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Economic Impact of Remittances in Albania

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Dedicated to my family...

"Nanos gigantum humeris insidentes"

Declaration

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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Acknowledgments

Abstract

This dissertation intends to explain the impact of remittances on Albania's economic activity. Based on the gravity model, to achieve the purpose of the study, two estimation models were constructed using panel data from 2005 to 2019. Firstly, the basic form of the gravity model was applied to analyse the relationship between remittances and four variables: GDP of Albania, GDP of the host country, distance, and shared border. Then, the basic form of the gravity model was extended with other variables. According to the results, The Basic Gravity Model explains about 80% of remittance flows in the case of Albania, while The Extended Gravity Model explains about 93%. A statistically significant relationship exists between remittances and GDP of Albania, GDP of host countries, financial development, shared border, labour market efficiency and quality of health services. On the other side, exchange rate, quality of institutions, age dependency ratio, and distance have no impact on explaining remittance flows. In addition, a survey was conducted aiming at exploring the microeconomic implications of remittances. Data were obtained from a sample of Albanian migrants residing in the Czech Republic as of 2020. The findings suggested that slightly more than half of survey respondents remit. Mainly remittances are sent for consumption purposes using informal channels and driven by altruistic motives. Mostly, the yearly remitted amount does not exceed 100.000 CZK a year ($\approx$ 4.000 €).

Abstrakt

Tato disertační práce má za cíl vysvětlit dopad remitencí na ekonomickou aktivitu Albánie. Na základě gravitačního modelu byly pro dosažení účelu studie zkonstruovány dva odhadovací modely s použitím panelových dat z let 2005 až 2019. Nejprve byla použita základní forma gravitačního modelu k analýze vztahu mezi remitencemi a čtyřmi proměnnými: HDP Albánie, HDP hostitelské země, vzdálenost a sdílená hranice. Poté byla základní podoba gravitačního modelu rozšířena o další proměnné. Podle výsledků The Basic Gravity Model vysvětluje asi 80 % toků remitencí v případě Albánie, zatímco The Extended Gravity Model vysvětluje asi 93 %. Existuje statisticky významný vztah mezi remitencemi a HDP Albánie, HDP hostitelských zemí, finančním rozvojem, sdílenou hranicí, efektivitou trhu práce a kvalitou zdravotnických služeb. Na druhou stranu směnný kurz, kvalita institucí, poměr věkové závislosti a vzdálenost nemají na vysvětlení toků remitencí žádný vliv. Kromě toho byl proveden průzkum zaměřený na prozkoumání mikroekonomických důsledků remitencí. Data byla získána ze vzorku albánských migrantů pobývajících v České republice k roku 2020. Ze zjištění vyplývá, že něco málo více než polovina respondentů průzkumu remise. Převážně remitence jsou zasílány pro účely spotřeby pomocí neformálních kanálů a vedeny altruistickými motivy. Roční poukázaná částka většinou nepřesáhne 100 000 Kč ročně (≈ 4 000 €).

Klasifikace JEL: F24, F22

Klíčová slova: Remitence, migrace, mezinárodní ekonomie, gravitační model, Albánie.

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Abbreviations

ALL – Albanian Lek (Albanian Currency)

BFS - The Swiss Federal Statistical Office

DESTATIS - The Federal Statistical Office (Germany)

DHS – Department of Homeland Security (United States of America)

EU – European Union

EUROSTAT - The statistical office of the European Union

GDP – Gross Domestic Product

GNI – Gross National Income

INE - National Statistics Institute (Spain)

INED - The French Institute for Demographic Studies

INSTAT – Institute of Statistics (Albania)

ISTAT – Italian National Institute of Statistics

MAKSTAT - State Statistical Office of the Republic of North Macedonia

MONSTAT – Statistical Office of Montenegro

NATO - North Atlantic Treaty Organization

NPISH – Non-Profit Institutions Serving Households

OECD - The Organisation for Economic Co-operation and Development

ONS - The Office for National Statistics (United Kingdom)

SCB – Statistics Sweden

STATBEL - The Belgian statistical office

TURKSTAT - Turkish Statistical Institute

UN – United Nations

WTO – World Trade Organization

1. Introduction

1.1 Background

Migration is not a new phenomenon in the world. The movement of people has been part of human history ever since. Remittances have been a central component related to migration. Remittances refer to the money transfer by migrant workers to relatives and friends back home in their country of origin. They tend to be well-targeted to the necessities of the beneficiary. Consumption is the most common reason for remitting. Especially in developing countries, migrant remittances are an important financial source used to meet the recipient's basic needs. Many people remit for other reasons. Some remittances are sent for coverage of medical expenses, education fees, or housing expenses while some are sent for saving or investment in activities that create jobs and generate income. Remittances can make an invaluable contribution to the economy and can be an engine of development.

It is difficult to estimate the exact size of remittance flows because many migrants prefer unofficial channels in transferring money. Nevertheless, the World Bank estimated USD 554 billion of remittance flows in 2019 overtaking FDIs. According to the World Bank, remittance flows in 2020 to low-and-middle-income countries fell by 7.2% to USD 508 billion, excepted to further decline in 2021 by 7.5% to USD 470 billion mainly due to the economic crisis caused by the COVID-19 pandemic. In other words, such projections imply a fall in wages and employment for migrants and consequently fewer remittances for families back home. A fall in wages and employment places migrants in a highly vulnerable situation while a decline in remittances affects families' ability to cope with new financial challenges in supporting and improving livelihoods.

Sirkeci et al. (2012) analysed migration and remittances during the 2008 financial crisis. They concluded that migration and remittances were relatively resilient to the 2008 financial crisis and many remittance-receiving countries became more dependent on remittance inflows for meeting financing needs. The resilience of remittances during the crises can be explained by the fact that the most significant part of remittances is sent by the stock of migrants rather than recent arrivals of migrants

since they need to establish themselves first. The decision of migrants returning to their country of origin is complex and a crisis does not necessarily mean a return to the home country. On the other side, migrants that have the intention to return or even return, tend to save, and take their savings back with themselves. Apart from the socio-economic impact, remittances can contribute to macroeconomic stability and economic growth.

In the early 1990s, with the collapse of the communist system, Albania has experienced several waves of emigration. Considering the informality that has accompanied this phenomenon in Albania, it is nearly impossible to determine the exact number of Albanian migrants. However, based on some estimations from the United Nations Department of Economic and Social Affairs, there were 1,148,144 Albanian migrants worldwide as of 2017. Such a figure is a clear indication of the social and economic importance of Albanian migrants when compared with the total population of approximately 3 million. Put differently, 1 out of 3 Albanians lives overseas.

The literature in the field of remittances is very extensive. In the case of Albania, the research in this field has been relatively scarce due to a lack of data or inconsistent datasets mainly because most of the migrants were undocumented or illegal. Throughout the time, a very significant number of illegal migrants were legally admitted to the destination countries possessing necessary immigration documentation and hence opening the path to the official statistical recording. Besides, Albania is experiencing a brain drain in very recent years, mainly driven by labour market inefficiency and unsatisfactory pay. Such a new wave of migration is composed of highly skilled professionals likely to have detrimental effects on the economy and society. Considering the new context, analysing the impact of remittances on the Albanian economy would be of great interest.

1.2 Purpose and Objectives

The main purpose of this dissertation is to explain the impact of remittances on Albania's economy for the period 2005-2019. The study aims to fill the gaps in this area of research by investigating the main factors influencing remittance flows. The

wide array of factors affecting remittances is commonly divided into macro and micro. Typically, micro factors are associated with demographic characteristics of migrants, remittance motivations, and remittance purposes. While macro factors are related to the gross domestic product, financial development, exchange rate, quality of institutions, labour market, quality of health care system and education, etc. All macro factors are beyond migrants' control but could have a direct impact on their remitting behaviour. The purpose was achieved through a series of objectives, which, in a nutshell, relate to answering the following questions:

Macro factors

- What is the relationship between remittances and GDP of Albania, and to what extent is the impact of GDP of Albania on explaining remittance flows;
- What is the relationship between remittances and GDP of host countries, and to extent is the impact of GDP of host countries on explaining remittance flows;
- What is the relationship between remittances and distance between host and home country and shared border, and to what extent is their impact on explaining remittance flows;
- What is the relationship between remittances and financial sector development in Albania, and to what extent is its impact on explaining remittance flows;
- What is the relationship between remittances and exchange rate, and to what extent is its impact;
- What is the relationship between remittances and quality of institutions, and to what extent is its impact;
- What is the relationship between remittances and stock of migrants, and to what extent is its impact;
- What is the relationship between remittances and labour market efficiency as well as remittances and quality of health and primary education, and to what extent are their impact on explaining remittance flows;
- What is the relationship between remittances and age dependency ratio, and to what extent is its impact;

Micro factors

- What is the main motivation for remitting;
- What is the main purpose for remitting:
- What is the main channel used for money transfer;
- What percentage of migrant's savings is remitted and what is the value of the yearly remitted amount.

