of their services.

4 EMPIRICAL RESEARCH

4.1 Research design

North Macedonia has been facing the loss of youth as well as educated youth (brain drain), which is linked with the loss of creative work force and investment in human capital and represents one of the biggest problems of the country. One of the crucial questions for the countries of birth (North Macedonia) is if migration helps or impedes development. Migration might impede development by losing the skilled people (known as 'brain drain'), eliminating the energetic young personnel and lowering pressure for social development. Migration usually includes allocation of the most valued economic resource - human capital from poorer to richer countries. The family, regional communities and country of birth have carried the cost for the background of education of the migrant to his adult age and the destination country will get the benefit of this investment. Usually, migrants are returning in their native countries since they have completed their work abroad and then the home country has the duty of being again responsible for them. It will be beneficial for the emigration country only if the potential transfer of capital from the workers abroad and the transfer of know-how on their return will outweigh the potential loss of human capital and the costs associated with that loss (Castles, 2000).

For the collection of the primary data, a questionnaire was prepared on Google forms and it was dispersed using the snowballing method through social media where 172 responses were collected. The analysis of the questionnaire data was done with SPSS.

4.1.1 Research goal with hypotheses

The research goal of the master thesis in accordance with our literature review and the theoretical assumptions is to examine the trends, the causes and consequences of emigration of youth and "brain drain" in North Macedonia. According to that structure the hypotheses have been divided in to three parts: satisfaction with life in North Macedonia, attitudes towards and causes of migration and consequences of migration for North Macedonia.

The following hypotheses will be tested:

1. Satisfaction with life in North Macedonia:

H1.1: There is a relationship between the dissatisfaction amongst the highly educated people and the political situation;

H1.2 There is a relationship between the dissatisfaction amongst the highly educated people and income and earnings;

H1.3: There is a different relationship with satisfaction from the workplace from citizens employed abroad than with the ones which are employed in the home country;

H1.4: There is a relationship between being employed abroad and returning permanently home in North Macedonia.

2. Attitudes towards and causes of migration

H2.1: There is a relationship between the consideration for employment abroad in comparison with employment in the home country and studying abroad;

H2.2: There is a relationship between satisfaction of the workplace and the plans for migration for citizens employed in North Macedonia;

H2.3: There is a relationship between the expectation of better living standard abroad than in the home country and being employed in North Macedonia;

H2.4: There is a relationship between the salary offered and the acceptance of a job with lower skills that the people posses;

H2.5: There is a relationship between low wages and plans for migration for people employed in North Macedonia;

H2.6: There is a relationship between corruption in the country of origin and the reason for migration for people already employed abroad;

H2.7: There is a relationship between the statement that income taxes are high in North Macedonia, and the proposed income tax scheme.

3. Consequences of migration:

H3.1: There is a relationship between the brain drain and the emigration of youth with the general economic development of the country;

H3.2: There is a relationship between remittances and the emigration of youth and brain drain.

4.1.2 Questionnaire description and survey implementation

From the research point of view, there are two broad approaches in regarding to the data collection that can be applied in the research: qualitative and quantitative research (Pathak, Jena & Kalra, 2013). Qualitative research is focused on understanding the research questions as idealistic or humanistic and was mostly used for understandance of people's behavior, altitude, beliefs, etc. (Pathak, Jena & Kalra, 2013).

For the quantitative method we can say that is a more reliable method, because it is based on numbers (Pathak, Jena & Kalra, 2013) and is defined as *"numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect"* (Sukamolson, 2007). Questionnaires are considered the most used quantitative technique of data collection.

For our questionnaire we prepared 37 questions and sub-questions in total. The questionnaire has all the techniques of data collection where each person has to answer the first 12 same set of questions that are in a predetermined order. Then the rest of the questions are divided by sub-groups in regard to their employment status. This type of questionnaires are good to use for collecting data, when there are not a lot of open-ended questions (Saunders, Lewis & Thornill, 2009).

Depending on their administration there are different types of questionnaires (Saunders, Lewis & Thornill, 2009):

1. Self –administered questionnaires which represent the questionnaires that are completed in full by the respondents and here we consider three different types:
a. Internet and intranet questionnaires (are delivered using the Internet).
b. Postal questionnaires (delivered using the post office).
c. Delivery and collection questionnaires (delivered in person to respondents and then collected after a certain time period).
2. Interviewer – administered questionnaires:

a. Telephone questionnaires (this type of questionnaires are administered by phone calls and let by the interviewer).

b. Structured interviews (interviewers meet in person with the respondents and collect the answers).

For our analysis, due to the large population on different distances, we decided to conduct the self-administered questionnaire using the Internet. We decided on this type of questionnaire because of the following factors:

1. Demographic characteristics of the respondents which were the target group.
2. Sample size.
3. Number and type of questions and sub-questions in the questionnaires.
4. The geographic distance with the respondents.

The questionnaire was prepared in Google forms, due to its simplicity to use and there are different formats available for extraction of the final data. The questionnaire was prepared only in English language, as for our target group it is believed that all the respondents have English skills. The data collection was conducted in the year 2020.

The target sample for this analysis were Macedonian citizens between the ages 18-45, which were either enrolled in a university, employed in North Macedonia or employed abroad. The survey was spread using social media like Facebook, mail, etc. We used the snowball sampling method to distribute the questionnaire where it was circled among people with higher education. Since the questionnaire was spread through the social media, we cannot know how many people received it.

The purpose of the questionnaire was to reach the people's opinions, since lots of young people that answered have already emigrated and are living abroad and they represent a good sample for explaining what were their main reasons for deciding to study or work/live in another country rather in their country of birth. The other ones that answer the questions are a good sample about the satisfaction with the life in North Macedonia, and do they ever think to leave the country and what are the main reasons to do so. The questionnaire contains also Likert scale questions which are an easy way for the people who are answering to express their opinions or perceptions on the proposed answers. Also focus was given to income tax with proposed answers, since North Macedonia is one of the countries with the lowest income tax and as discussed in the previous chapter the income tax stayed at 10% although measures for change were proposed.

4.1.3 Sample description

The primary sources for the needs of our research were collected through survey of individuals. Our main target were categories representing people between the age of 18 and 45, where our main target were people with higher education, bachelors and above which represent our potential population for brain drain. This doesn't mean that the questionnaire wasn't open for people that are older than these categories. They could also add their age and answer the questionnaire.

First 12 questions are general for all respondents, out of which 6 questions are regarding the demographic characteristics of the respondents. One of the demographic questions regarding the activity status of respondents, separates the group of respondents in 4 sub-groups, with questions which are specific to each sub-group. Those 4 sub-groups are: employed in North Macedonia (full-time, part-time or self-employed), student, living/employed abroad and unemployed/work in shadow economy. One percent of the respondents answered that they are not searching for work and they ended the questionnaire with the first 12 questions. In Figure 44 it is visible that full-time employed, part-time employed and self-employed in North Macedonia which represent our first group are represented in the questionnaire with 55% of all respondents. The second group which was represented with 25% was the group of respondents which are already employed and living abroad. The third most represented group are students who represent 10% of all respondents and the last group are people who are unemployed or working in shadow economy with 9% of all respondents.

Figure 44: Activity status of respondents, as a % of all respondents

Source: Own work (N=172).

61
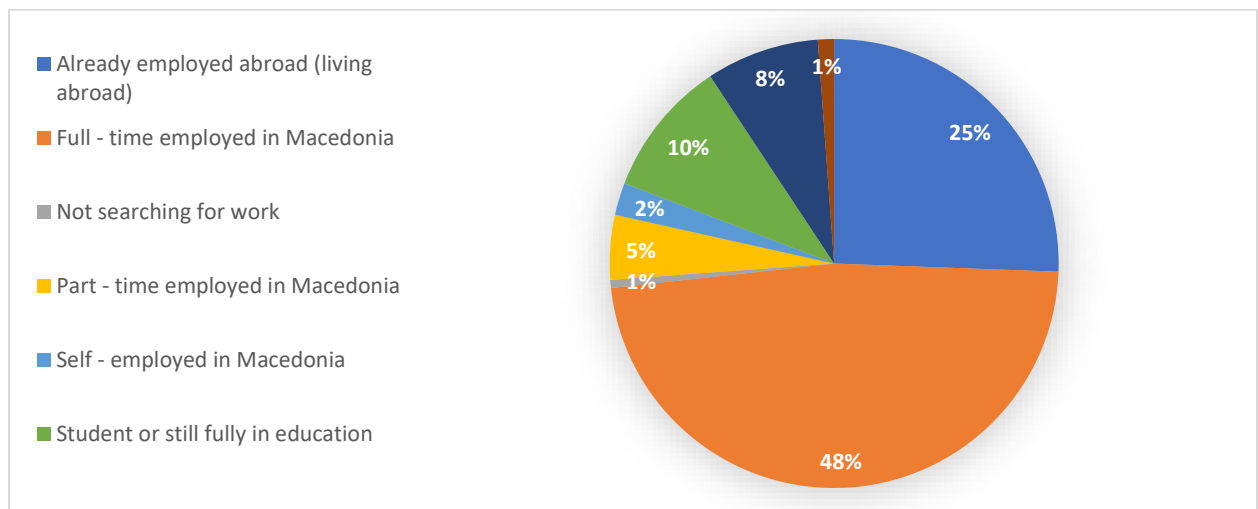
From the respondents that are already migrated we have answers from Slovenia, Germany, Australia, Canada, USA, Serbia, Italy, Netherlands and other countries. Thirty-one respondents answered Slovenia which equals to 70% of all respondents. Other answers represent a smaller percentage of the respondent population like Serbia (2 respondents), Germany (2 respondents) and Italy, Malta, Australia, Canada, UK, France, Netherlands, Slovakia, USA (1 respondent from each country).

From the respondents that are employed in North Macedonia, 64% have found employment in their field of study versus 34% which have not. In comparison respondents that are already employed abroad, 73% have found employment in their field of study, versus 27% who have not. Most of the respondents in North Macedonia are employed by an international company (33%). Second biggest employer are the local companies (30%), followed by a governmental institution with 23%. From the rest of the respondents 6% are self-employed, 4% are employed by NGOs and 3% are employed in education. In comparison 43 % of respondents that are already employed abroad are employed by an international company, followed by 30% employment in the local companies and 16% employment in governmental institutions. NGOs employee 2% of the respondents and 2% are self-employed. Regarding the size of the companies, 37% of respondents employed in North Macedonia are in bigger companies, followed by 26% employment in small companies and 24 % employed in middle size companies. Only 13% are working in a micro business. In comparison, respondents that are already employed abroad, 48% of them work in a bigger company, followed by middle size and small companies, both represented with 23% and only 7% are employed in a micro business.

The majority of the respondents were in the targeted group in the ages of 18-45. They represent 91% of total respondents. Most of them are representing the category between the age 26-35 or 57% (98 people) from all respondents. The second and third biggest population, both with 17% of all respondents represent the category between the ages of 18-25 and 36-45, respectively (as shown in Figure 45). From all of the respondents 70% were female and 30% male respondents.

Figure 45: Age group of respondents, as a % of total respondents
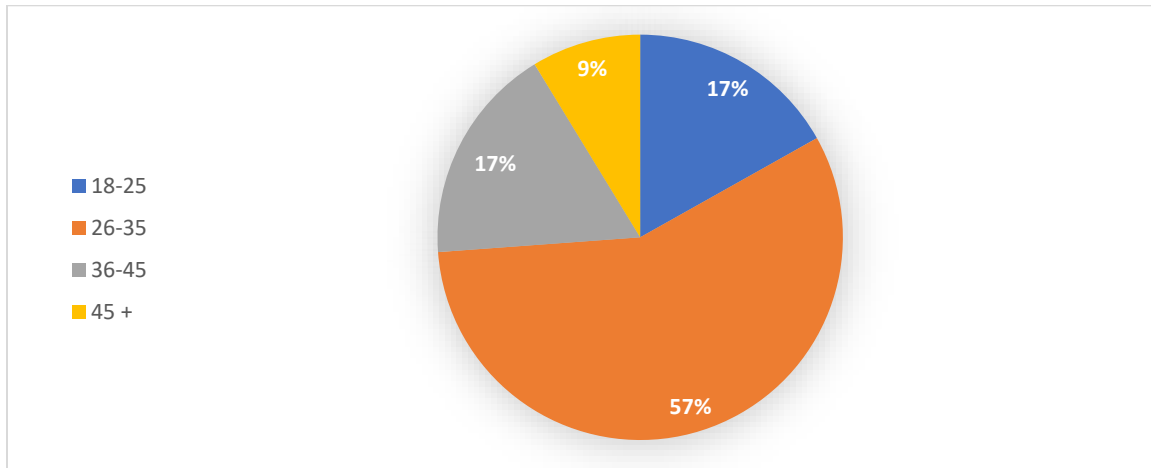
Source: Own work (N=172).

Figure 46 shows that 92% of respondents have finished a higher education level and they represent our population for potential brain drain or brain drain that has already occurred. The biggest population percentage are respondents with bachelor's degree with 51%, followed by master's degree with 38%. Only 3% of respondents had a doctoral degree and 8% had only secondary school. From the respondents 91% have responded that they have enrolled at/have finished or are planning to enroll to state university. The remaining 9% are from private university.

Figure 46: Education level
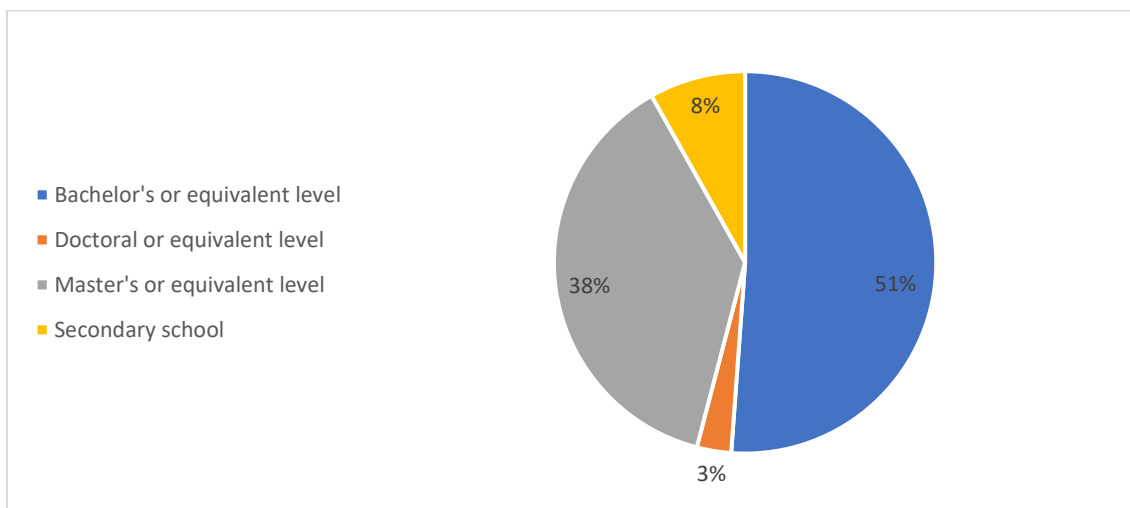
Source: Own work (N=172).