1.3 The significance of the study

Albania has a significant migratory population scattered around the world. Almost one in three Albanians lives and works abroad. Despite the high number of migrants residing and working overseas, the migratory trend of Albanians continues to be on the rise over the years. A study conducted by Gedeshi and King (2018) found that Albania's potential migration had grown from 44 percent in 2007 to 52 percent in 2018. Certainly, there are "push" and "pull" factors that encourage further migratory flows from Albania. On the other side, the high number of migrants has created significant remittance flows playing an essential role for the domestic economy regardless of the political and economic upheaval in Albania and overseas. Nevertheless, Albanian migration of recent years has distinct attributes and different dynamics compared to earlier migratory waves. Until a few years ago, the unemployed, unskilled, uneducated, and young people were potential migrants. While in very recent years potential migrants are identified to be employed, highly skilled, educated, and not necessarily young. The new social and economic dynamics of early and recent migrants influenced by the economic activity in the host countries presents a new reality that is closely associated with remittance flows. Considering the new context, investigating the economic impact of remittances in the case of Albania remains of high significance. The study aims at contributing to the literature in this field being a valuable source of knowledge for interested individuals, organizations, and policymakers.

1.4 Structure of the dissertation

The dissertation is organized into four chapters. Chapter 1 describes the background of the study, the purpose and objectives of the study, its significance, and the structure of the dissertation. Chapter 2 presents a review of related literature and studies related to migration and remittances. In Chapter 3 are shown methodology and the results. This chapter is subdivided into two parts. The first part explains and presents the results regarding the economic impact of remittances in the case of Albania using a gravity model approach. Commonly, the gravity model is applied in international trade in international economics. The model predicts bilateral trade flows based on the economic sizes and distance between two units. Similarly, to trade flows, the model is used to examine remittance flows and their impact on the Albanian economy. The second part analyses the microeconomic implications of remittances. For this purpose, a cross-sectional survey was conducted. As the sample population were chosen Albanian migrants residing in the Czech Republic. Finally, Chapter 4 presents the conclusions, outlines theoretical and practical contributions to the research field, as well as recommendations and limitations of this study.

2. Literature Review

2.1 Migration

Migration is a term broadly used to describe the movement of people and change of residence from one place to another. Migration is distinct from nomadism, commuting, and tourism because is not transitory. Migration refers to the movement of people with intentions of settling at a new location. United Nations Department of Economic and Social Affairs (1998) defined the term migrant as a person who moves to a country other than that of his or her usual residence so that the country of destination effectively becomes his or her new country of usual residence. United Nations Department of Economic and Social Affairs (1998) definition distinguishes long-term migrant from short-term migrant. A long-term migrant is an individual who resides in his or her new country of usual residence for at least a year while a short-term migrant is an individual who resides for at least three months but less than a year.

Emigration and immigration are two terms that are often used interchangeably. Nevertheless, emigration is the act of leaving or moving out of the home country to settle in another one, and immigration means entering the destination country. The movement of people, or in other words migration, may be forced or voluntary. Forced migration was divided by the United Nations Food and Agriculture Organization (2017) into four groups: conflict-induced displacement, development-induced displacement, disaster-inducted displacement, and survival migration. Conflict-induced displacement refers to the people who flee their homes because the state authorities are unable or unwilling to protect them from armed conflicts and violence. The Syrian refugees represent a typical and unfortunate example of conflict-induced migration resulting from the Syrian civil war. Development-induced migration involves the movement of people caused by the implementation of large-scale projects to supposedly enhance development. A common example of supposed development-induced displacement is the displacement of indigenous people. Disaster-induced displacement is another form of forced migration referring to the movement of people because of natural disasters such as floods, volcanic eruptions, earthquakes, deforestation, desertification, land degradation, global warming. Survival migration is

the movement of people when leaving the usual place of residence is seen as the only option for the survival of the individual and/or family members. Betts (2010) affirmed that the state holds collective and final responsibility for ensuring the human rights of its citizens in the modern state system. Betts (2013) added that conditions in failed and fragile states pose an existential threat for its citizens. Still, for some countries achieving Sustainable Development Goals remains a real challenge if not an elusive quest. Numerous countries, particularly in Sub-Saharan Africa, continue to face food crises far away from achieving the first three SDGs such as no poverty, zero hunger, and good health and well-being.

One of the most important aspects concerning migration is scale. Estimating the correct number of migrants is a constant challenge because of a series of factors. Getting the right number serves as a good basis for understanding the scale of the migration phenomenon, its trends, and shifting demographics about the global social and economic transformations. According to some estimates by the United Nations International Organization for Migration, 3.5 percent of the global population or 272 million people were international migrants in 2019. That may be a minor number when considering the current world population of 7.8 billion. However, the migration phenomenon differs substantially when seen from a country-specific context rather than a global perspective. Countries at similar development levels present quite different migration patterns. Differences across countries emerge due to differing political, economic, and socio-cultural influences. Countries capable of meeting the job market demands and with adequate social welfare record lower migration rates than their neighbours. Khoudour (2015) argued that migration is often a result of failed development policies.

Based on data from the United Nations International Organization for Migration, Europe and Asia comprise 61 percent of the total global international migrant stock. In 2019, Europe hosted 82 million international migrants, Asia hosted 84 million international migrants, and North America hosted around 59 million international migrants. From 2000 to 2019, Asia and Europe experienced a remarkable increase in international migrants. Asia had a 69 percent increase or around 34 million

international migrants while Europe had an increase of 25 million international migrants, followed by North America with an increase of 18 million. Referring to data published by the United Nations International Organization of Migration, the top 10 destination countries of international migrants as of 2019 are the United States of America, Germany, Saudi Arabia, Russian Federation, United Kingdom, France, Canada, Australia, Italy, and Spain. On the other side, the top 10 origin countries of international migrants in 2019 are India, Mexico, China, Russian Federation, the Syrian Arab Republic, Bangladesh, Pakistan, Ukraine, Philippines, and Afghanistan.

A broad spectrum of theoretical approaches exists for explaining the origins, patterns, and characteristics of migration. The first attempt to explain migratory flows was made by Ravenstein as early as 1885. He identified a set of generalizations that he regarded as "the laws of migration". Many of them are relevant even nowadays. He noticed an inverse relationship between distance and volume of migration and that each migration current produces a counter current. Most migrants move to short distances relative to their home. Ravenstein pointed out that migration occurs step by step mainly due to economic reasons and is highly age selective. Numerous studies have confirmed that adults in the working-age groups demonstrate a high propensity to migrate.

The gravity model is another theory explaining migration. Based on Newton's law of gravitation, the theory states that the volume of migration is a function of size (mass) and distance between home and destination countries. Put differently, migration is directly proportional to their size and inversely proportional to the distance between the two countries expressed as follows:

$$M_{ij} = \frac{P_i * P_j}{D_{ij}} * C \ (1.1)$$

In this formula M stands for migration flows, P stands for population size between home and destination countries (*i* and *j*), D stands for distance and C is a constant. It must be highlighted that the model presented is simplistic for the complexity of the migration phenomenon. Given the recent infrastructural and technological developments, it is more coherent to measure the distance in terms of

transport facilities and the cost of transport rather than physical distance. The simplified model also considers all migrants as a homogeneous group, which is not accurate. Migrants are heterogeneous and their experiences differ greatly.

The theory of intervening opportunities proposed by Stouffer (1940) is another attempt in explaining migration. Stouffer stated that the distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities between home and destination countries. He emphasized the essential importance of opportunities rather than geographical distance and the population size of countries. Stouffer's theory can be mathematically expressed as:

$$M_{ij} = \frac{\Delta O_j}{\Delta O_i} * C \ (1.2)$$

In formula (1.2) M stands for migration, ΔO_j represents the number of opportunities at the destination country, ΔO_i is the number of intervening opportunities at the home country, and C is a constant. Later, Stouffer (1960) revised his original model. The new model suggests that migration from one place to another is directly proportional to the number of opportunities in the place of destination and inversely proportional to the number of opportunities intervening between home and destination countries and the number of other migrants competing for opportunities in the destination country.

Lee (1966) theorized migration considering many factors influencing the decision and the process of migration. Lee (1966) summarized factors leading to mobility as factors associated with the place of origin, factors associated with the place of destination, intervening obstacles, and personal factors. Lee indicated three types of factors; factors that hold, attract and repel people. While some factors affect people in the same way, some other factors affect different people in different ways. However, important differences exist regarding factors associated with place of origin and destination. Lee saw an element of ignorance about the area of destination stating that knowledge about the destination is rarely exact and that the advantages and disadvantages of an area can be perceived only by living there. Lee regarded the

decision to migrate as an interplay between rationality and irrationality implying that transient emotions, mental disorder, and accidental occurrences are significant components of the migration.

2.2 Remittances

Migration and remittances are closely linked. Generally, remittances are considered as the money or goods that migrants send back to families and friends in origin countries. Remittances also express the most direct and common link between migration and development. Remittances are defined by the International Monetary Fund (2009) as the total amount of two items in the balance of payments such as "compensation of employees" and "personal transfers". International Monetary Fund refers to compensation of employees as the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities. Compensation of employees includes wages and salaries in cash, wages, and salaries in-kind, social contributions, as well as all forms of bonuses and allowances. According to the definition provided by the International Monetary Fund, personal transfers are all current transfers in cash or in-kind made or received by resident households to or from non-resident households. In this sense, personal transfers are a subset of current transfers. International Monetary Fund recognizes also supplementary items related to remittances such as social benefits, current transfers to NPISH (Non-Profit Institutions Serving Households), and capital transfers to NPISH.

It is difficult to estimate the exact size of remittance flows because many come to pass through unofficial channels. Bikoue (2020) stressed the importance of cost reduction as an element for encouraging migrants to send money through official transfer channels. Similarly, Kakhkharov, Akimov and Rohde (2017) stated that reductions in transaction costs could drive growth in recorded remittances. According to the official data from the World Bank, remittance flows to low and middle-income countries reached a record high of 584$ billion in 2019, surpassing foreign direct investment flows of $534 billion and overseas development assistance $166 billion. Although remittance flows are expected to fall by 14% worldwide because of the

Covid-19 pandemic situation, the gap between remittance flows and foreign direct investments will widen further, and particularly for low to middle-income countries the significance of remittances as a source of financing will increase.

The balance of payments is defined by IMF (2021) as a statistical statement that systematically summarizes the economic transactions of an economy with the rest of the world for a specific period. Residence is an important notion. The identification of transactions between residents and non-residents is a fundamental attribute of the balance of payments. The residence notion widely is referred to nationality or legal criteria akin to concept of residence used for tax, health insurance and compensation purposes.

The major components of the balance of payments are the current account, capital accounts, financial account, and reserve assets. Table 1 shows the standard components of the balance of payments:

Table 1 The Balance of Payments, Standard Components

	Debit	Credit
1. Current Account		
Goods (*general merchandise, goods for processing, etc*.)		
Services (*transportation, travel, communication, financial services, etc*.)		
Income (*compensation, dividends, interests, bonds, other income etc.*)		
Current Transfers (*general government, remittances, other transfers, etc*.)		
2. Capital Account		
Capital transfers (*debt forgiveness, migrants' transfers etc*.)		
Acquisition/disposal of non-produced, non-financial assets		
3. Financial Account		
Direct Investment (*equity capital, reinvested earnings, etc*.)		
Portfolio investment (*equity securities, debt securities, etc*.)		
4. Reserve Assets		
Monetary gold		
Foreign Exchange		
Special drawing rights		
Reserve position in the Fund		
Other claims		

Source: Author's own processing based on structure and classification made by IMF (2009)

As shown in Table 1, remittance flows belong to the current account under the current transfers ledger. It is necessary to distinguish between current transfers and capital transfers. Any cash transfer is considered a capital transfer. Current transfers, such as remittances, consist of all transfers that affect the disposable income of the donor and recipient and influence in the opposite direction their consumption possibilities. Capital transfers are conditional on the acquisition or disposal of a fixed asset by the donor or recipient. Capital transfers commonly are large and infrequent, while current transfers are small and frequent.

2.3 Albanian Migration and Remittances

Albania is in South-eastern Europe. The country shares land borders with Greece, North Macedonia, Kosovo, and Montenegro; and maritime borders with Italy, Greece, and Montenegro.

Figure 1. Geographical Location of Albania

The country went from a centralized economy during the communist era 1946-1990 to a free-market economy after change in the political systems in 1991. Albania is a developing country with an upper-middle-income economy. It is a member of the United Nations, NATO, World Bank, World Trade Organization, and is not a member of the European Union (EU) and Organisation for Economic Co-operation and Development (OECD). The official language of Albania is Albanian, an independent branch of the Indo-European language tree. Thus, the Albanian language has no similarities with any existing languages. The country's currency is named Lek (ALL). Table 2 shows some of the main socio-economic indicators for Albania.

Table 2 Country Level Socio-Economic Indicators, 2019

Indicators	Values
Population	2.854.191 inhabitants
GDP	15.28 US$ (billions)
GDP per capita	5,353 US$
GNI per capita	5,220 US$
Inflation	0.36%
Unemployment	11.47%
Labour market (total)	1.265.582 economically active people
Gross average monthly wage per employee	52.380 lek (≈ 500 US$)
The monthly average consumption expenditures	33.436 lek (≈ 310 US$)
Labour market participation rate	53% women; 68% men
Gender pay gap	10.1%
Percentage of population in managerial positions	65.3% men, and 34.7% women
Population annual growth rate (%)	-0.58%
Median age of the population	37.2 years old
Age dependency ratio (% of working-age population)	46.2%
Life expectancy at birth, total (years)	79.1 years
Body mass index (15-49 years old)	25.4 for women; 44.6 for men
Consumption of fruits and vegetables	About 80% of women and men have consumed 1-3 portion(s) per day
Number of households receiving economic assistance	64.057 persons
People at risk of poverty or social exclusion (in %)	49%
School enrolment, primary (% gross)	104.81%
Crimes and criminal justice	123.4 criminal offences per 10 thousand inhabitants

The corruption perceptions index (1-100 best)	35

As shown in Table 2, the gross average monthly wage per employee was around 500 US$ and the monthly average consumption expenditures were about 310 US$. In other words, about 61% of monthly income earned by Albanian households was used only for consumption purposes. Based on data obtained from labour force surveys carried out by INSTAT, in 2019, 36.4% of economically active people were employed in the agriculture sector, 27.2% were employed in trade, transportation, accommodation and food, and business and administrative services. About 16.3% were employed in public administration, community, social and other services, and activities. Nearly 10.9% were employed in the manufacturing sector, 7% in construction, and 2.2% in mining and quarrying, electricity, gas and water supply. Based on data obtained from the living condition survey conducted by INSTAT, about 45.1% of people over 16 years old claimed to have an unmet need for medical and dental care and nearly 49% of people feel at risk of poverty or social exclusion. According to the ranking provided by Transparency International, Albania was ranked 106th among 180 countries concerning the perceived levels of public sector corruption for 2019. Still, strengthening public institutions remains a challenge.

The so-called modern Albanian migration dates almost one century ago. Considering the Albanian independence year 1912 as the starting point of the modern Albanian migration, the modern Albanian migration is divided into three distinct periods:

- Pre-communist period (1912-1944)
- Communist period (1944-1990)
- Post-communist/Democratic period (after 1990)

A negligible number of Albanians migrated during the first period of the so-called modern migration period (1912-1944). At that time, the preferred destination was the United States and migrants left their home country primarily for economic

reasons. The establishment of the communist regime in Albania in 1944 led to another wave of migration but of different nature. During this period people were moving to escape political persecution and poverty. The communist regime in Albania is widely considered as one of the harshest regimes (Abrahams, 2015), that imposed strict inbound and outbound travel restrictions. A special authorization was required to be able to travel. Nevertheless, the authorization was subject to political bias where authorizations were mostly being rejected. Bon (2017) referred to this period as the immobility period. De Zwager et al. (2005) estimated that during the communist era 1945-1990 about 20,000 people managed to leave Albania. The first destination for Albanian migrants during this period usually were bordering countries with the US and Australia being their final destinations.

After the collapse of communism in 1990, alongside widespread impoverishment and famine, and the eagerness of people for freedom after almost 45 years of isolation, Albania faced unprecedented waves of migration. From 1990 to 2000, no serious attempts were made by the Albanian Governments to determine the exact number of Albanian migrants. However, a decade later in 2001, INSTAT conducted the first Population and Housing Census. Using an indirect approach because of the lack of data, INSTAT estimated between 600,000 to 650,000 Albanian migrants over the period 1990-2000. Commonly, this migration wave is described as "exodus" which has influenced the Albanian economic, social, and political landscape. Even after 2000, Albania has continuously experienced intense, irregular, and evolving migration cycles. Chart 1 presents the Albanian net migration flows from 1992 to 2017 on 5-years cycles.