Regarding the field of education 32% of respondents are in the business, administration and law field of education and they represent the biggest group in the respondents. Second biggest group are the respondents with information and communication technologies field of education with 12% of total respondents. The next important groups from the field of education are social sciences, journalism and information, health and welfare and education with representation of 11%, 10% and 10% respectively. Other groups in the field of education that are represented with more than 1% are engineering, manufacturing and construction, arts and humanities, natural sciences, mathematics and statistics and services (personal services, transport services, security services, environmental protection) with representation of 8%, 6%, 6% and 3% respectively (as shown in Figure 47).

Figure 47: Field of education
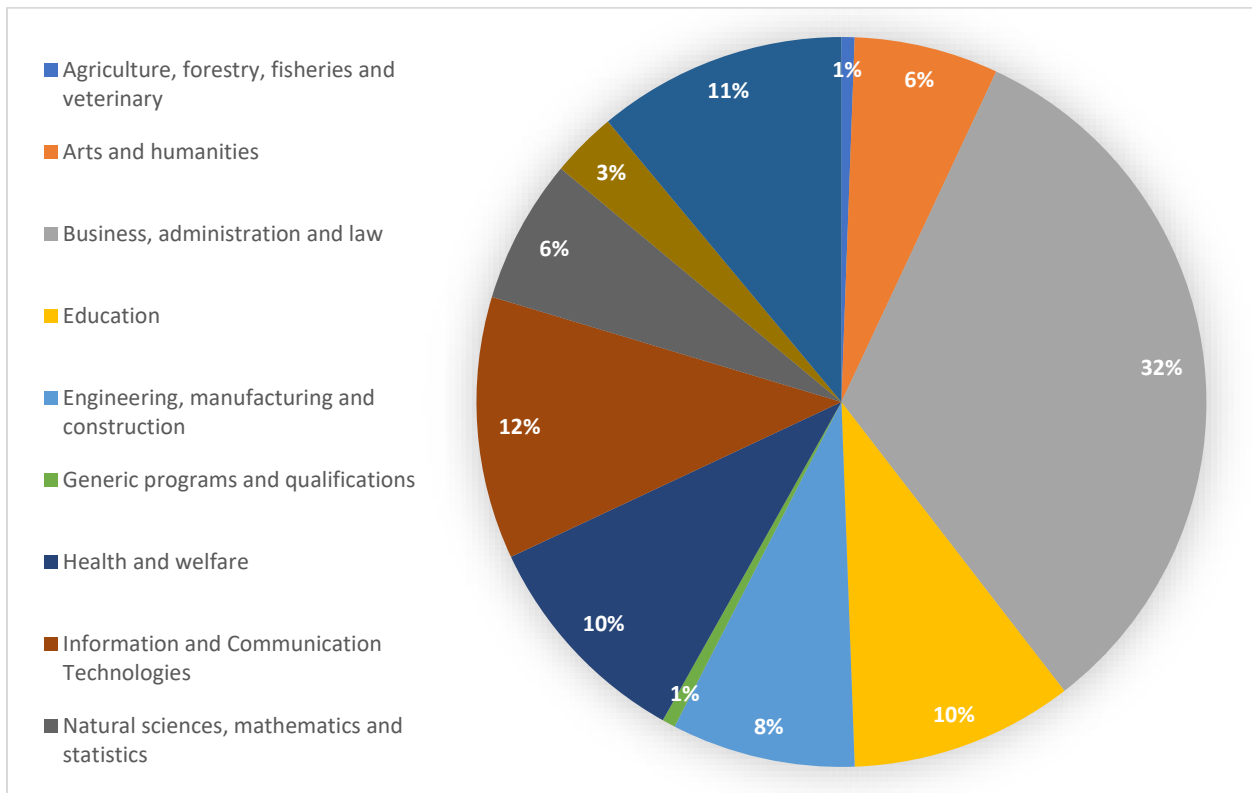
Source: Own work (N=172).

Figure 48 represents the income class of the respondents that are employed in North Macedonia. It is visible that the highest majority of the respondents are receiving well above the average salary. The biggest share of respondents is in the range of 351 EUR- 500 EUR, which is above minimum wage (200 EUR) and around the average wage or above (400 EUR in the time of the questionnaire). The higher salaries represent 501 EUR – 650 EUR with 22% representation, 651 EUR – 800 EUR with 12 % representation and above 801 EUR with 19%

representation. Only 2% of respondents were below minimum wage, and only 20% of respondents were in the range of 201 EUR – 350 EUR, which considering our representation sample of highly educated individuals is expected. Regarding the wage and education structure, respondents with secondary school mostly earn above 350 EUR (60%), respondents with bachelor's degree mostly earn above 350 EUR (76 %), with 31% earning between 501-650 EUR, respondents with master's degree mostly earn above 350 EUR (84%), with 39% earning more than 801 EUR a month and with doctoral degree all of them earn more than 651 EUR a month.

Figure 48: Income class (monthly salary) or respondents employed in North Macedonia
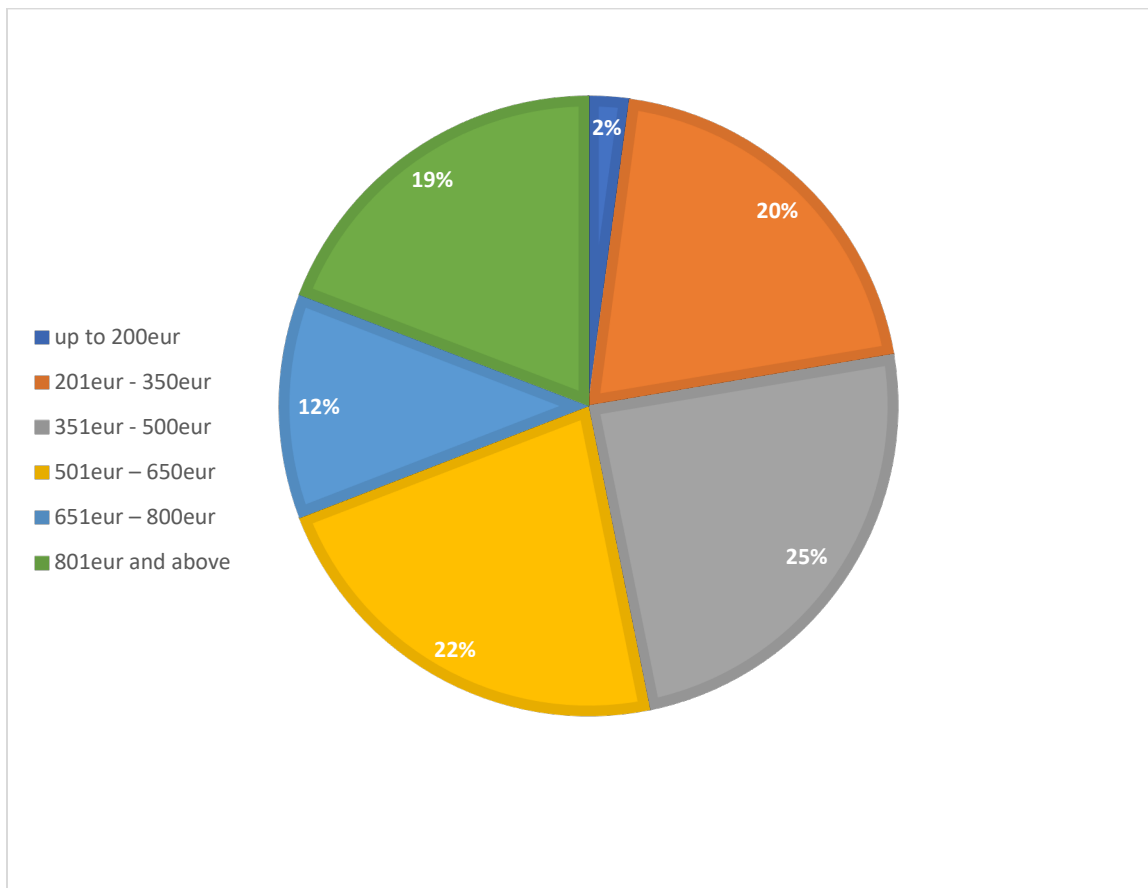
Source: Own work (N=94).

All of the respondents abroad have higher income tax rate in their current country of residence as visible in Figure 49. From the respondents employed abroad 62 % had a progressive taxation in their country of residence and 41% of them paid a tax rate between 10-20%, while 48% of respondents pay 20-30% of personal income tax rate in their country of residence.

Figure 49: Percentage of income tax for respondents employed abroad
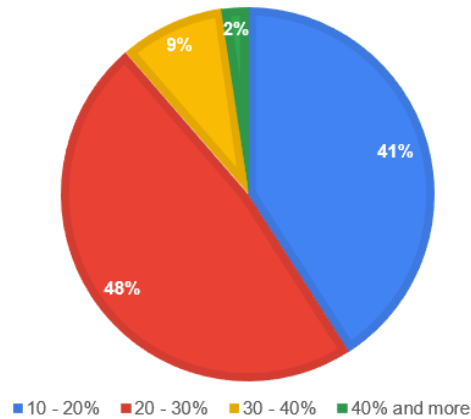
Source: Own work (N=44).

4.2 Results

4.2.1 Satisfaction with life in North Macedonia

From the Figure 50 it is obvious that the biggest percentage of disagreement is about the political situation (65% of the respondents). Just 4 people from the 172 respondents answered that are satisfied with the political situation in North Macedonia, the neutral answer was marked by 26 respondents, and the rest 142 respondents aren't satisfied with the political situation. This confirms our H1.1 hypothesis that people are mostly dissatisfied with the political condition in the country. This answer also shows that this group of people are more and more interested in all the other factors that increase their well-being in the society they are a part of, primarily the political condition.

The other biggest dissatisfactions represent efficiency of institutions (48% strongly disagree, 38% disagree), health system (40% strongly disagree, 43% disagree) and the education system (29% strongly disagree, 41% disagree). What is obvious from the responses is that for every proposed statement there is a higher percentage of dissatisfaction than satisfaction. Only one statement has a more favourable results and that is satisfaction with current income and family income (7% strongly agree, 26% agree and 26% neutral). This is expected as most of the respondents are people with higher education, which on average earn more than rest of the population. This question also confirms the H1.2 hypothesis that the biggest dissatisfaction according to the youth and the highly educated individuals is not about income.

Figure 50: Level of satisfaction with life in North Macedonia with Likert scale offered statements
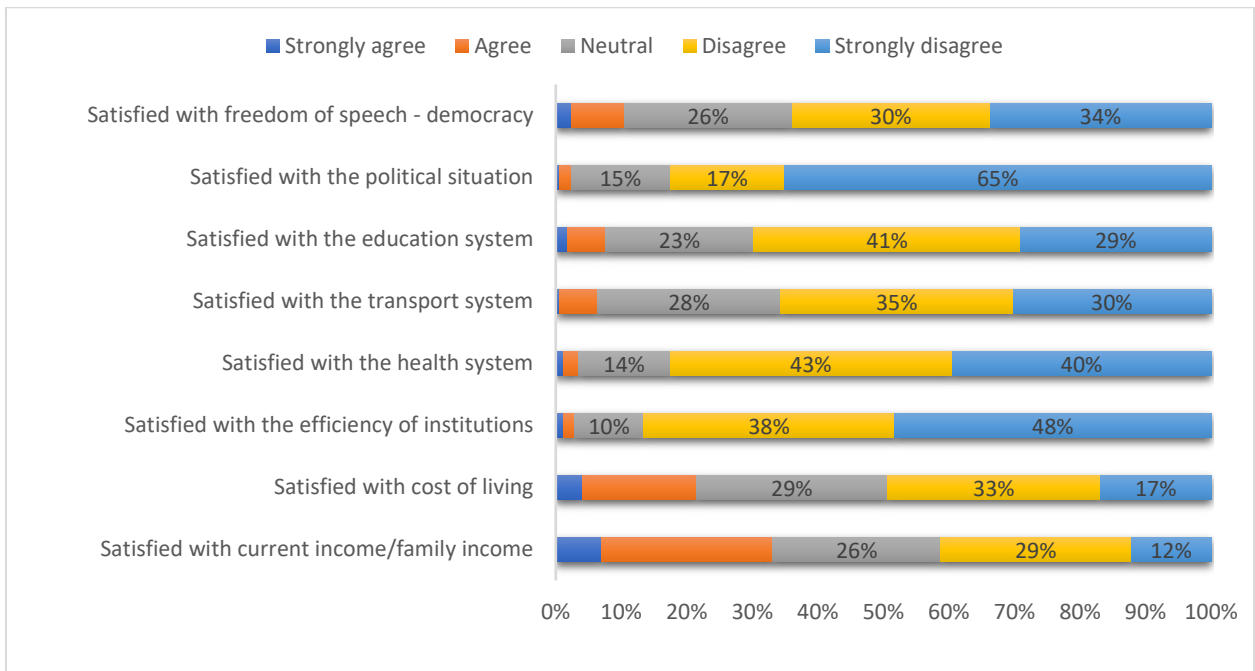
Source: Own work (N=172).

Regarding the level of satisfaction of the workplace for respondents employed in North Macedonia in Figure 51 it is evident that most of the respondents are satisfied with the current workplace. Respondents are satisfied with their work in general (Agree 44%, Strongly agree 11%), then with the usage of their skills and abilities (Agree 49%, Strongly agree 12%), with personal growth and update of skills (Agree 45%, Strongly agree 11%) and their opportunities for promotions based on their skills and knowledge (Agree 41%, Strongly agree 11%). The biggest disagreements are with the statements that they are overqualified for their position (Strongly disagree 13%, Disagree 30%), satisfaction with salary (Strongly disagree 10%, Disagree 26%) and regarding the reward for the quality of the efforts (Strongly disagree 6%, Disagree 22%).