Chart 1 Albanian Net Migration Flows, 1992-2017

Source: Author's processing based on data from World Bank, *World Development Indicators*, 2021.
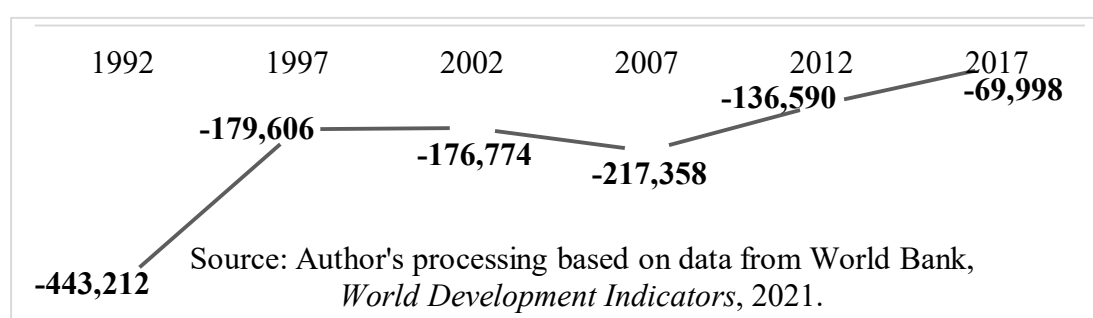
Certainly, migration is associated with remittances. In simple terms, remittances represent a part of the financial income earned by migrants working abroad sent back to family members and friends. The purposes and motivations are diverse. Principally they are sent to families back home to meet the basic needs. Chart 2 shows the remittance inflows and GDP of Albania from 2005 to 2019.

Chart 2 Remittance Inflows and GDP of Albania, 2005-2019

Source: Author's processing based on data from World Bank, *World Development Indicators*, 2021.
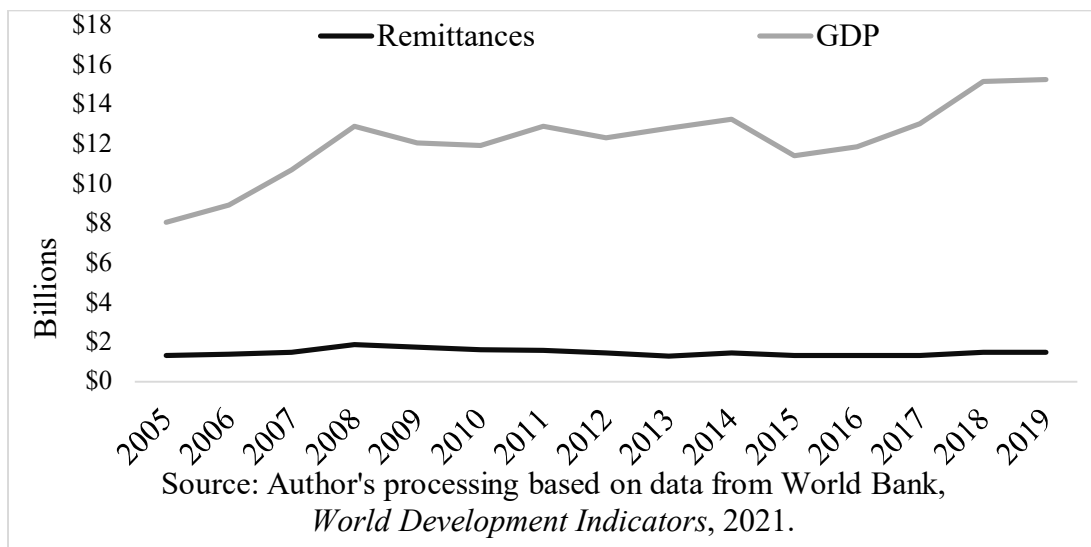
Chart 3 presents net remittance inflows and foreign direct investments.

Chart 3 Net Remittances and Foreign Direct Investments, 1990-2019

Source: Author's processing based on data from World Bank, *World Development Indicators*, 2021.
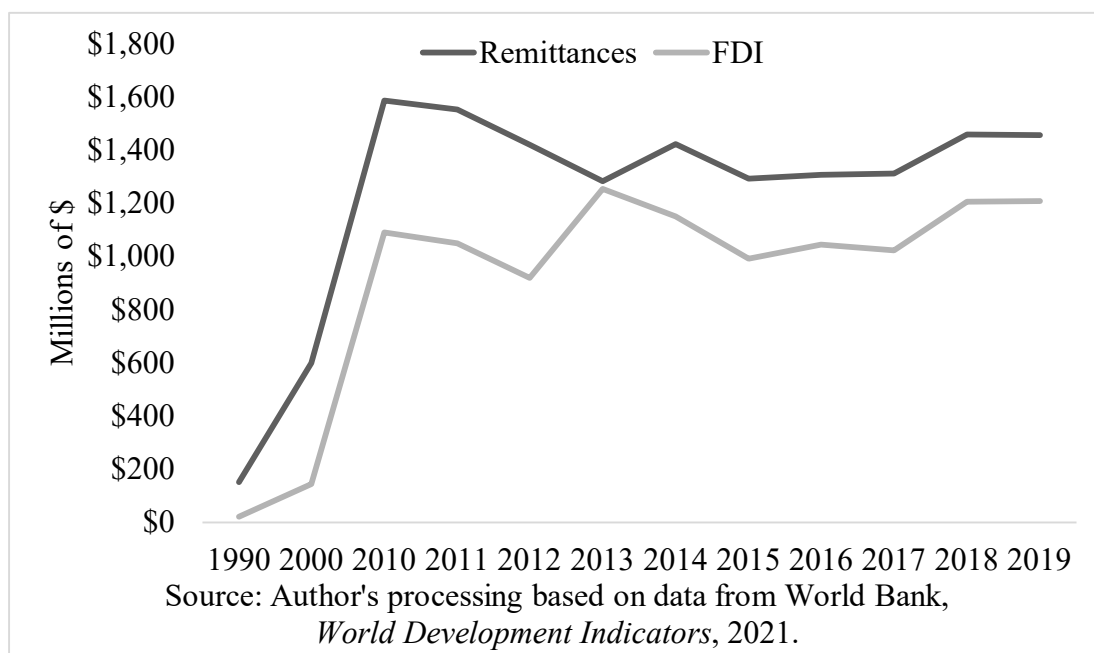
As shown in Chart 3, net remittance inflows and net foreign direct investment share a similar pattern. Over the period 1990-2010, net remittance inflows and foreign direct investments have been significantly increased in nominal values. However, during the last 10 years, net remittance flows, and foreign direct investment appears to be in a straight-line trend.

Chart 4 presents the remittance inflows to Albania as a share of GDP since the beginning of massive migratory waves.

Chart 4 Remittance Inflows to Albania as a Share of GDP, 1992-2019

Source: Author's processing based on data from World Bank, *World Development Indicators*, 2021.
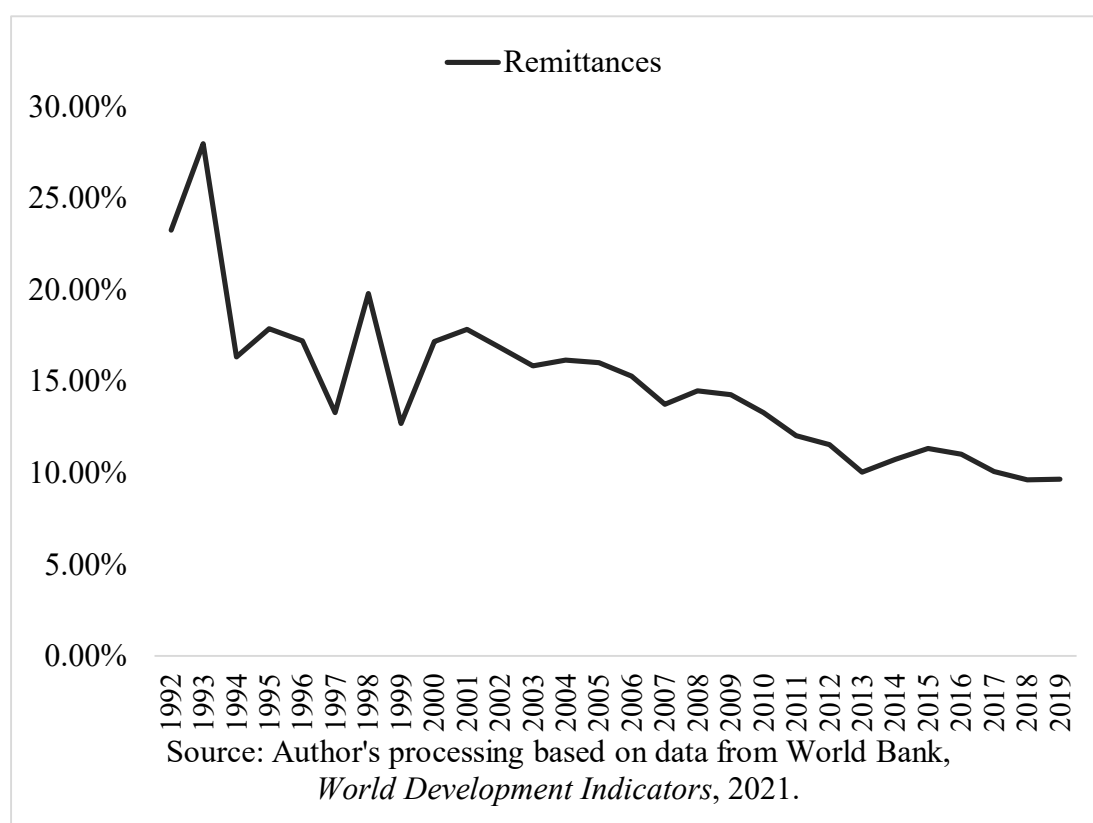
The first massive migratory wave was during 1990-1992 which correspond to the change of the political system in Albania. As shown in Chart 3, after the first massive migratory wave the remittance inflows are reflected immediately in 1992 and 1993. Remittance inflows contributed nearly 30% to the GDP of Albania in 1993. Another peak in Chart 3 corresponds to the year 1998. A year earlier, in 1997, Albania experienced the second massive migratory wave mainly due to the so-called Albanian uprising of 1997 sparked by pyramid scheme failures.

Chart 5 shows the net remittance inflows to Albania from 2005 to 2019.

Chart 5 Remittance Net Inflows to Albania, 2003-2019

Source: Author's processing based on data from World Bank,
World Development Indicators, 2021.
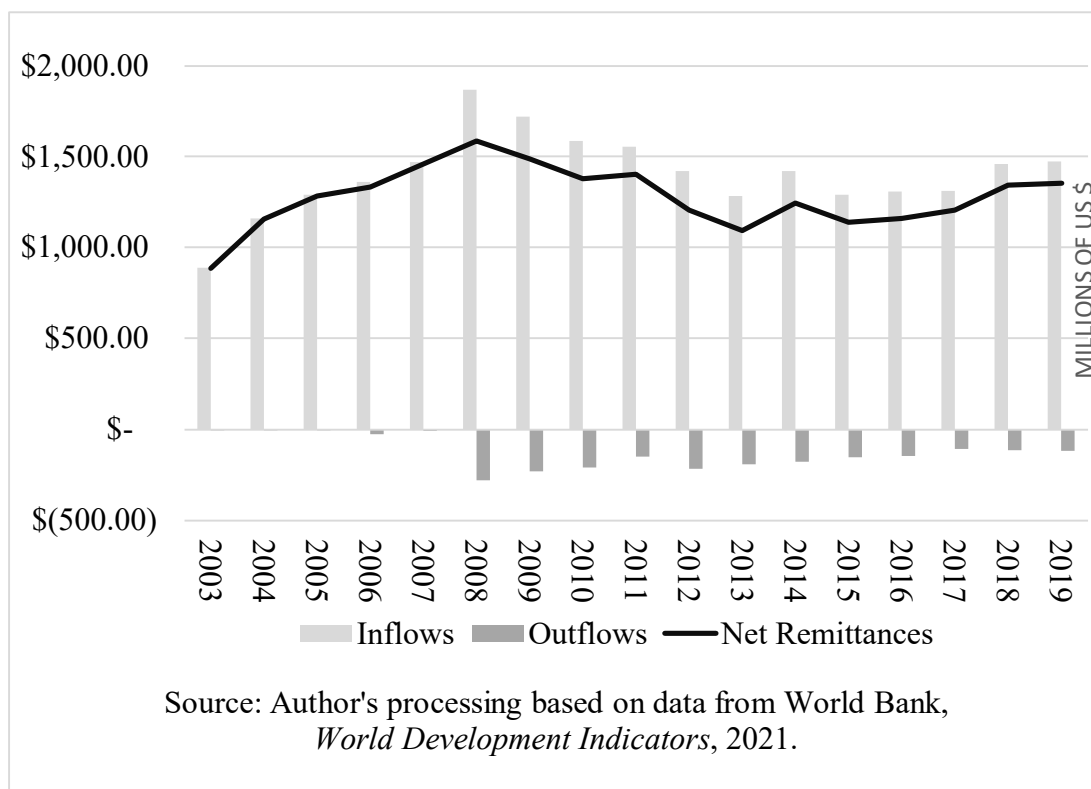
As shown in Chart 5, the highest level of remittance inflows as well as remittance outflows was sent during 2008. This year is commonly referred to as the year of the global financial crisis. The data visualized in Chart 2, Chart 3, Chart 4, and Chart 5 confirms the countercyclical nature of remittances. More remittances were sent by Albanian migrants during 1997 and 2008. The first corresponds to the political uprising in Albania while the second corresponds to the global financial crisis which certainly affected Albania as well.

2.4 Albania and the Western Balkans

Analysing remittances at the regional level provides a necessary context and an integrated perspective for a comprehensive understanding of the role and importance of remittance flows for Albania as well as for countries from the same region. The Western Balkans includes countries such as Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia.

GNI per capita is often regarded as an indicator of standard of living. Each country in the region has achieved significant improvements in terms of GNI per capita over the period 2005-2019. In 15 years, all six countries have doubled GNI per capita. GNI per capita of Albania in 2005 was 2,620 US$, while in 2019 was 5,220 US$. GNI per capita of Montenegro in 2005 was 3,660 US$, while in 2019 was 9,060 US$. Chart 6 shows GNI per capita for all six Western Balkan countries from 2005 to 2019.

Chart 6 GNI Per Capita for Western Balkan Countries, 2005-2019

Source: Author's own processing based on data from World Bank, *World Development Indicators*, 2021.
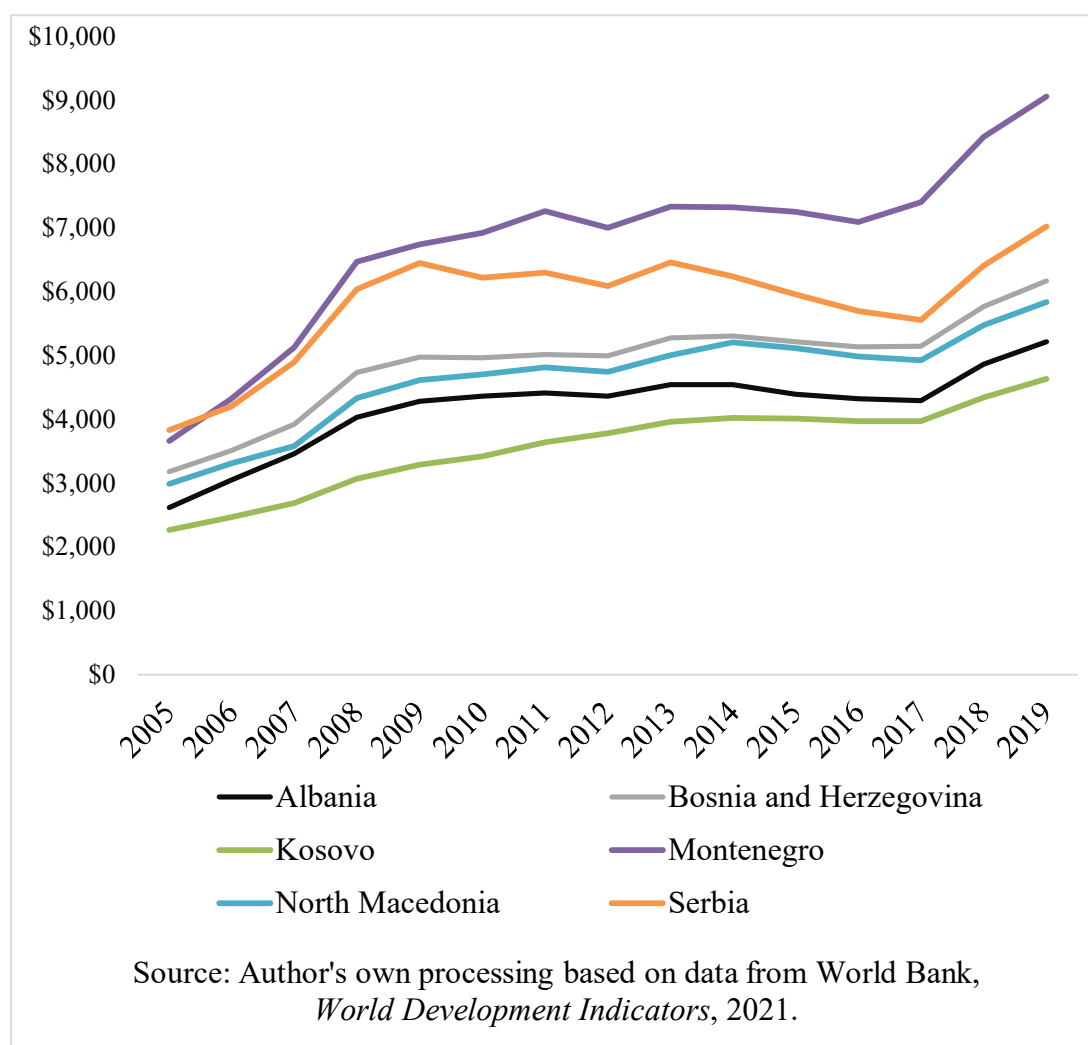
Despite the significant improvements in the standard of living measured by GNI per capita, migration continues to be a concern and have an upward trend for the whole region. Total population, total migrant population, and migrants as a percentage of the population for each country are shown in table 3.