The relationship between the satisfaction of the workplace and the education level was tested. Here the relationship is not significant (correlation 0.167, p=0.108), which shows that the satisfaction is not related to the level of education of the respondents (see more in Appendix 3). Also, the relationship between satisfaction of the workplace and monthly income was tested. The relationship here is significant (correlation 0.453, p<0.001) which confirms the connection between satisfaction of the workplace and the monthly income of our respondents (see more in Appendix 4).

On the other hand, respondents that are already employed abroad are more satisfied. Most of the respondents are satisfied with living abroad (Agree 59%, Strongly agree 27%), they believe that they have a better living standard than in North Macedonia (Agree 34%, Strongly agree 52%), they are satisfied with their work (Agree 50%, Strongly agree 27%). Vast majority of the respondents are more satisfied with their salary now then what they used to make at home (Agree 34%, Strongly agree 50%). This confirms our H1.3 hypothesis that people that are employed abroad are more satisfied with their workplace than people working in North Macedonia.

From other responses it is also obvious that the respondents experience personal growth, are satisfied with their involvement in the workplace and have career opportunities at their workplace. The only disagreement is the possible return home in North Macedonia (Disagree 16%, Strongly disagree 50%) which confirms our H1.4 hypothesis that there is a low probability of a possible brain reverse to the home country.

Figure 51: Satisfaction indicators with the workplace in North Macedonia
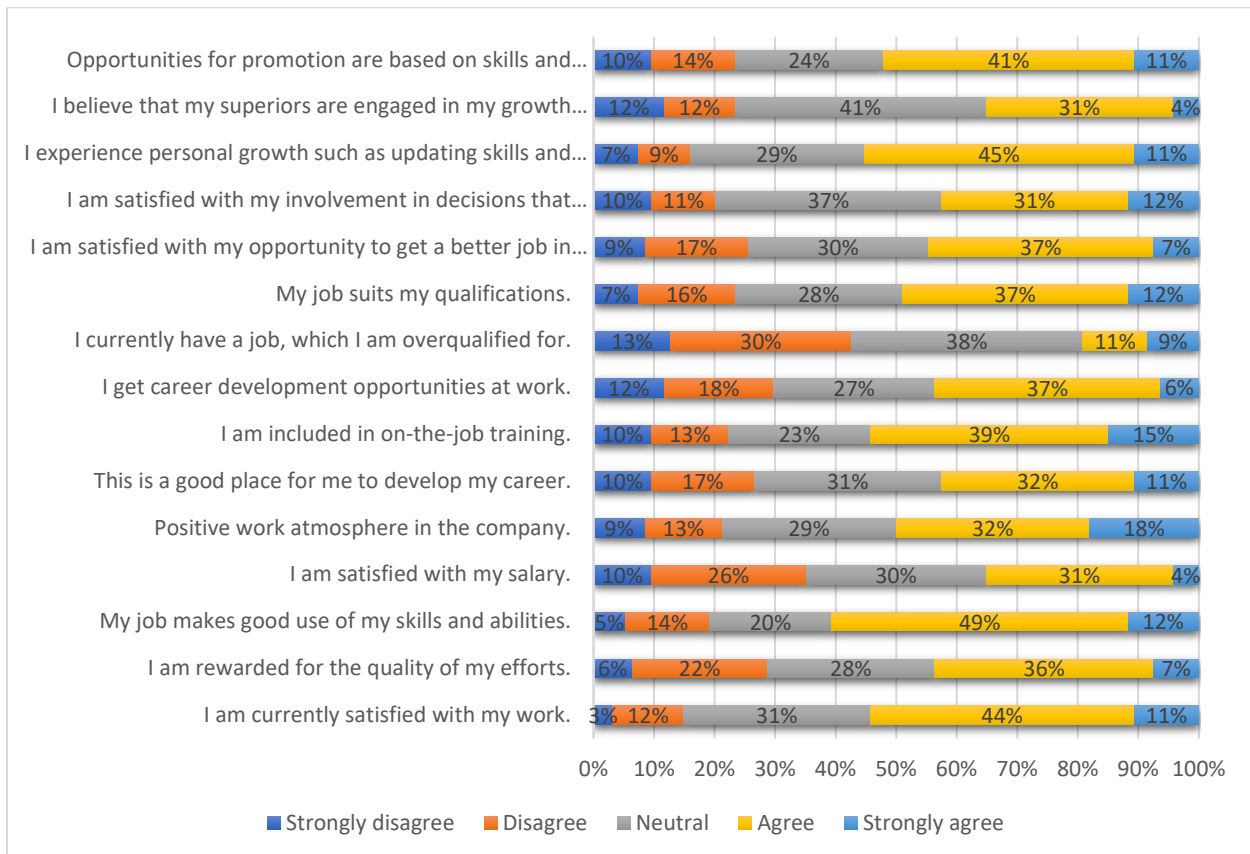
Source: Own work (N=94).

Figure 52 represents the satisfaction with the education they have received so far. The biggest population of students were partly satisfied with their education (47%), while 24% were not at all satisfied. More than satisfied and very satisfied were represented by 6% each, while 18% of the students were satisfied with the education they have received so far. From the students that are studying in North Macedonia 50% were partly satisfied with their education, 38% were not at all satisfied while only 13% were satisfied with the education they have received so far. On the other hand, students that were already studying abroad were partly satisfied with 44% of the respondent population, 22% were satisfied, while 11 % of the responses were for each of the other responses: not at all satisfied, more than satisfied and very satisfied with the education they have received so far.

Figure 52: Satisfaction with education received so far
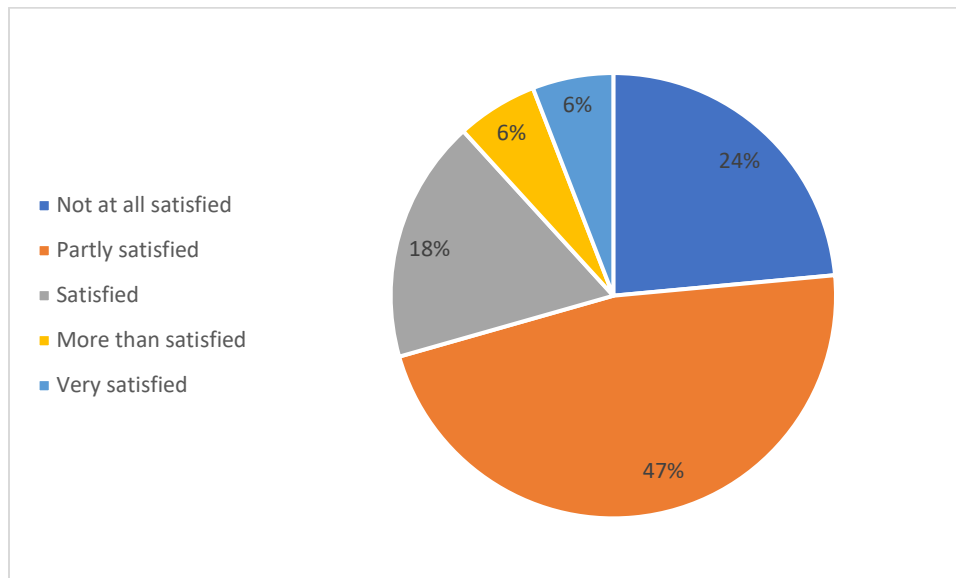
Source: Own work (N=17).

Regarding the consideration of unemployed respondents for starting their own business in North Macedonia more than half of the respondents from this category answered "Yes". But what do they believe that are their biggest limitations for starting an own business in North Macedonia the answers are shown in Figure 53. This was a question where respondents could choose more than one answer and it is visible that the biggest percentage of limitations for starting their own business is low trust in government institutions (75% or 12 responses) and low protection from unfair competition (62,5% or 10 responses) which is then followed by not enough funds (56,3% or 9 responses).

Figure 53: Biggest limitations for starting an own business
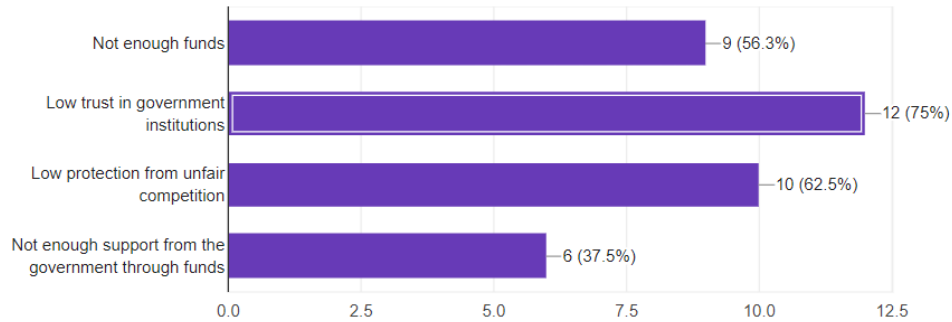
Source: Own work (N=16).

4.2.2 Attitudes towards and causes of migration

From the population of the respondents 17 were students. Regarding their consideration for studying abroad as an aspect of early migration or intention of migration it is visible in Figure 54 that 35 % of respondents have considered, while 12% have not. From our respondents group it is also visible that 53% of respondents are already studying abroad.

Figure 54: Intention for studying abroad
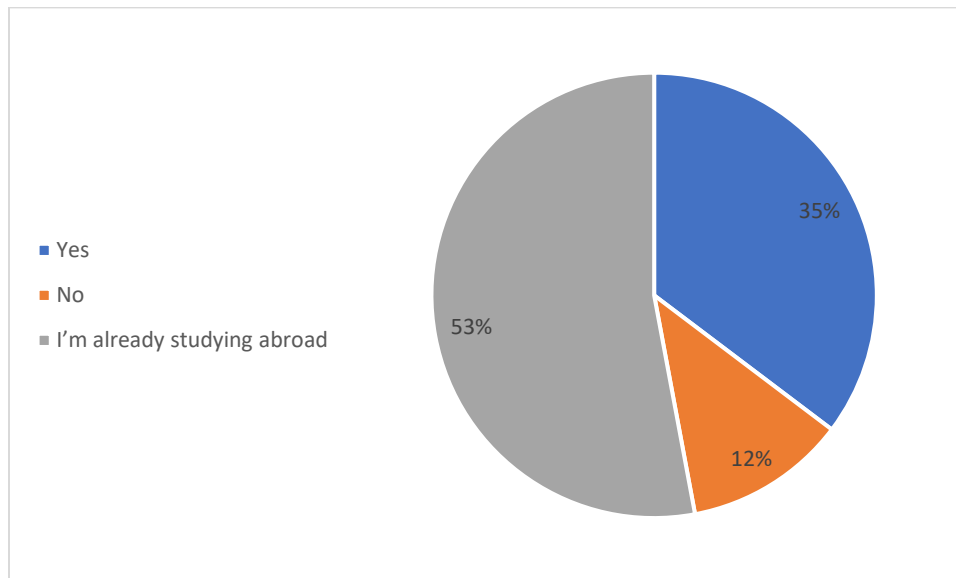
Source: Own work (N=17).

From Figure 55 it is visible that the biggest motive for studying abroad is the opportunity for employment (Very important 67%, Fairly important 22%). Other significant motives are the quality of education programs (Very important 56%, Fairly important 33%) and the type of

education programs (Very important 44%, Fairly important 22%). The least important motive for studying abroad is the improvement of language skills (Very important 22%, Fairly important 22%).

Figure 55: Motives for studying abroad
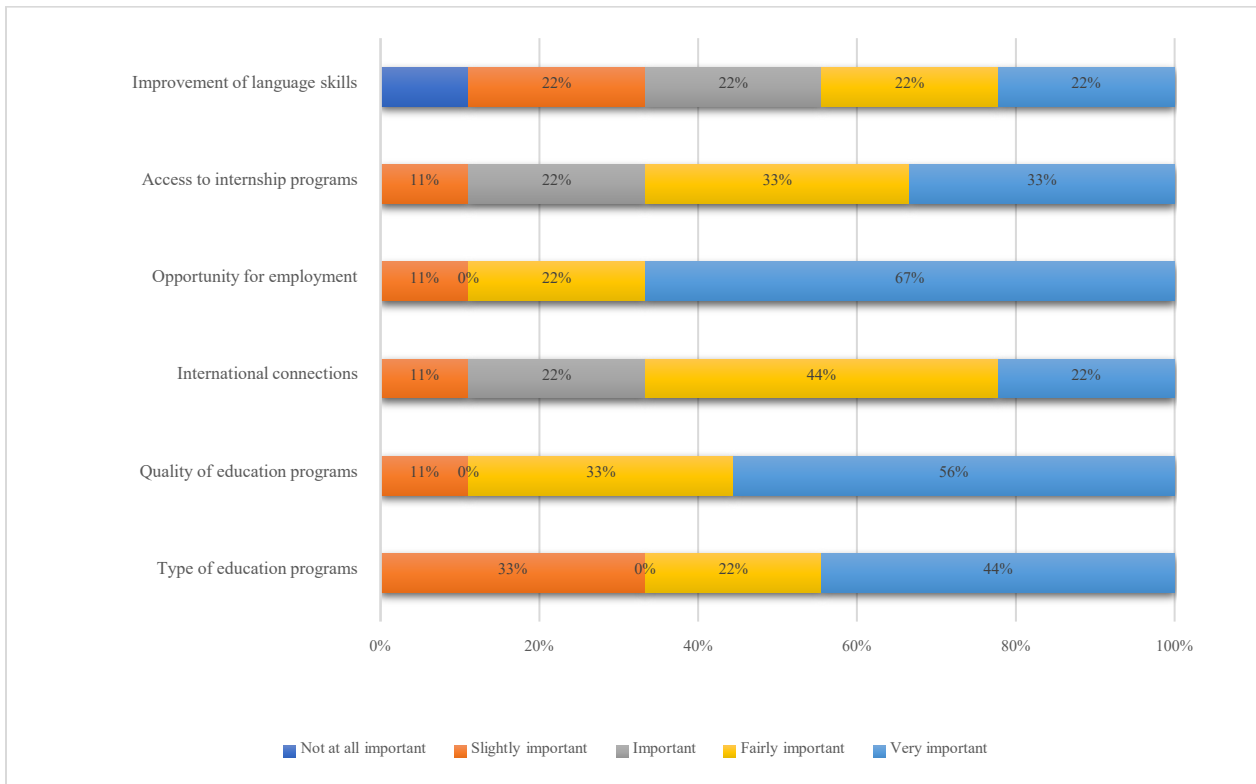
Source: Own work (N=9).

Responses regarding the opportunities for employment after finishing studies abroad in the home country or abroad are shown in Figure 56. As visible most of the students rank their possibilities higher abroad than in their home countries which confirms our H2.1 hypothesis that students who are already studying abroad will consider employment abroad rather than in the home country.