Table 3 Migration as a Share of Total Population in the Western Balkans

Country	Population (millions)	Migrants (millions)	Migrants as % of population
Albania	2.9	1.26	43.60
Bosnia and Herzegovina	3.8	1.70	44.50
Kosovo	1.8	0.55	30.30
Montenegro	0.6	0.28	45.40
North Macedonia	2.1	0.63	30.20
Serbia	7.1	1.30	18.00
Western Balkans	18.3	5.72	31.25

Source: Author's processing based on data from World Bank,
Migration and Remittances Data, 2021.

Serbia is the largest country in the region representing nearly 39% of the total population in Western Balkans, and Montenegro is the smallest country in the region with a total population of about 600,000 citizens. Albania, Bosnia and Herzegovina, and Montenegro have the highest number of migrants abroad as a share of total population. On regional scale, migration about 31.25% of the total population.

Chart 7 shows the top 10 remittance recipients by the total amount in the Europe and Central Asia region as of 2020.

Chart 7 Top 10 Remittance Recipients by Total Amount in the Europe and Central Asia Region, 2020

Source: World Bank, *Migration and Development Brief 33*, 2020.
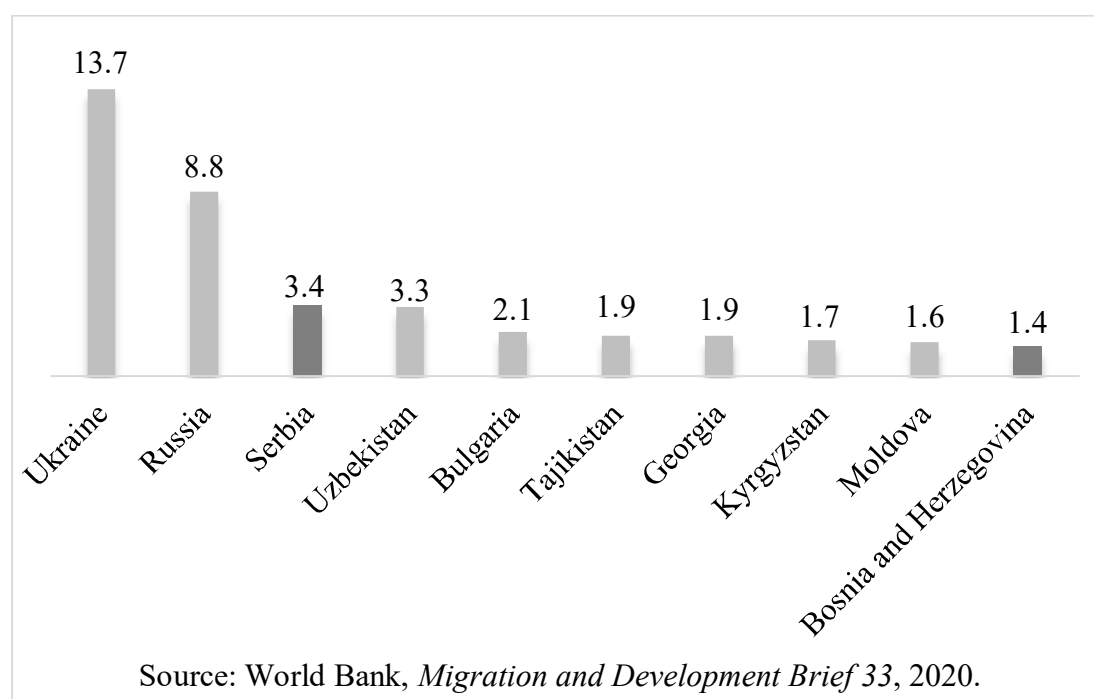
According to the data published by World Bank, Western Balkan countries appear to be among the top remittance recipients in Europe and Central Asia region. Serbia and Bosnia Herzegovina are among the top ten recipients by the total amount in Europe and Central Asia Region as of 2020.

Chart 8 depicts the top 10 remittance recipient countries by share of GDP (%) in Europe and Central Asia Region as of 2020.

Chart 8 Top 10 Remittance Recipients by Share of GDP in Europe and Central Asia Region, 2020

Source: World Bank, *Migration and Development Brief 33*, 2020.
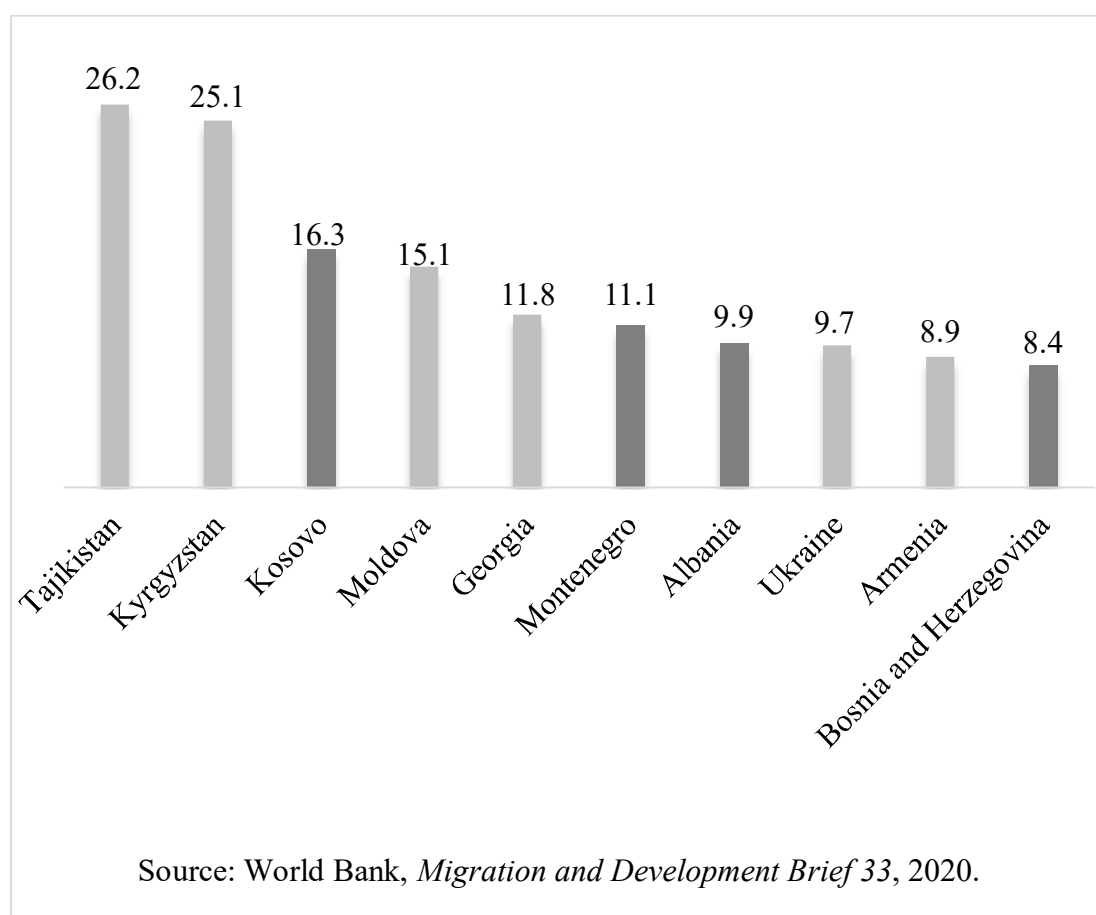
Four out of six Western Balkan countries, namely Albania, Bosnia and Herzegovina, Kosovo, and Montenegro are among the top 10 remittance recipients by share of GDP (%) in Europe and Central Asia Region as of 2020.

Chart 9 shows remittances as a share of GDP for each country in the region from 2005 until 2020.

Chart 9 Remittances as Share of GDP in the Western Balkans, 2005-2020

Source: Author's processing based on data from World Bank, *World Development Indicators*, 2021.
Note: Montenegro gained independence from Serbia on June 2006. Thus, no separate data exists for Montenegro and Serbia for 2005 and 2006.
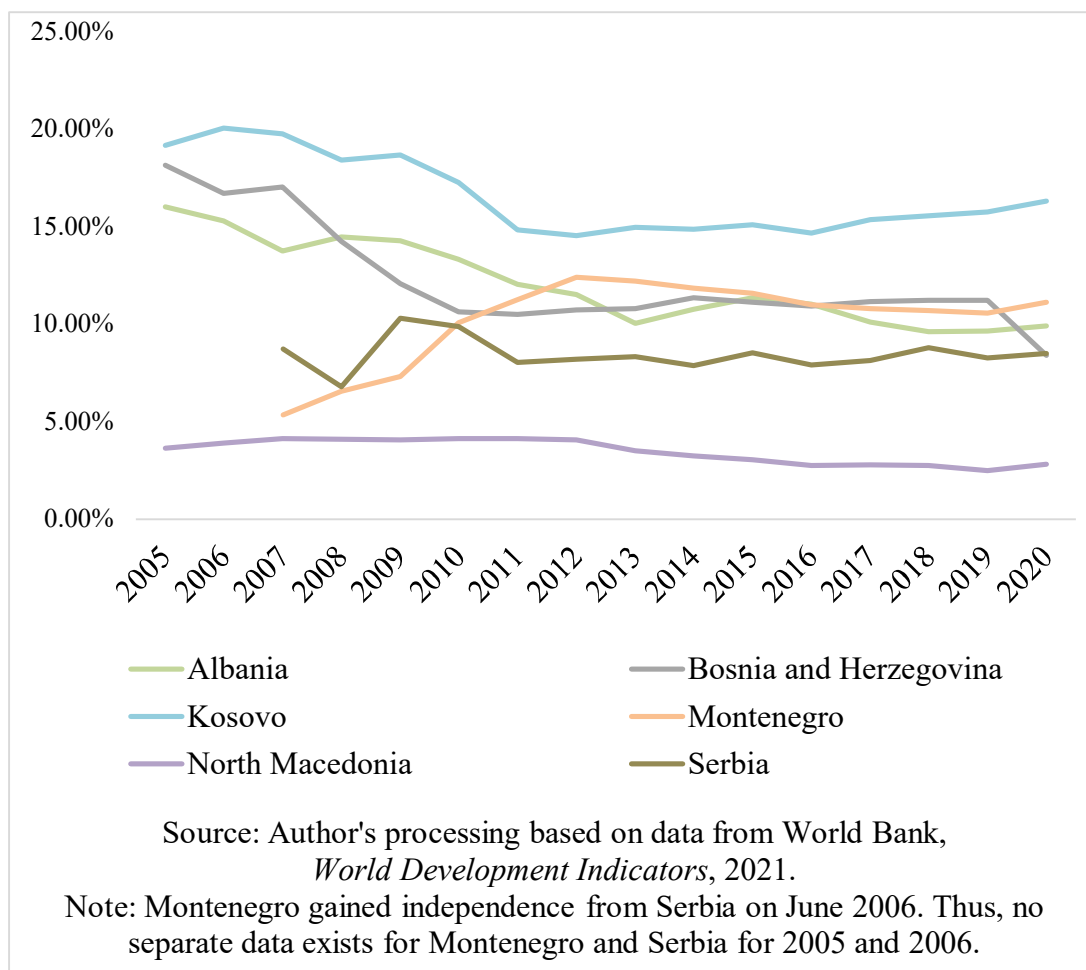
Kosovo is the top remittance recipient country as a share of GDP in the Western Balkans from 2005 to 2020. On the other side, over the same period, North Macedonia is the country that historically had the lowest share of remittance flows as a share of GDP in the region. Albania and Bosnia and Herzegovina recorded the largest decline in remittances as a percentage of GDP. In 2005 remittances represented about 16% of the GDP of Albania and in 2020 they represented about 10% of GDP. While for Bosnia and Herzegovina remittances in 2005 constituted nearly 18.20% of GDP and in 2020 around 8.40% of GDP. Over the last decade, Albania, Bosnia and Herzegovina, Montenegro, and Serbia appear to have a convergent trend regarding remittance flows as a share of GDP.

2.5 Prior Studies

Remittances catalyse financial inclusion and development. Considering five indicators of financial development such as credit to the private sector as a share of GDP, number of mobile transactions, the value of mobile transactions, number of mobile agents, and number of bank accounts, Misati, Kamau and Nassir (2019) found a strong and positive relationship between remittances and financial development in long-run. Fromentin and Leon (2019) examined the impact of remittances on credit in 30 developing and 27 developed countries from 2000 to 2014. The results indicated that remittances have a positive impact on credit in the long run stimulating credit provisions through firm credit in developed countries. It was revealed that remittances have a stronger effect on household credit compared to firm credit. While Tsaurai and Hlupo (2019) found a non-significant positive impact of remittances on financial development using stock market turnover, stock market value traded, domestic credit to the private sector by banks, and public bonds as measures of financial development. Their results were consistent with the general perception that remittances encourage recipients to open bank accounts and conduct basic financial transactions through financial institutions. Efobi et al. (2019) assessed how remittances affect industrialisation for 49 African countries from 1980 to 2014. They concluded that remittances could drive industrialisation through financial development mechanism. Sobiech (2019) noticed a positive effect of remittances on growth only when the financial sector is poorly developed. On the other side, Vacaflores (2018) found financial development to have a limited impact on the effectiveness of remittances concerning poverty and inequality for 18 Latin American countries. Batu (2017) argued that temporary flows of remittances positively affect GDP per capita while permanent flows of remittances have no positive impact. Tu et al. (2021) investigated the impact of remittance inflows and financial inclusion on economic growth from 60 low and middle-income countries. Their results showed that financial inclusion could strengthen the growth-enhancing effect of remittances.

Remittances also proved to have an impact at the household, community, and national levels. Taylor and Wyatt (1996) found evidence from Mexico that remittances sent home by migrants stimulate household income by relieving credit and risk

constraints on household-farm production. Garip (2014) findings suggested an equalizing effect of remittances on wealth distribution in rural Thailand. Similarly, in rural areas of Turkey, Dagdemir et al. (2018) results indicated that remittances decrease poverty and improve income distribution in favour of middle-income households. Their results suggested a positive relationship between remittances and education-related expenditures. However, Musakwa and Odhiambo (2019) found no impact of remittances on poverty in Botswana when measured by household consumption expenditure. Using survey bootstrap procedure aimed to predict the consumption of Kosovar households in the case of no remittances, Loxha (2019) affirmed that remittances increase the consumption of recipient households, and the poverty rate would be higher in the case of no remittances, particularly in rural areas. Liu et al. (2020) analysed the role of agriculture and remittances in mitigating rural poverty in Pakistan by applying the ARDL technique. Their results indicated that remittances facilitate the reduction of poverty in the short run, and agriculture is more effective in poverty alleviation in the long run. Inoue (2018) examined the impact of remittance on poverty alleviation by applying the generalized method of moments to panel data for 120 developing countries. He concluded that remittance flows help alleviate poverty in developing countries.

Bettin, Lucchetti, and Pigini (2018) highlighted that remittances appear to be stable at the macro level and much more volatile at the micro level. They proposed that countries that are heavily dependent on remittances should establish stronger ties with migrants. Barajas et al. (2018) regarded remittances as an element of stability in terms of funding for banks. Nevertheless, they accepted that more funding for the banks is not necessarily translated to more credit. Williams (2017) referred to stability in a broader sense such as the improvement of democratic institutions. He found evidence that remittance flows improve democratic institutions. Abbas, Masood, and Sakhawat (2017) estimated that democracy induces migrants to remit more to their home.