Figure 56: Opportunities for employment after finishing studies abroad
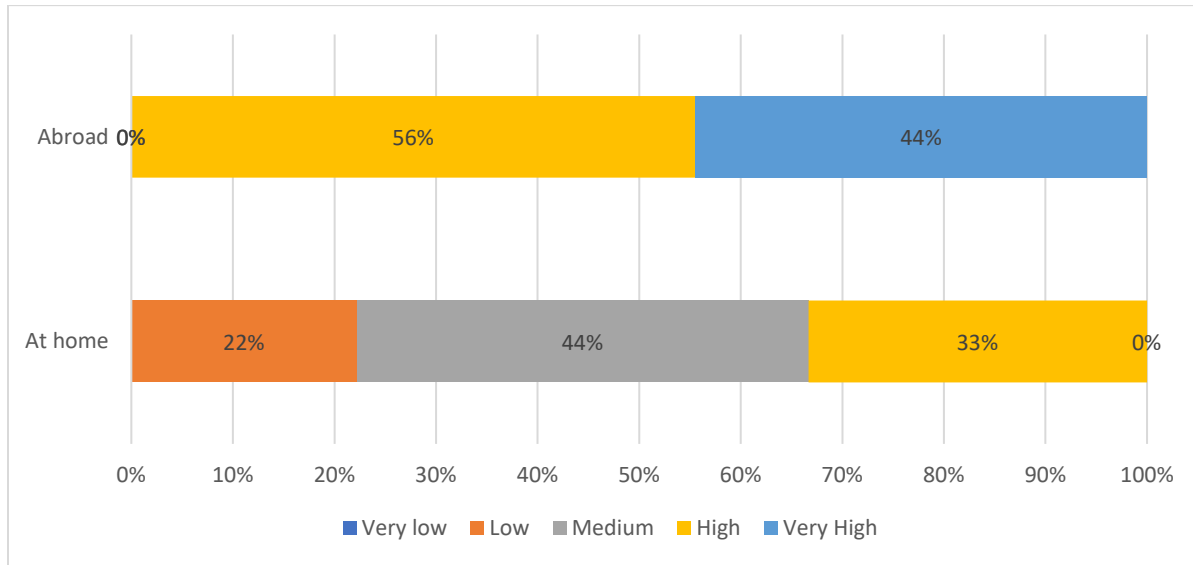
Source: Own work (N=9).

From the respondents that are employed in North Macedonia but are not planning to leave the country, majority or 86% earn above 350 EUR, while only 14% earn below that. From the education structure from the people not planning to leave the country 89% are with Bachelor or higher education. There is also a relationship between satisfaction with the workplace and the intention for migration. The relationship is significant (correlation 0.418, p<0.001), which confirms our hypothesis H2.2 that people who are satisfied with their workplace are not inclined to migration (see more in Appendix 5).

The indicators for leaving the country for people that are employed in North Macedonia, are displayed in Figure 57 which shows that the biggest percentage of respondents expect a better living standard abroad than in North Macedonia (Agree 34%, Strongly agree 29%), which confirms our H2.3 hypothesis. Also, important reasons for leaving the country are because of corruption (Agree 35%, Strongly agree 19%), better life quality such as health and social insurance system (Agree 33%, Strongly agree 26%) and better prospects for their family (Agree 34%, Strongly agree 23%).

There is a similar but not the same picture when the responses from the student population are analysed. Around 76% of students strongly agree with the expectation of better living standard abroad than in North Macedonia. Other indicators that represent the important reasons for leaving the country are better job opportunities (Agree 24%, Strongly agree 41%), better life quality such as health and social insurance system (Agree 29%, Strongly agree 47%) and better prospects for their family (Agree 29%, Strongly agree 41%). Also, it is noticeable that students

are not planning to find a job in another town in the home country (Disagree 24%, Strongly disagree 47%).

Indicators for leaving the country for the unemployed group are somewhat similar. Most of the respondents would accept a job that requires lower skills than they posess depending on the salary (Agree 31%, Strongly agree 38%). Other indicators that represent the important reasons for leaving the country are because of corruption (Agree 13%, Strongly agree 56%), better life quality such as health and social insurance system (Agree 19%, Strongly agree 63%) and better prospects for their family (Agree 13%, Strongly agree 69%). On the statement for expectation for a job opportunity in their own country respondents mostly disagree (Disagree 38%, Strongly disagree 6%).

Figure 57: Indicators for leaving the country, respondents employed in North Macedonia
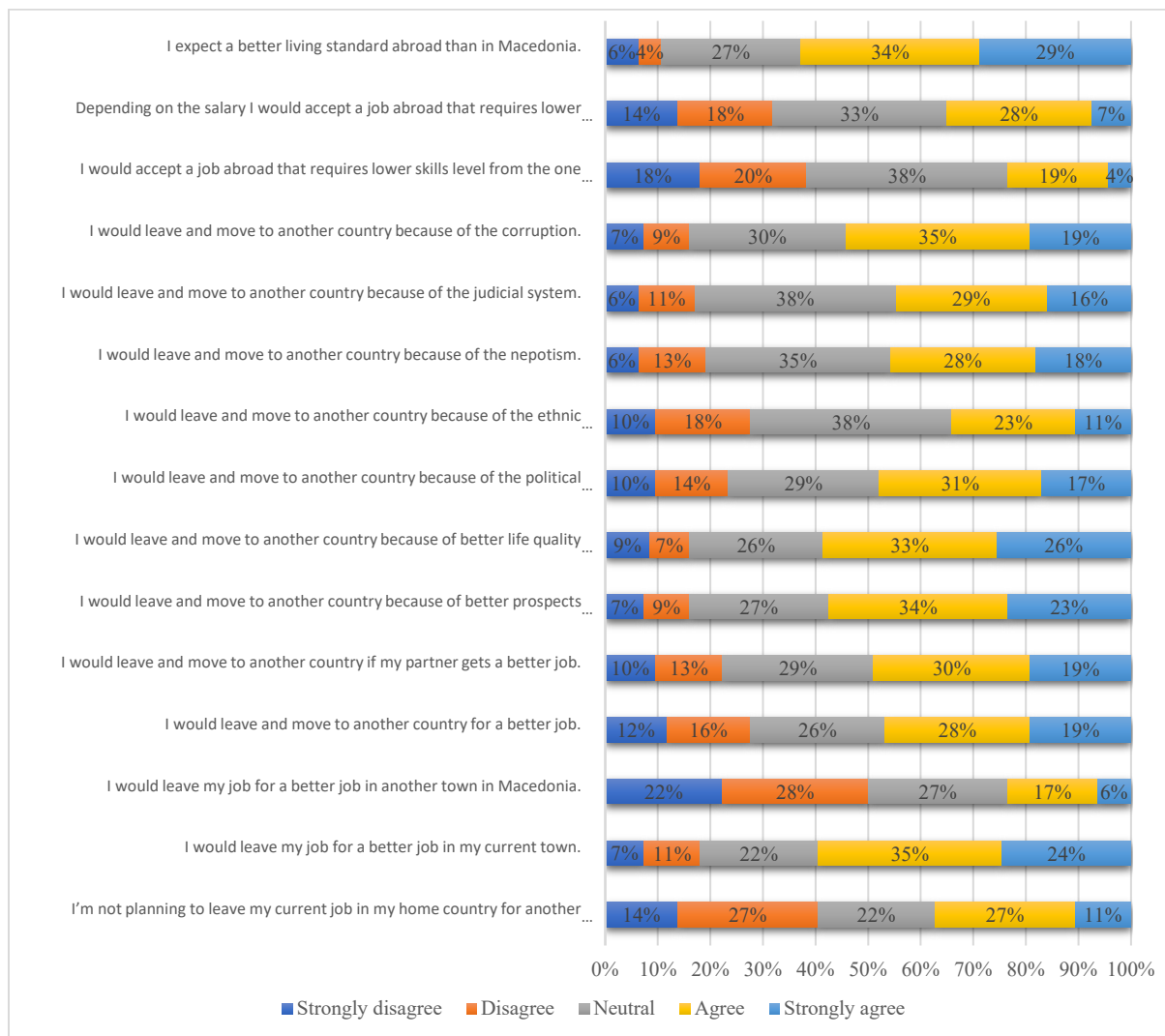
Source: Own work (N=94).

A relationship was also tested between acceptance of a job that requires lower skills than the respondents posses depending on the salary offered and plans for leaving the country for another job abroad. The relationship is significant (correlation -0.372, p<0.001), which confirms our hypothesis H2.4. The correlation here is negative and significant which shows that respondents that are planning to leave the country will accept a job abroad with lower skills than they posses which represents the phenomenon brain waste (see more in Appendix 6).

Regarding the preferred country of migration in which the respondents would like to migrate to if there is an opportunity the answers received were similar for employed in North Macedonia and students. The biggest percentage of respondents employed in North Macedonia from the answers proposed choose Germany (18%), Slovenia (17%), USA (14%), Australia (12%) and Canada (5%). 34 % of respondents choose Other, from which Switzerland had also 5% of the respondents. Other countries that were written as a response were Austria, Norway, UK, Netherlands, Denmark, Sweden, Belgium, Italy, Spain, etc. Most of the students from our respondents would prefer to migrate to Germany and Slovenia with 18% of respondents, then Canada, Sweden and Switzerland with 12%, and Australia, France and USA with 6%. 12% of students would not prefer to migrate nowhere. The unemployed respondents would prefer to migrate to Slovenia with 31%, then 25% to Germany and 18% perceive Australia as their desired destination for migration.

How important were some of the reasons for migrating of the family members and friends of the respondents can be seen from the Figure 58. The biggest percentage of the very important reason are the low wages (44%), followed by the percentage of limited possibility of professional development (42%) which is followed by the percentage of the nepotism through the institutions (40%). Other very important factors are high level of unemployment (37%), corruption (36%) and the political condition (36%). The reasons that were ranked as not so important was the presence of family abroad as well as the problem of general safety. This confirms our H2.5 hypothesis that for people employed in North Macedonia low income is regarded as the main reason for migration.

The rating of the reasons for migration of the respondents that have already migrated and are employed abroad are somewhat similar. The most important reasons are the following: corruption (Fairly important 11%, Very important 66%), limited possibility of professional development (Fairly important 7%, Very important 66%), the health system (Fairly important 11%, Very important 61%), low wages (Fairly important 11%, Very important 59%), political condition (Fairly important 14%, Very important 55%) and public institutions effectiveness (Fairly important 23%, Very important 55%). From all of the reasons proposed the presence of family abroad received the least importance (Not at all important 34%, Slightly important 18%) which shows to us that the big number of respondents which are highly educated

represent the first generation of migrants abroad. These results confirm our H2.6 hypothesis that people employed abroad consider corruption as the main reason for migrating, which is contradicting the view of the people who are living in North Macedonia.

Figure 58: The importance of migration factors, as a % of all respondents
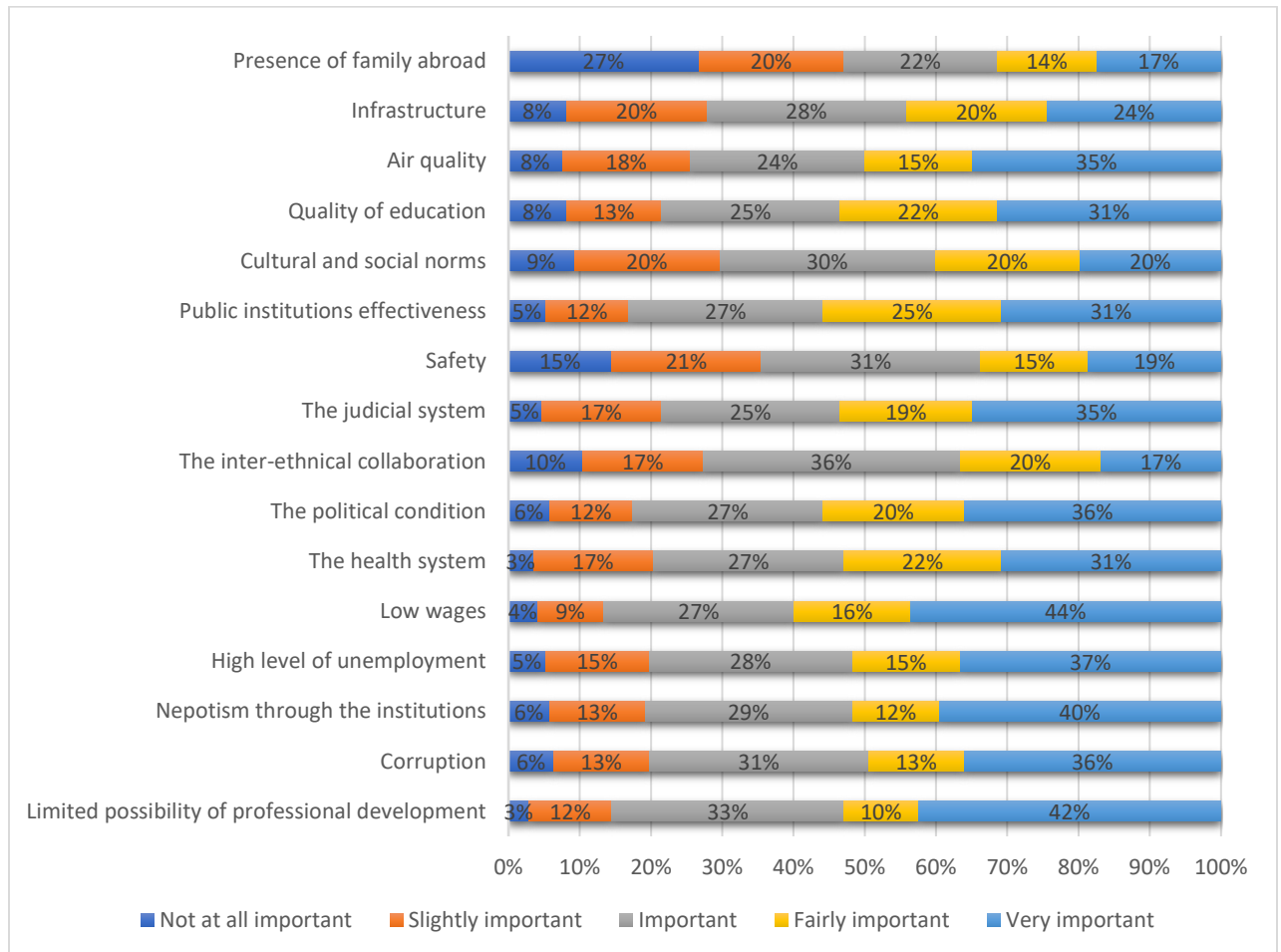
The analysis of the effect of progressive taxation on emigration in North Macedonia was tested as well. As evident from Figure 59, because the respondents come from different backgrounds, most of the percentage for all statements was for the answer Neutral. The proposed bill that was postponed received a high percentage of agreement (32% Agree and 10% Strongly agree) and the proposition that we proposed which is the first in the Figure 59 received the second highest percent of agreement (22% Agree and 16% Strongly agree). The current level of taxation received the smallest percentage of agreement (17% Agree and 7% Strongly agree). The statement for the taxes being high in North Macedonia contradicts the agreement for higher tax percentage. What is interesting is that 44% of people already employed abroad

believe that income taxes in North Macedonia are high in contrast to 36% of people employed in North Macedonia.

Figure 59: Statements of agreement for proposed income taxes
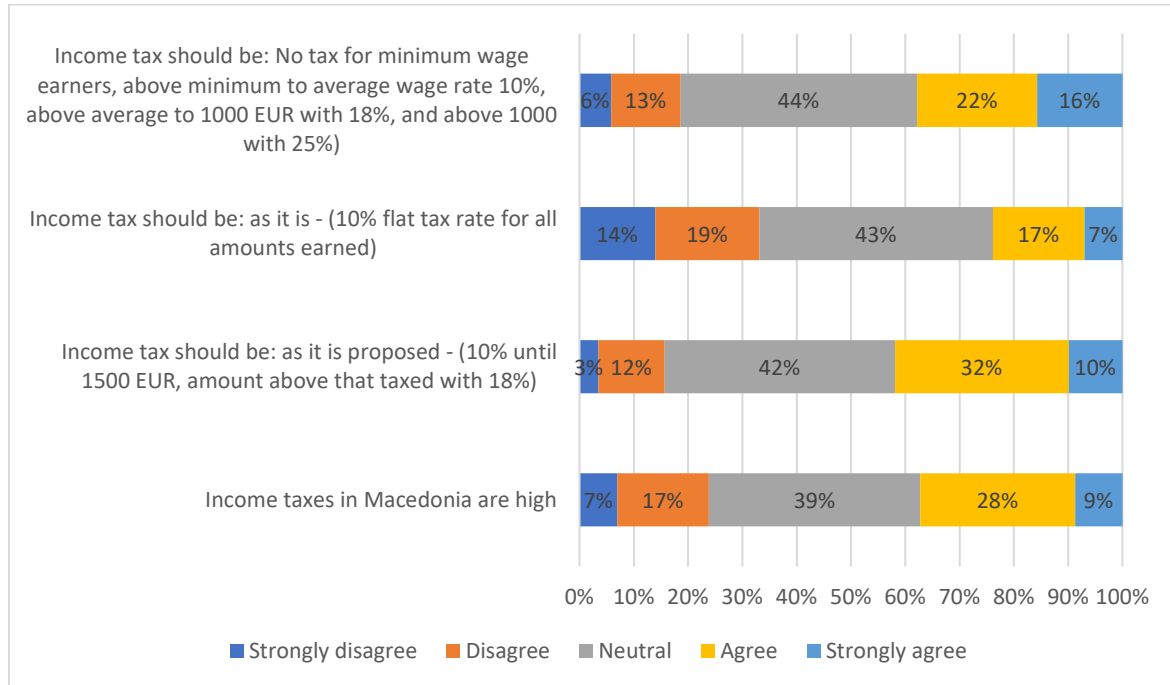
Source: Own work (N=172).

Here the relationship was tested between statement that income taxes are high in North Macedonia, and the proposed income tax scheme which shows higher taxes. The relationship is significant (correlation 0.381, p<0.001). This can indicate that respondents believe that income taxes are high because of the flat rate and the unequal distribution of income which confirms hypothesis H2.7 (see more in Appendix 7).

4.2.3 Consequences of migration

Regarding the impact of migration of young people on the development of North Macedonia respondents agreed with all of the statements. The biggest agreement and percentage (58%) is to the statement: loss of future qualified workers, which is followed by the loss of new ideas, innovations and loss of potential workers. All of the statements have been answered in more percentage in agreement than in disagreement (as shown in Figure 60) which shows that the respondents even from different backgrounds are aware of the potential loss for the economy as a whole from the brain drain. Interesting is that even though the respondents who have no intention of leaving the country are aware of the loss on development that brain drain has on

their country. These responses confirm our H3.1 hypothesis that the brain drain and the emigration of youth hinder the general economic development of the country.

Figure 60: Impact indicators from the migration of young people on the development of North Macedonia
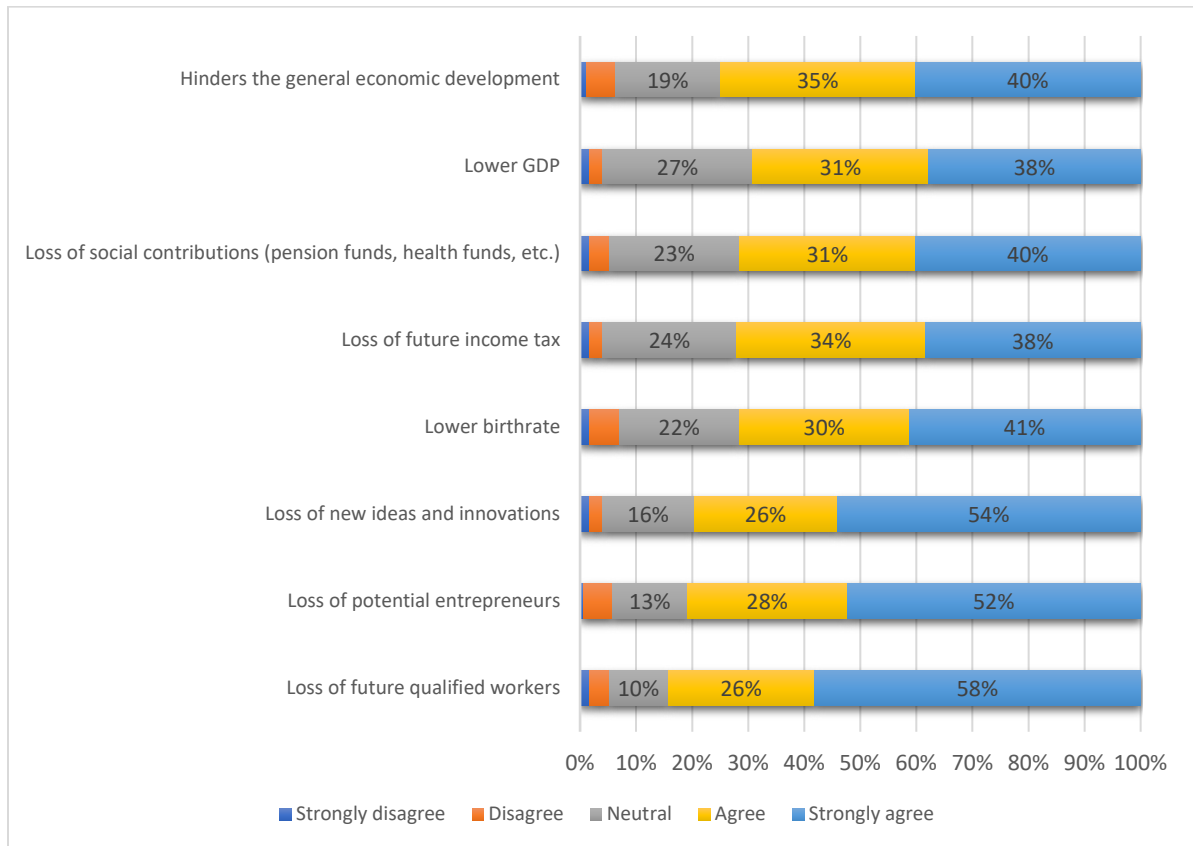
Source: Own work (N=172).

Regarding the presence of family abroad, it was tested also for receiving some form of remittances. 65% of respondents answered that they have received money or gifts from abroad, while 35 % responded that they haven't. This question was set in the questionnaire with intention, because through the official data on remittances North Macedonia is ranked very low in comparison with regional average. Here it was tested for a relationship between receiving money and having family or friends abroad, the relationship is significant (correlation 0.214, p=0.005). This confirms our hypothesis H3.2 that the positive consequence of brain drain and emigration of youth in the form of remittances is present in the case of North Macedonia (see more in Appendix 8).

4.2.4 Discussion of results

Summary of the empirical research and the hypothesis results with added explanation are shown in Table 7.

Table 7: Summary of research results

Hypothesis	Result	Explanation/interpretation
Satisfaction with life in North Macedonia		
H1.1: There is a relationship between the dissatisfaction amongst the highly educated people and the political situation;	Positive relationship	This hypothesis is regarding the political situation in North Macedonia, which is perceived to be worsening with time. This shows that lack of political stability can be indeed an important factor as stated in the literature.
H1.2 There is a relationship between the dissatisfaction amongst the highly educated people and income and earnings;	Negative relationship	This hypothesis is confirming the view that highly educated people are not concerned primarily with income, but with other factors like the efficiency of institutions, healthcare and other factors that lower their welfare.
H1.3: There is a different relationship with satisfaction from the workplace from citizens employed abroad than with the ones which are employed in the home country;	Positive relationship	Here it is confirmed that people employed abroad are more satisfied with work conditions, due to the fact that they are working in developed countries, most of them in big corporations which have strict regulations and values for the work-life balance of the employees.
H1.4: There is a relationship between being employed abroad and returning permanently home in North Macedonia;	Negative relationship	Very important observation, which lowers the possibility of so called brain gain or brain reverse for the country, with which the country loses its possibility for know-how transfer.
Attitudes towards and causes of migration		
H2.1: There is a relationship between the consideration for employment abroad in comparison with employment in the home country and studying abroad;	Positive relationship	Confirming the possibility of a temporary migration becoming a permanent one. Very persistent trend also observed through the data for Macedonian students who are studying abroad.
H2.2: There is a relationship between satisfaction of the workplace and the plans for migration for citizens employed in North Macedonia;	Positive relationship	Confirming the satisfaction in the workplace and the possible intention for migration. It shows that relations in a company are very important and in the industry as a whole for a country when considering migration.
H2.3: There is a relationship between the expectation of better living standard abroad than in the home country and being employed in North Macedonia;	Positive relationship	As shown in literature, in combination with the preferred countries of migration, all of which developed, its expected from people to have a better living standards abroad.

| Hypothesis	Result	Explanation/interpretation
H2.4: There is a relationship between the salary offered and the acceptance of a job with lower skills that the people posses;	Positive relationship	The phenomenon referred to as brain waste. Observable for many developing countries, such as North Macedonia, where people consider this type of emigration, for a better living standard for themselves or their families.
H2.5: There is a relationship between low wages and plans for migration for people employed in North Macedonia;	Positive relationship	Expected results for respondents living in a developing country like North Macedonia with low income, provided as well in the theory as one of the main push factors.
H2.6: There is a relationship between corruption in the country of origin and the reason for migration for people already employed abroad;	Positive relationship	Interesting confirmation of the hypotheses, which shows that for the well-educated people living abroad corruption, and not wage, is perceived as the main reason for leaving the country.
H2.7: There is a relationship between the statement that income taxes are high in North Macedonia, and the proposed income tax scheme.	Positive relationship	Another push factor as represented in the theoretical part. Interesting enough, people believe that taxes are high, but most of them believe that they should be higher and are for introduction of progressive taxation, which shows the unequal distribution of income as an important factor.
Consequences of migration		
H3.1: There is a relationship between the brain drain and the emigration of youth with the general economic development of the country;	Positive relationship	A negative consequence as discussed in the theoretical part on emigration. Most of the respondents agree that it hinders the economic development in general, through the loss of qualified workers, loss of know-how, reduced tax income and etc.
H3.2: There is a relationship between remittances and the emigration of youth and brain drain.	Positive relationship	A positive consequence confirmed through the empirical research as discussed in the theoretical part of the thesis. Interesting, in the data wasn't as high as expected, probably because there is still a huge amount of informal transfers like cash.

Source: Own work.

4.2.5 Limits of the research

Based on the objective of this research, the questionnaire could have more respondents than 172 respondents, in order to receive a wider overview of the research. We couldn't reach the students which are currently enrolled in North Macedonia. The reason for this is that social media was used, and we didn't have many groups of people that are currently enrolled in higher education in North Macedonia.

The questionnaire was prepared only in the English language because we thought that all respondents speak English and will be able to understand the questions. Probably, the translation in Macedonian would have brought more respondents.

All of the literature that was used was in the English language and we had a lack of information on brain drain in North Macedonia, especially in the data part, because the Statistical office of North Macedonia shows the net migration data based on principles where people that migrate abroad from the country, have to sign paperwork and report to local authorities like the police office that they will be leaving the country. That is why data from Statistical offices from the countries which have the biggest Macedonian diaspora were included in the research.

5 POLICY RECOMMENDATIONS

We consider brain drain mainly in two forms, one is the direct migration of highly educated individuals that are leaving the country and the other form is when graduates which are trained abroad decide to stay in that country.

There is some promising evidence that can suggest that the governments can through policies encourage the successful return of highly skilled diaspora, especially with tax incentives. The return of brain drain, or also known as brain gain, can support the economic development of a country, especially when returning migrants bring capital and know-how and their home countries provide the necessary conditions for full usage of those skills.

However, the most effective approach in the long-term remains for countries to be able to prevent the brain drain in the first place, by providing incentives and building policies which will lead these individuals in staying in their home country.

Although is very difficult and most of the proposed policies are long-term there is something that North Macedonia can do in the short term to stop brain drain and to increase its development potential. Some of the recommended measures for preventing brain drain in North Macedonia we have divided in six priority areas for policy recommendations based on the responses in the questionnaire.

5.1 Education

Scholarships for deficient staff and additional training is needed. With the increase of the high skilled migration, North Macedonia has a deficient staff in many areas, with health being the most important. This is evident specially in the rural and less developed areas of the country where there is a lack of specialists in various fields of medicine (WHO Report, 2021).

Modernization of curricula in higher education: teaching in English, learning techniques in academic/practical research, exchange programs. Even with the introduction of the Bologna system and the implementation of various exchange student programs like the Erasmus +, the full capacity has not been utilized. For the period 2014-2020 only 3.291 students have realized mobility between North Macedonia, candidate countries and EU member states. In the academic staff mobility for the same period 893 staff have used the right to mobility across EU member states and Candidate countries (European Commission, 2022b). The utilization of these programs is crucial for the transfer of know-how which will increase the quality of tertiary education in the country.

The number of accredited universities needs to be reduced and controlled. North Macedonia has one of the highest numbers of accredited universities regarding its population. The country has 28 accredited higher education institutions with 6 of them being public universities and 22 private universities (European Commission, 2022b). A lot of the developing countries who have higher emigration rates of high skilled migrants have seen a surge in the opening of private universities to meet the demand. These universities need to be carefully monitored and accredited because it is very important to maintain the quality of education and preserve the reputation of high skilled workers that a country posses (OECD, 2020).

5.2 Employment

North Macedonia must use the biggest advantage for development and stopping brain drain in North Macedonia which is through the Start-ups. Skopje as the capital is the biggest startup hub in the country, and other cities have begun to show potential as well. The startup community is very well organized through associations, hubs and what is important is that new startups are welcomed and mentored by many of the older members. These projects have developed by itself without any major government policy or help. The biggest reason for this occurrence is that North Macedonia has highly educated individuals in the tech area and with the favourable corporate tax of 10% and personal income tax of 10% as it was discussed in the previous chapter they are a very competitive player in the global market where location is not important. The two main things that these young entrepreneurs are leading in are price and quality. The new prime minister who has acknowledged this new movement has announced that the government is planning (from year 2023) to reduce the personal income tax rate from 10% to 0% for the IT and high-tech sector, so more and more young people can specialize in those skills so they can stay in the country and also increase the productivity.

Improving the alignment of the skills supply with the requirements of the labour market must be advocated and addressed. This can be achieved through the development of a comprehensive skills forecasting system that will provide the necessary information for policy making, as well as for young people when choosing a job; improving the relevance of outcomes from education on the

demands of the labour market; integration of career guidance teaching in school curricula and providing quality career counseling and guidance in key moments in the lives of young people (Action plan for employment, 2016-2020).

Motivation of young people by providing an internship or full employment for the best students from every university needs to be implemented. The biggest challenge in North Macedonia is still youth unemployment. Regarding the incentives that can be provided through government policies is the employment of the best students from every university. They can be employed either in the public sector or employed in the private sector financed and supported by government grants (OECD, 2020).

For the second biggest advantage that can be utilized with few policies is the seasonal migrants or long-term returning migrants that when they return to North Macedonia, are mostly unemployed and they do not invest their capital. Even though most of these migrants are not highly skilled, they still bring the values of the more developed countries when they come home. The main reason for not investing in their home country is the lack of confidence in the government institutions. Their capital and working habits if they invest in their home country can help stop the migration of youth and potential brain drain that is occurring more and more daily.

5.3 Rule of law

Improvements in the judiciary system are necessary. North Macedonia has had some progress and the judicial system is moderately prepared. There is still a lot needed to achieve the strategic action plan that was proposed by the Venice Commission. The new draft law that is being prepared on the Academy for Judges and Prosecutors which will secure fair and transparent access to the system should keep the Academy as the one and only entry point in these professions (European commission, 2021).

Better involvement of the State Commission for prevention of corruption has to be allowed. The State Commission for prevention of corruption with the new legislation has received the mandate for anti-corruption review of legislation which is extremely important preventive mechanism. The anti-corruption review of the legislation is an analysis and assessment of the form and content of the legal regulations. The anticorruption review covers all draft laws and optionally the laws that have already been adopted in order to detect, prevent and minimize the risks of the possibility of corruption and conflict of interest (State Commission for prevention of corruption, 2022).

5.4 Healthcare

Better staffed public health system and incentives for not leaving the public health system are needed. North Macedonia assessment of the implementation of International Health regulation showed that the country was not prepared for a pandemic. Capacities of the health care systems

were very low in terms of human resources, the country scored 40% in comparison to the 71 % of the WHO European Region. Regarding the staff in the health sector the country has improved but still remains low at 312 per 100.000 population in 2019 in comparison to the EU average at 382 per 100.000 population (WHO, 2021).

Modernization and digitalization of the public health system must be accompanied by higher public health spending. Even though more than half of the health spending is from public sources, public spending on health per capita in North Macedonia is very low. For the year 2018 North Macedonia had the second lowest spending in South-East Europe after Albania and was one third less than the average (WHO, 2021).

5.5 Culture

Special projects funded by the Ministry of Culture for young people creators from different ethnical background for better social cohesion and reduction in tensions is needed. North Macedonia's Ministry of Culture in its yearly programs has introduced the percentage of projects which are awarded regarding the ethnicities in the country (Ministry of culture, 2021). However, for none of these projects or creators is not mandatory to increase the social cohesion in the society.

Cinemas and cultural events in every city are also needed. North Macedonia has seen a reduction in cinemas from year to year. In 2021 there were only 11 cinemas operational, out of which 4 were in the capital and only 7 in other cities (State Statistical Office, 2021).

5.6. Environment

Special government subsidies for opening eco-friendly business are welcomed. Even though the government has been introducing subsidies for small hydro power plants, solar panels and other investments for renewable energy (Government of North Macedonia, 2021), the policies are very much needed in the collection and recycling of waste. Skopje as the capital of North Macedonia is still expecting government policy regarding the investment in a collection and recyclable center.

Fighting pollution through renewable source heating and better public transport system is a must. North Macedonia, especially the capital Skopje is considered one of the most polluted cities in Europe, especially in the winter months. This pollution mainly comes from the housing heating systems (Government of North Macedonia, 2021). Even though the government has introduced policies, the results are still not visible. The problem remains in the public transport system and in the source of heat for the households in the winter. The transfer of heating source from wood and oil to electricity remains a problem for most households, even though North Macedonia's electricity system is heavily subsidized. The solution remains in subsidizing the solar panel system and the heat pump system for households and improving the quality of the public transport system.

CONCLUSION

Brain drain and the emigration of youth is a problem for a big number of countries. The most affected countries are the developing countries like North Macedonia. The literature that was analysed showed that the pull and push factors like income, stable political environment, corruption, health system and etc. put the developing countries in an inferior position.

All of these causes for brain drain have led to big negative consequence for the development of North Macedonia. The biggest problem that North Macedonia is facing is that the biggest number of temporary migrations especially for the high skilled workers is transferred into a permanent one.

The purpose of this thesis was to analyse the factors leading to brain drain and the emigration of youth from North Macedonia. This was done through the analysis of the main push and pull factors. For the achievement of the purpose of the thesis, a questionnaire survey was conducted with Macedonian citizens which were divided in to four main categories: employed in North Macedonia, students studying abroad and in North Macedonia, already employed abroad and unemployed citizens in North Macedonia. This thesis also conducted a correlation for a possible return of the highly skilled migrants or so called brain reverse. The most important findings of the thesis were the following:

- Citizens of North Macedonia are not only unsatisfied with family income, but they prioritize corruption, the health care system, education and career developments as main factors for migration.
- People who are considering migration abroad will accept a job that requires lower skills than they posses.
- Most of the respondents believe that they will have better living standards, better job opportunities and better quality of life abroad than they have in North Macedonia.
- There is a very small possibility of a potential brain reverse. This indicates that most of the respondents abroad are considering a permanent migration in the developed country they are currently at.
- Policies that are implemented by the country are lacking and the confidence is low for the actual benefit from the application of those policies.

All of these conclusions as a result of the analysis show that North Macedonia is gradually losing the biggest investment and that is its human capital. For a developing country with slow growth is especially hurtful when that human capital is young and highly educated. That loss in human capital cannot be compensated through remittances because those young people are expected to increase productivity and to further boost the growth of the country, while handling the burden of the aging population.

Positive and negative effects of the migration must be taken into consideration when considering development strategies of the country. Immediate measures that were proposed in the thesis are to be taken to reduce the brain drain and the emigration of the youth. Especially in the connectivity between the private sector and the universities, special hubs and incentives for the biggest value-added sectors and a big reduction in the nepotism through institutions and corruption. After all, paper will put up with anything, but people won't.

REFERENCE LIST

1. Australian Bureau of Statistics (2022, April 26). *Australia's Population by Country of Birth.* Retrieved May 20, 2022 from https://www.abs.gov.au/statistics/people/population/australias-population-country-birth/2021#data-download

2. Baruch, Y., Budhwar, P. & Khatri, N. (2007). Brain drain: Inclination to stay abroad after studies. *Journal of World Business,* 42, 99-112.

3. Bhende, A. & Kanitkar, T. (2006). *Principles of Population Studies.* New Delhi: Himalaya Publishing House.

4. Böcker, A. (1994). Chain migration over legally closed borders: Settled immigrants as bridgeheads and gatekeepers. *Netherlands Journal of Social Sciences*, *30*(2), 87–106.

5. Carling, J. & Talleraas, K. (2016). Root causes and drivers of migration. *Peace Research Institute Oslo (PRIO),* 2016, 13-14.

6. Cassan, G. & A. di Mattia. (2009). "Migration "Push" Factors in Non-OECD Countries over the Long Term", in *The Future of International Migration to OECD Countries*, Paris: OECD Publishing.

7. Castles, S. (2000). International migration at the beginning of the twenty-first century: global trends and issues. *International Social Science Journal,* 52(165), 269-281.

8. Center for Research and Policy Making. (2012). *Developing Brain Gain Policies in Macedonia: Pitfalls and Challenges.* Retrieved from http://www.crpm.org.mk/wp-content/uploads/2012/03/Developing-Brain-Gain-Policies-in-Macedonia_Pitfalls-and-ChallengesOPTIM.pdf

9. Chowdhury, A. & Mavrotas, G. (2006). FDI and growth: What causes what? *The World Economy* 29, 9-19.

10. Clark, W. A. & Maas, R. (2013). Interpreting migration through the prism of reasons for moves. *Population, Space and Place*, 21(1), 54-67.

11. Czaika, M. & de Haas, H. (2012). The role of internal and international relative deprivation in global migration. *Oxford Development Studies*, 40(4), 423-442.

12. Docquier, F., Peri, G. & Ruyssen, I. (2014). The Cross-country determinants of potential and actual migration. *International Migration Review,* 48(S1), S37-S99.

13. Epstein, G.S. & Gang, I.N. (2006). The Influence of others on migration plans. *Review of Development Economics,* 10(4), 652–665.

14. ETF (2017), Tracing Secondary Vocational and Tertiary Education Graduates in the Former Yugoslav Republic of Macedonia: 2016 Tracer Study Results, *European Training Foundation*, Turin, 40-42.

15. Eurofund. (2018). *Living and working in North Macedonia*. Loughlinstown, Ireland: European Foundation for the Improvement of Living and Working Conditions. Retrieved September 24, 2021 from http://www.eurofound.europa.eu/country/north-macedonia

16. Europäische Kommission. (2000). *Push and pull factors of international migration: a comparative report (2000 ed.).* Luxembourg: Office for Official Publications of the European Communities.

17. Europeana collections. (n.d.). *The Land of Opportunity.* Retrieved October 20, 2018 from https://www.europeana.eu/portal/en/exhibitions/people-on-the-move/migrant-workers

18. European Commission. (2021). *Key findings of the 2021 Report on North Macedonia.* Retrieved from https://ec.europa.eu

19. European Commission. (2022a). *Bulgaria: 2021 marks steady increase in citizenship acquisition.* Retrieved June 5, 2022 from https://ec.europa.eu/migrant-integration/news/bulgaria-2021-marks-steady-increase-citizenship-acquisition_en

20. European Commission. (2022b). *Republic of North Macedonia, Mobility in higher education.* Retrieved March 23, 2022 from https://eacea.ec.europa.eu/

21. European Investment Bank. (2016). *FYROM -- Assessment of Financing Needs of SMEs in the Western Balkans Countries*. Kirchberg, Luxembourg: European Investment Bank.

22. Eurostat. (2020). Eurostat COVID-19: *Statistics serving Europe (database)*, European Statistical Office, Luxembourg City. Retrieved April 15, 2022 from https://ec.europa.eu/eurostat/data/database

23. Faist, T. (2008). Migrants as Transnational Development Agents: An Inquiry into the Newest Round of the Migration–Development Nexus. *Population, Space and Place*, 14(1), 2142.

24. Federal Statistical Office, Switzerland. (2021, September 1). *Permanent and non-permanent resident population by canton, residence permit, sex, age class and citizenship.* Retrieved November 6, 2021 from https://www.bfs.admin.ch/bfs/en/home/statistics/population/migration-integration/foreign.assetdetail.18404677.html

25. Gamlen, A. (2010). The New Migration and Development Optimism. *A Review of the 2009 Human Development Report. Global Governance,* 16(3):415422.

26. Gamlen, A. (2014). The new migration and-development pessimism. *Progress in Human Geography,* 38(4):581-597.

27. Gammeltoft, P. (2002). Remittances and Other Financial Flows to Developing Countries. International Migration. *Blackwell Publishers Ltd.,* 40(5), 181–211.

28. Geis, W., Uebelmesser, S. & Werding, M. (2013). "How do migrants choose their destination country? An analysis of institutional determinants". *Review of International Economics 21*, 825–840.

29. Gordon, A. (1998). The New Diaspora-African immigration to the U.S.A. *Journal of Third World Studies*, *Vol. XV USA*, pp.80-81.

30. Government of the Republic of North Macedonia. (2021). *Agenda for clean air.* Retrieved June 7, 2022 from vlada.mk/PlanZaChistVozduh

31. Government of the Republic of North Macedonia. (n.d). *Action plan for employment 2016-2020.* Retrieved from https://vlada.mk/

32. Hatton, T. J. & Williamson, J. G. (2011). "Are third world emigration forces abating?" *World Development 39:1,* 20–32.

33. Hunt, J. (2006). Staunching emigration from East Germany: Age and the determinants of migration. *Journal of the European Economic Association 4:5,* 1014–1037.

34. IMF. (2019). *World Economic Outlook, October 2019: Global Manufacturing Downturn, Rising Trade Barrier*, International Monetary Fund, Washington, D.C. Retrieved from http://www.imf.org/en/Publications/WEO/Issues/2019/10/01/world-economic-outlook-october-2019

35. ILO. (2020). *Share of youth not in employment, education or training (NEET) by sex - ILO modelled estimates, Nov.2019 (%) – Annual.* Geneva: International Labour Organization.

36. IMF. (2020a). *World Economic Outlook, April 2020: The Great Lockdown*, Retrieved October 9, 2021 from www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020

37. IMF. (2020b). *International Financial Statistics (dataset)*. Retrieved May 29, 2022 from https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b

38. Italian National Statistical Institut. *Population and Households.* Retrieved October 17, 2021 from https://www.istat.it/en/population-and-households?data-and-indicators

39. Karemera, D., Oguledo, V. I. & Davis, B. (2000). A gravity model analysis of international migration to North America. *Applied Economics,* 32:13, 1745–1755.

40. Kennedy, S., Kidd, M. P., Mcdonald, J. T. & Biddle, N. (2015). The healthy immigrant effect and immigrant selection: Evidence from four countries. *Journal of International Migration and Integration,* 16:2, 317–332.

41. Kerr, S., Kerr, W., Özden, C. & Parsons, C. (2017, May 31). *Global talent flows: Causes and consequences of high-skilled migration* [published on blog]. Retrieved July 13, 2021 from http://blogs.worldbank.org/developmenttalk/global-talent-flows-causes-and-consequences-high-skilled-migration

42. Kosovo Agency of Statistics (2020). *ASK Data (database).* Retrieved November 6, 2021 from https://askdata.rks-gov.net/pxweb/sq/

43. Lewis, A. (1954). Economic development with unlimited supplies of labor. *The Manchester School of Economic and Social Studies*, 22, 139-191.

44. Lowell, L. (2002). Skilled Labour Migration from Developing Countries: Annotated Bibliography. *International Migration Papers.*

45. Maastricht University & the Global Migration Data Analysis Centre (GMDAC) of the International Organization for Migration for the European Asylum Support Office. (2016). *Significant push/pull factors for determining of asylum-related migration: a literature review*. Luxembourg: Publications Office of the European Union.

46. Migration Policy Institute. (2004, October 1). *Understanding the Importance of Remittances*. Retrieved from https://www.migrationpolicy.org/article/understanding - importance-remittances

47. Ministry of culture of North Macedonia. (n.d.). Retrieved August 15, 2021 from http://kultura.gov.mk/.

48. Ministry of Finance of North Macedonia. (2020, January 1). *Tax System Reform Strategy (2020-2023)*. Retrieved from https://finance.gov.mk/wp-content/uploads/2020/02/Tax-Strategy_2020_2023.pdf

49. Ministry of Finance of North Macedonia. (n.d). Retrieved from https://www.finance.gov.mk/en

50. National Bank of the Republic of North Macedonia. (2020a). *Bank Lending Survey*. Retrieved June 16, 2021 from http://www.nbrm.mk/ankieta_za_krieditna_aktivnost-en.nspx

51. National Bank of the Republic of North Macedonia. (2020b). *Statistical Web Portal (database)*. Retrieved February 28, 2022 from http://nbstat.nbrm.mk/pxweb/en/

52. National Geographic News. (2018, March 19). *143 Million people may soon become climate migrants*. Retrieved from https://news.nationalgeographic.com/2018/03/climate-migrants-report-world-bank-spd/

53. National Geographic Society. (2010, October 18). *National Geographic EarthPulse: A Visual Almanac*.

54. Neto, F. & Mullet, E. (1998). Decision-making as regards migration: Wage differential, job opportunity, and the network effect. *Acta Psychologica,* 98, 57–66.

55. OECD. (2007). *Policy Coherence for Development, Migration and developing countries*. A Development Centre Perspective. Retrieved from https://doi.org/10.1787/9789264026100-en

56. OECD. (2008). *The Brain Drain and Negative Social Effects: When is the Home Country Hurt?,* in Policy Coherence for Development 2007: Migration and Developing Countries. OECD Publishing. Paris. Retrieved from https://doi-org.nukweb.nuk.uni-lj.si/10.1787/9789264026100-6-en

57. OECD. (2016). *Overview: International migration and development in a shifting world, in Perspectives on Global Development 2017*. International Migration in a Shifting

World. OECD Publishing. Paris. Retrieved from https://doi.org/10.1787/persp_glob_dev-2017-en

58. OECD. (2020). *How's Life? 2020: Measuring Well-being*. OECD Publishing, Paris. Retrieved from https://doi.org/10.1787/9870c393-en

59. *Pathak V., Jena, B & Kalra, S. (2013). Qualitative research. *Perspectives in clinical research*, 4(3),192-192.

60. Pedersen, P. J., Pytlikova, M. & Smith, N. (2008). Selection and network effects- Migration flows into OECD countries 1990–2000. *European Economic Review* 52:7: 1160–1186.

61. Portes, A. & Böröcz, J. (1989). Contemporary immigration: theoretical perspectives on its determinants and modes of incorporation. *International Migration Review,* vol. 23(3), 606-630.

62. Public Revenue Office. (2020). *Tax Incentives for investing in Technological – Industrial Development Zone (TIDZ)*. Public Revenue Office, Ministry of Finance, Republic of North Macedonia, Skopje. Retrieved May 27, 2022, from http://www.ujp.gov.mk/en/vodic/category/1479

63. Salt, J. (2001). *The business of international migration: essays in honour of Reginald Appleyard*. Cheltenham: Edward Elgar.

64. Saunders, M., Lewis, P. & Thornill, A. (2009). Research methods for business students (Fifth ed.): *Pearson Education Limited.*

65. Science Trends. (2017, November 24). *Push and Pull Factors Of Migration* [published on blog]. Retrieved from https://sciencetrends.com/politics-economics-influence-push-pull-factors-migration/

66. Sciencing. (2018, April 24). *Political Factors in Migration.* Retrieved October 26, 2018 from https://sciencing.com/political-factors-migration-8212756.html

67. Siddique, M. A. B. (2001). *International migration into the 21st century: essays in honour of Reginald Appleyard*. Cheltenham: Edward Elgar.

68. Simpson, N., & Sparber, C. (2013). The short- and long-run determinants of less-educated immigrant flows into US states. *Southern Economic Journal* 80:2: 414–438.

69. Simpson, N. (2017). Demographic and economic determinants of migration. *IZA World of Labor 2017:* 373 doi: 10.15185/izawol.373.

70. Skeldon, R. (1997). *Migration and Development: A Global Perspective.* Harlow, Essex: Addison Wesley Longman.

71. Solt, F. (2019). Measuring Income Inequality Across Countries and Over Time: *The Standardized World Income Inequality Database.* 10.31235/osf.io/mwnje.

72. State Commission for prevention of corruption. (2022). *Anti-corruption review of legislation.* Retrieved May 26, 2022 from https://dksk.mk/en/anti-corruption-review-of-legislation/

73. State Statistical Office, Republic of North Macedonia. (2018). *Statistical review: Population and social statistics*. Retrieved June 2, 2022 from https://www.stat.gov.mk/PrikaziPublikacija.aspx?id=27&rbr=764

74. State Statistical Office, Republic of North Macedonia. (2020a). *External trade by countries, cummulative data.* Retrieved June 4, 2022 from http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__NadvoresnaTrgovija__KumulativniPod/125_zemji_kumulativ_ml.px/?rxid=e70e8868-e6a5-4557-87cc-fc8b565e5da3

75. State Statistical Office, Republic of North Macedonia. (2020b). *Labour Market – unemployed*. Retrieved April 20, 2022 from http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/?rxid=e70e8868-e6a5-4557-87cc-fc8b565e5da3

76. State Statistical Office, Republic of North Macedonia. (2020c). *Labour Market – Job vacancies.* Retrieved April 20, 2022 from http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__PazarNaTrud__SlobodniRabotniMesta/125_PazTrud_Mk_asrm1_ang.px/?rxid=e70e8868-e6a5-4557-87cc-fc8b565e5da3

77. State Statistical Office, Republic of North Macedonia. (2021). *Culture – Cinemas.* Retrieved June 10, 2022 from http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__Kultura__Kina/125_Kultura_RM_Kina_ml.px/?rxid=e70e8868-e6a5-4557-87cc-fc8b565e5da3

78. State Statistical Office, Republic of Slovenia. (2020). Retrieved December 25, 2021 from from https://pxweb.stat.si/SiStatData/pxweb/sl/Data/-/05E1008S.px.

79. Statistical Database of Statistics Austria. (2020). *Population by citizenship.* Retrieved November 7, 2021 from https://statcube.at/statistik.at/ext/statcube/jsf/dataCatalogueExplorer.xhtml

80. Statistics Canada. (2020). *Population by citizenship.* Retrieved November 7, 2021 from https://www.statcan.gc.ca/search/results/site-search?q=population%2520by%2520citizenship&fq=stclac:2&sort=score%20desc&rows=25&page=1

81. Statistisches Bundesamt. (2020). *Population by citizenship*. Retrieved November 5, 2021 from https://www-genesis.destatis.de/genesis//online?operation=table&code=12411-0009&bypass=true&levelindex=0&levelid=1655112674214#abreadcrumb

82. Sukamolson, S. (2007). Fundamentals of quantitative research. *Language Institute Chulalongkorn University*, 2-3.

83. Sørensen, N.N., Van Hear, N. & Engberg-Pedersen, P. (2002). The migration-development nexus evidence and policy options state-of-the-art overview. *International Migration,* 40(5):3-47.

84. Tevera, D. (2004). *Emigration Potential of the Skills Base of Zimbabwe.* Harare:Southern African Migration Project.

85. Thet K. K. (2012). Pull and push factors of migration: A case study in the urban area of Monywa Township, Myanmar. *News from the world of statistics, 1(4).*

86. Transparency International. (2021). *Corruption Perception Index 2021.* Retrieved April 6, 2022 from https://www.transparency.org/

87. United Nations Conference on Trade and Development (2011). *Impact of remittances on poverty in developing countries.* Retrieved June 16, 2022 from https://www.researchgate.net/publication/297535175_Impact_of_Remittance_on_Poverty_in_Developing_Countries

88. United Nations High Commission for Refugees. (UNHCR). (1997). *The State of the World's Refugees 1997–98: A Humanitarian Agenda.* Oxford: Oxford University Press.

89. United nations. (2018). *World Migration Report 2018.* Geneva: International Organization for Migration.

90. United Nations & Department of Economic & Social Affairs. (2004). *World economic and social survey 2004.* New York: United Nations.

91. United Nations. (2018). *Migration.* Retrieved October 18, 2018 from https://www.un.org/en/sections/issues-depth/migration/index.html

92. Woetzel, J., Madgavkar, A., Rifai, K., Mattern, F., Bughin, J., Manyika, J., Elmasry, T., di Lodovico, A. & Hasyagar, A. (2016, November). *Global migration's impact and opportunity | McKinsey* [published on web page]. Retrieved from https://www.mckinsey.com/featured-insights/employment-and-growth/global-migrations-impact-and-opportunity

93. World Bank. (2018). *Former Yugoslav Republic of Macedonia - Systematic Country DIagnostic: Seizing a Brighter Future for All*, World Bank Group, Washington,D.C., Retrieved October 3 from http://documents.worldbank.org/curated/en/113581543719676213/Former-Yugoslav-Republic-of-Macedonia-Systematic-Country-Diagnostic-Seizing-a-Brighter-Future-for-All

94. World Bank. (2020a). *World Development Indicators (database),* DataBank, World Bank Group, Washington, D.C., Retrieved September 24, 2021 from https://databank.worldbank.org/source/world-development-indicators

95. World Bank. (2020b). *North Macedonia: Country Profile, Enterprise Surveys.* World Bank Group/European Bank for Reconstruction and Development/European Investment Bank, Washington, D.C./London/Kirchberg, Luxembourg. Retrieved May 30, 2022 from http://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/country/North-Macedonia-2019.pdf

96. World Bank. (2020c). *Ease of Doing Business in North Macedonia.* World Bank Group, Washington, D.C. Retrieved May 29, 2022 from http://www.doingbusiness.org/en/data/exploreeconomies/north-macedonia#DB_ri

97. World Bank. (2020d). *Multi-dimensional analysis of development in North Macedonia.* Retrieved May 26, 2022 from https://www.oecd-ilibrary.org/sites/e232493b-en/index.html?itemId=/content/component/e232493b-en

98. World Bank. (2022a). *Export and imports of goods and services, GDP.* Retrieved May 27, 2022 from https://data.worldbank.org/

99. World Bank. (2022b). *Unemployment and annual inflation in North Macedonia. FDI and Government debt to GDP.* Retrieved June 3, 2022 from https://data.worldbank.org/

100. World Health Organization Regional office for Europe. (2021, December 8). *Health Systems in Action North Macedonia.* European Observatory on Health Systems and Policies.

101. Zolberg, A. R., Suhrke, A. & Aguayo, S. (1989). Escape from Violence. New York: Oxford University Press.

APPENDICES

Appendix 1: Povzetek (Summary in Slovene language)

Beg možganov in izseljevanje mladih je problem številnih držav. Najbolj prizadete države so države v razvoju, kot je Severna Makedonija. Po podrobnem pregledu literature, se je izkazalo, da dejavniki vleke in potiska, kot so dohodek, stabilno politično okolje, korupcija, zdravstveni sistem itd., postavljajo države v razvoju v podrejen položaj.

Omenjeni vzroki za beg možganov so povzročili velike negativne posledice v razvoju Severne Makedonije. Največja težava, s katero se sooča Severna Makedonija, je, da se največje število začasnih migracij, zlasti za visokokvalificirane delavce, prenese v trajno.

Namen magisterske naloge je bil analizirati dejavnike, ki povzročajo beg možganov in izseljevanje mladih iz Severne Makedonije. To je bilo narejeno z analizo glavnih dejavnikov potiska in vlečenja. Za dosego namena magisterske naloge je bila opravljena anketa z državljani Severne Makedonije, ki so bili razdeljeni v štiri glavne kategorije: zaposleni v Severni Makedoniji, študenti, ki študirajo v tujini in v Severni Makedoniji, že zaposleni v tujini in brezposelni državljani v Severni Makedoniji. V magistrski nalogi je bila analizirana korelacija za možno vrnitev visokokvalificiranih migrantov v domovino ali tako imenovani možganski obrat. Najpomembnejše ugotovitve magisterske naloge so bile naslednje:

- Državljani Severne Makedonije niso samo nezadovoljni z družinskim dohodkom, temveč dajejo tudi prednost glavnim dejavnikom migracije kot so korupcija, sistem zdravstvenega varstva, izobraževanju in razvoju kariere.
- Ljudje, ki razmišljajo o selitvi v tujino, bodo sprejeli delo, ki zahteva nižje sposobnosti, kot jih imajo.
- Večina vprašanih meni, da bodo imeli v tujini boljši življenjski standard, boljše zaposlitvene možnosti in boljšo kakovost življenja kot v Severni Makedoniji.
- Možnost potencialnega možganskega obrata je majhna. To pomeni, da večina anketirancev v tujini razmišlja o trajni selitvi v razvito državo, v kateri se trenutno nahajajo.
- Politike, ki jih izvaja država Severna Makedonija so pomanjkljive. Zaupanje v dejanske koristi od uporabe teh politik je nizko.

V zaključku, ki je rezultat analize smo ugotovili, da je Severna Makedonija postopoma izgublja največjo naložbo in to je njen človeški kapital. Za državo v razvoju s počasno rastjo je predvsem škodljivo, če je ta človeški kapital mlad in visoko izobražen. Te izgube človeškega kapitala ni mogoče nadomestiti z nakazili, ker se pričakuje, da bodo ti mladi povečali produktivnost in dodatno spodbudili rast države, hkrati pa bodo obvladali breme starajočega se prebivalstva.

Pri obravnavi razvojnih strategij države je potrebno upoštevati pozitivne in negativne učinke migracij. S takojšnjimi ukrepi, ki so bili predlagani v nalogi bi vplivali na zmanjšanje bega

možganov in odseljevanje mladih. Predvsem v povezavi med zasebnim sektorjem in univerzami, posebnimi povezavami in spodbudami za sektorje z največjo dodano vrednostjo ter velikim zmanjšanjem nepotizma v povezavi z institucijami in korupcijo. Navsezadnje bo papir prenesel vse, ljudje pa ne.

Appendix 2: Questionnaire questions

The first 12 questions are general for all respondents.

1.   Which category best represents your age?
- 18-25
- 26-35
- 36-45

        Other (add other, then you can filter these out)

2.   What is your gender?
- M
- F

3.   What is your education level?
- Primary school
- Secondary school
- Bachelor's or equivalent level
- Master's or equivalent level
- Doctoral or equivalent level

4.   What type of university are you enrolled at/have finished/planning to enroll?
- State University
- Private University
- Other

5.   What is your field of education?
- Generic programs and qualifications
- Education
- Arts and humanities
- Social sciences, journalism and information
- Business, administration and law
- Natural sciences, mathematics and statistics
- Information and Communication Technologies
- Engineering, manufacturing and construction
- Agriculture, forestry, fisheries and veterinary
- Health and welfare
- Services (personal services, transport services, security services, environmental protection)

6. How satisfied would you say you are with your life these days in Macedonia?

State, to what extent you agree with these statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Satisfied with current income/family income					
Satisfied with cost of living					
Satisfied with the efficiency of institutions					
Satisfied with the health system					
Satisfied with the transport system					
Satisfied with the education system					
Satisfied with the political situation					
Satisfied with freedom of speech - democracy					

7. Do you have any close family member/friend that has already migrated abroad?
*   Yes
*   No

8. What were their general reasons for migrating?

State, in your opinion how important were the following reasons for their decision to migrate: .

	Not at all important	Slightly important	Important	Fairly important	Very important
Limited possibility of professional development					
Corruption					
Nepotism through the institutions					
High level of unemployment					
Low wages					
The health system					
The political condition					
The inter-ethnical collaboration					
The judicial system					
Safety					
Public institutions effectiveness					
Cultural and social norms					
Quality of education					
Air quality					
Infrastructure					
Presence of family abroad					

9. Have you ever received any gifts/money from them?

- Yes
- No

10. How the migration of young people impacts in your opinion the development of Macedonia? State, to what extent you agree with these statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Loss of future qualified workers					
Loss of potential entrepreneurs					
Loss of new ideas and innovations					
Lower birthrate					
Loss of future income tax					
Loss of social contributions (pension funds, health funds, etc.)					
Lower GDP					
Hinders the general economic development					

11. State to what extent do you agree with the following statements:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Income taxes in Macedonia are high					
Income tax should be: as it is proposed - (10% until 1500 EUR, amount above that taxed with 18%)					
Income tax should be: as it is - (10% flat tax rate for all amounts earned)					
Income tax should be: No tax for minimum wage earners, above minimum to average wage rate 10%, above average to 1000 EUR with 18%, and above 1000 with 25%)					

12. What is your current activity status?
- Full - time employed
- Part - time employed
- Student or still fully in education
- Self - employed
- Work in shadow economy
- Unemployed

- Not searching for work
- Already employed abroad (living abroad)

Questions if the answer on question 12 is Employed in the home country (Macedonia):

13. Does your employment match your field of study?
- Yes
- No

14. Who is your employer?
- Local company
- International company
- Governmental institution
- NGO
- Self employed
- Other (who?) If the answer is "other" new pop-up question: "who?" will appear.

15. What size is the company you are currently employed at?
- 0-9
- 10-49
- 50-249
- 250 + employees

16. State, to what extent you agree with these statements:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am currently satisfied with my work.					
I am rewarded for the quality of my efforts.					
My job makes good use of my skills and abilities.					
I am satisfied with my salary.					
Positive work atmosphere in the company.					
This is a good place for me to develop my career.					
I am included in on-the-job training.					
I get career development opportunities at work.					
I currently have a job, which I am overqualified for.					
My job suits my qualifications.					
I am satisfied with my opportunity to get a better job in this company.					
I am satisfied with my involvement in decisions that affect my work.					

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I experience personal growth such as updating skills and learning different jobs.					
I believe that my superiors are engaged in my growth and future promotion.					
Opportunities for promotion are based on skills and knowledge.					

17. What is your income class (monthly salary)?

- up to 200eur

- 201eur - 350eur

- 351eur - 500eur

- 501eur – 650eur

- 651eur – 800eur

- 801eur and above

18. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I'm not planning to leave my current job in my home country for another job abroad.					
I would leave my job for a better job in my current town.					
I would leave my job for a better job in another town in Macedonia.					
I would leave and move to another country for a better job.					
I would leave and move to another country if my partner gets a better job.					
I would leave and move to another country because of better prospects for my family (education, development & etc.)					
I would leave and move to another country because of better life quality (health, social insurance & etc.)					
I would leave and move to another country because of the political system.					
I would leave and move to another country because of the ethnic situation.					
I would leave and move to another country because of the nepotism.					
I would leave and move to another country because of the judicial system.					
I would leave and move to another country because of the corruption.					

I would accept a job abroad that requires lower skills level from the one that I posses.					
Depending on the salary I would accept a job abroad that requires lower skills level from the one that I posses.					
I expect a better living standard abroad than in Macedonia.					

19. Which country would you prefer to migrate to?

-Germany

-Australia

-Canada

-USA

-Slovenia

-Other_____ If the answer is "other" new pop-up question: "where?" will appear.

Questions if the answer of question 12 is Student:

13. How satisfied are you with the quality of education you have received so far?

•   Not at all satisfied

•   Partly satisfied

•   Satisfied

•   More than satisfied

•   Very satisfied

14. Have you considered studying abroad?

•   Yes

•   No

•   I'm already studying abroad

If the answer is "I'm already studying abroad" the sub questions will be: Rank the motives for studying abroad?

	Not at all important	Slightly important	Important	Fairly important	Very important
Type of education programs					
Quality of education programs					
International connections					
Opportunity for employment					

Access to internship programs					
Improvement of language skills					

How do you rank your opportunities for employment after finishing studies abroad?
(1 – being the lowest, 5 – being the highest)

	1	2	3	4	5
At home					
Abroad					

15. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I'm planning to find a job in my current town.					
I'm planning to find a job in another city in my home country.					
I believe I can find employment in Macedonia in my field of study.					
I would leave and move to another country for the prospects of a better job opportunities.					
I would leave and move to another country if my partner gets a better job.					
I would leave and move to another country because of better prospects for my family (education, development & etc.)					
I would leave and move to another country because of better life quality (health, social insurance & etc.)					
I would leave and move to another country because of the political system.					
I would leave and move to another country because of the ethnic situation.					
I would leave and move to another country because of the nepotism.					
I would leave and move to another country because of the judicial system.					
I would leave and move to another country because of the corruption.					
I would accept a job abroad that requires lower skills level from the one that I posses.					

Depending on the salary I would accept a job abroad that requires lower skills level from the one that I posses.					
I expect a better living standard abroad than in Macedonia.					

16. Which country would you prefer to migrate to?

-Germany

-Australia

-Canada

-USA

-Slovenia

-Other_____ If the answer is "other" new pop-up question: "where?" will appear.

Questions if the answer on question 12 is Unemployed or Work in shadow economy:

13. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I believe that I will have a job opportunity in my near future in my home country.					
I would leave and move to another country for the prospects of a better job opportunities.					
I would leave and move to another country if my partner gets a better job.					
I would leave and move to another country because of better prospects for my family (education, development & etc.)					
I would leave and move to another country because of better life quality (health, social insurance & etc.)					
I would leave and move to another country because of the political system.					
I would leave and move to another country because of the ethnic situation.					
I would leave and move to another country because of the nepotism.					
I would leave and move to another country because of the judicial system.					
I would leave and move to another country because of the corruption.					
I would accept a job abroad that requires lower skills level from the one that I posses.					

Depending on the salary I would accept a job abroad that requires lower skills level from the one that I posses.					
I expect a better living standard abroad than in Macedonia.					

14. Which country would you prefer to migrate to? (if the answer to the statement for movement is 4 or 5)

-Germany

-Australia

-Canada

-USA

-Slovenia

-Other_____If the answer is "other" new pop-up question: "where?" will appear.

15. Have you considered starting your own business in your home country?

• Yes

• No

16. What do you believe are the biggest limitations for starting your own business?

• Not enough funds

• Low trust in government institutions

• Low protection from unfair competition

• Not enough support from the government through funds

• Other _____If the answer is "other" new pop-up question: "what?" will appear.

Questions if the answer on question 12 is Already employed abroad

13. Does your employment abroad match your field of study?

• Yes

• No

14. Who is your employer?

• Local company

• International company

• Governmental institution

• NGO

• Self employed

• Other (who?) If the answer is "other" new pop-up question: "who?" will appear.

15. What size is the company you are currently employed at?

- 0-9
- 10-49
- 50-249
- 250 + employees

16. Which country have you migrated to?

-Germany

-Australia

-Canada

-USA

-Slovenia

-Other_____If the answer is "other" new pop-up question: "where?" will appear.

17. State, to what extent you agree with these statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I'm satisfied with living abroad.					
I am currently satisfied with my work.					
I am rewarded for the quality of my efforts					
My job makes good use of my skills and abilities.					
I am more satisfied with my salary abroad than I used to earn before at home.					
Positive work atmosphere in the company.					
This is a good place for me to develop my career.					
I am included in on-the-job training.					
I get career development opportunities at work.					
I currently have a job, which I am overqualified for.					
My job suits my qualifications.					
I am satisfied with my opportunity to get a better job in this company.					
I am satisfied with my involvement in decisions that affect my work.					
I experience personal growth such as updating skills and learning different jobs.					
I believe that my superiors are engaged in my growth and future promotion.					
Opportunities for promotion are based on skills and knowledge.					
I'm considering returning permanently back home.					

I have a better living standard abroad than in Macedonia.					

18. Rank the reasons below for leaving the country in your opinion:

	Not at all important	Slightly important	Important	Fairly important	Very important
Limited possibility of professional development					
Corruption					
Nepotism through the institutions					
High level of unemployment					
Low wages					
The health system					
The political condition					
The inter-ethnical collaboration					
The judicial system					
Safety					
Public institutions effectiveness					
Cultural and social norms					
Quality of education					
Air quality					
Infrastructure					
Presence of family abroad					

19. What type of income taxation do you have in your country of residence?
- progressive
- flat
- other_____ If the answer is "other" new pop-up question: "which?" will appear.

20. What percentage of income tax do you pay at your country of residence?
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40% and more

Appendix 3: Spearman correlation between satisfaction of the work place and education level

			I am currently satisfied with my work.	What is your education level?
Spearman's rho	I am currently satisfied with my work.	Correlation Coefficient	1.000	.167
		Sig. (2-tailed)	.	.108
		N	94	94
	What is your education level?	Correlation Coefficient	.167	1.000
		Sig. (2-tailed)	.108	.
		N	94	94

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=94).

Appendix 4: Spearman correlation between satisfaction of the work place and income class

			I am currently satisfied with my work.	What is your income class (monthly salary)?
Spearman's rho	I am currently satisfied with my work.	Correlation Coefficient	1.000	.453**
		Sig. (2-tailed)	.	<.001
		N	94	94
	What is your income class (monthly salary)?	Correlation Coefficient	.453**	1.000
		Sig. (2-tailed)	<.001	.
		N	94	94

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=94).

Appendix 5: Spearman correlation between satisfaction of the work place and intention of migration

			I am currently satisfied with my work.	I'm not planning to leave my current job in my home country for another job abroad.
Spearman's rho	I am currently satisfied with my work.	Correlation Coefficient	1.000	.418**
		Sig. (2-tailed)	.	<.001
		N	94	94
	I'm not planning to leave my current job in my home country for another job abroad.	Correlation Coefficient	.418**	1.000
		Sig. (2-tailed)	<.001	.
		N	94	94

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=94).

Appendix 6: Correlation between plans for leaving the country and acceptance of a job abroad with lower skills depending on the salary

			Depending on the salary I would accept a job abroad that requires lower skills level from the one that I posses.	I'm not planning to leave my current job in my home country for another job abroad.
Spearman's rho	Depending on the salary I would accept a job abroad that requires lower skills level from the one that I posses.	Correlation Coefficient	1.000	-.372**
		Sig. (2-tailed)	.	<.001
		N	94	94
	I'm not planning to leave my current job in my home country for another job abroad.	Correlation Coefficient	-.372**	1.000
		Sig. (2-tailed)	<.001	.
		N	94	94

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=94).

Appendix 7: Correlation between proposed income tax and current taxes

			Income taxes in Macedonia are high	Income tax should be: No tax for minimum wage earners, above minimum to average wage rate 10%, above average to 1000 EUR with 18%, and above 1000 with 25%)
Spearman's rho	Income taxes in Macedonia are high	Correlation Coefficient	1.000	.381**
		Sig. (2-tailed)	.	<.001
		N	172	172
	Income tax should be: No tax for minimum wage earners, above minimum to average wage rate 10%, above average to 1000 EUR with 18%, and above 1000 with 25%)	Correlation Coefficient	.381**	1.000
		Sig. (2-tailed)	<.001	.
		N	172	172

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=172).

Appendix 8: Correlation between presence abroad and remittances

			Do you have any close family member/friend that has already migrated abroad?	Have you ever received any gifts/money from them?
Spearman's rho	Do you have any close family member/friend that has already migrated abroad?	Correlation Coefficient	1.000	.214**
		Sig. (2-tailed)	.	.005
		N	172	172
	Have you ever received any gifts/money from them?	Correlation Coefficient	.214**	1.000
		Sig. (2-tailed)	.005	.
		N	172	172

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Own work (N=172).