Mondal and Khanam (2018) investigated the impact of remittances on reducing the volatility of household consumption from 84 developing countries. Their findings

highlighted that remittances contribute significantly to households' welfare by reducing the volatility of consumption in the short and long run. Lim and Basnet (2017) showed that remittances positively impact income but not consumption. Kapri and Ghimire (2020) analysed the relationship between remittances and agricultural productivity in Nepal and their results showed that remittance-receiving households demonstrate a higher level of productivity. Askarov and Doucouliagos (2020) studied the effects of remittances on household education expenditure. Their results suggested that on average remittances increase household education expenditure. They found a larger effect in Latin America. However, remittances were found to not effect education expenditure in Eastern Europe and East Asia. Azizi (2018) examined the impact of remittances on human capital and labour supply for 122 developing countries. He concluded that remittances raise school enrolment and school completion rate. Benhamou and Cassin (2021) argued that remittance flows increase education at the expense of domestic savings.

Fayissa and Nsiah (2010) studied the impact of remittances on economic growth for 37 African countries and found out that remittances boost growth in countries that have the least-developed financial systems. Meyer and Shera (2017) observed the impact of remittances on economic growth for Albania, Bulgaria, Macedonia, Moldova, Romania, and Bosnia Herzegovina. Their results suggested that remittances have a positive impact on growth relative to GDP. Cismas, Curea-Pitorac, and Vădăsan (2020) studied the impact of remittances on economic activity in CEE countries, particularly on Romania. They concluded that remittance inflows are more stable over the business cycles but do not stimulate economic growth in Romania. Cazachevici, Havranek, and Horvath (2020) asserted that time-series studies and studies ignoring endogeneity issues tend to report larger effects of remittances on growth.

Chowdhury and Radicic (2019) research results suggested a U-shaped relationship between remittances and household net assets. Khan et al. (2019) examined the long-run relationship between remittance inflows and private investments employing units roots tests while controlling variables such as real interest rate, economic growth, and the interaction between remittance inflows and business

freedom analysing data from 1990 to 2016 for India, Sri Lanka, Pakistan, Nepal, and Bangladesh and. Their findings revealed that private investments are positively affected by remittance inflows. Kakhkharov (2019) analysed remittances as a financing source for entrepreneurship in Uzbekistan. Based on his probit estimations, households invest in family businesses when income from other sources is sufficiently, and remittances are only supplementary. Issahaku, Abor and Harvey (2017) investigated the link between remittances, banking sector development and the stock market in a series of developing countries. They revealed that remittance flows promote banking sector development but decrease stock market development in low remittance recipient countries.

Song and Zai (2019) investigated propensity to remit by comparing remittance behaviours of Fuzhou-Chinese migrants to the US and Mingxi-Chinese migrants to Europe. According to their findings, altruistic remittance is consistent with the remitting propensities of migrants from the poorer Mingxi region. In the Fuzhou region, the existing cultural practice of honouring donors encourages people to contribute. These results provide economic and cultural context for remittances. Piteli, Buckley and Kafouros (2019) revealed that the economic effect of remittances decreases in individualistic cultures.

Empirical results of Dridi et al. (2019) for Sub-Saharan African countries suggested that the effects of remittances on recipient economies increase with the degree of linkages across sectors, notably in the financial intermediation sector. Cuadros-Menaca (2020) analysed the impact of remittances on health insurance and pension contributions in the case of Colombia. He found evidence that remittances boost contributions to health and pension for informal workers.

3. Methodology

3.1 Economic Impact of Remittances in the Case of Albania

3.1.1 Theoretical framework

The Gravity Model is based on Newton's Law of Gravity. According to Newton's law, the force of attraction between two bodies is proportional to their masses and inversely proportional to their distance squared. Even though the gravity model lacked a sound theoretical framework, Baier and Standaert (2020) observed that the empirical findings of many studies were consistent with the naïve gravity model. In its original form the model is mathematically expressed as:

$$F_{ij} = \frac{M_i * M_j}{D_{ij}^2} * G \ (1.3)$$

Where:

- o F_{ij} is the force of attraction between the two bodies.
- o M_i and M_j are masses of two bodies (i and j).
- o D_{ij} is the distance between the two bodies.
- o G is the gravitational constant.

Tinbergen (1962) is the first pioneer that suggested the applicability of almost the same functional form of equation in the economy, and specifically to international trade flows. It has since been used by many scholars in a wide range of fields. Tinbergen's proposal is expressed as:

$$F_{ij} = \frac{M_i^{\alpha} * M_j^{\beta}}{D_{ij}^{\theta}} * G \ (1.4)$$

Where:

- o F_{ij} is the trade flow between the two countries.
- o M_i and M_j are the economic sizes of two countries (i and j). Commonly, measured by the gross domestic product (GDP).
- o D_{ij} is the distance between the two countries.

o G is a constant.

The first attempt to build a theoretical foundation for the gravity equation was made by Anderson (1979). Head (2003) indicated the multiplicative nature of the gravity equation in trade means that natural logs can be applied, and a linear relationship between log trade flows and the logged economy sizes and distances can be obtained:

$$lnF_{ij} = \alpha lnM_i + \beta lnM_j - \theta lnD_{ij} + \rho lnR_j + \epsilon_{ij} \ (1.5)$$

Head (2003) derivation replaces the gravitational constant G with term R_j, and includes the error term ϵ_{ij}. Several authors have offered different major explanations regarding the distance. Hummels (2007) considered distance in the trade as a matter of transportation costs.

Although not to a large extent, in recent years, the gravity model is also used to estimate the impact of remittances on various macroeconomic and microeconomic variables. A lack of data on bilateral remittance flows has been the main limitation on assessing remittances using the gravity model. Lueth and Ruiz-Arranz (2006) created the first dataset of bilateral remittance flows for several developing countries. They found that most of the variation of the remittance flows can be described by a few gravity variables. According to their findings, GDP of countries, distance, and common language account for more than 50 percent of the variation in remittance flows between the countries.

3.1.2 Model Specification

In its simplest form, the gravity model assumes that bilateral remittances are directly proportional to the economic mass of the host and home country and inversely proportional to the distance between them. As such, the basic specification of the econometric model is as follows:

$$log(Rem_{ij,t}) = \alpha + \beta_1 log(GDP_{i,t}) + \beta_2 log(GDP_{j,t}) + \beta_3 log(Dist_{j,i}) +$$
$$\beta_4(SharedBorder_{j,i}) + \varepsilon_{ij,t} \ (1.6)$$

Where:

i – host country; Australia, Austria, Belgium, Canada etc.

j – home country; Albania.

t – time.

$Rem_{ij,t}$ – remittance flows from i host country to j home country.

α – intercept.

β – coefficients of the explanatory variables.

$GDP_{i,t}$ – Gross Domestic Product of i host country.

$GDP_{j,t}$ – Gross Domestic Product of j home country.

$Dist_{j,i}$ – geographical distance between i host country of j home country.

$SharedBorder_{j,i}$ – shared border between i and j country.

$\varepsilon_{ij,t}$ – the error/disturbance term.

The first specification was constructed considering the most basic form of gravity model. Shared border ($SharedBorder_{j,i}$) is a dummy variable taking 1 for country sharing its border with Albania and 0 for the country that does not share its border with Albania. For achieving study objectives and aims the basic model specification was extended with numerous variables.

The model specification in this study was constructed on the approach proposed by Lueth and Ruiz-Arranz (2008) and Ahmed and Martínez-Zarzoso (2016) by taking natural logs of the original multiplicative gravity model.

In many studies, population of the host ($POP_{i,t}$) and home country ($POP_{j,t}$) are included as the additional variables in the model. However, the population ($POP_{ij,t}$) was regarded as a proper variable when analysing trade flows rather than remittances. The stock of migrants ($Stock_{ij,t}$) was considered as a more adequate variable when analysing remittance flows.

The development of the financial sector is another important factor to be observed. The reason is that a developed financial sector is meant to facilitate financial transactions between different locations and subjects assuming that money transfer is faster, cheaper, and more available for pickup when the financial sector is developed.

Data and Singh (2019) used commercial bank branches (per 100,000 adults) as an indicator for financial inclusion, while Azizi (2020) used the ratio of private credit to GDP as a proxy for financial development.

However, this study used the financial development index provided by International Monetary Fund ($FDIndex_{j,t}$). The reason for such a selection is the multidimensional nature of financial development. The use of the ratio of private credit to GDP as a proxy for financial development does not take into consideration the multidimensional nature of this factor. The financial development index provided by International Monetary Fund considers the depth, access, efficiency of financial institutions as well as the depth, access, efficiency of financial markets. As such, the financial development index provided by International Monetary Fund accounts for several indices instead of a singular indicator.

Albania has its currency. Exploring the effect and role of the exchange rate on remittance flows is regarded rational choice. As such, the model was enriched with the exchange rate variable ($Exch_{ij,t}$).

Considering previous research carried out by other authors mentioned in the literature review of this work other variables were incorporated into the extended model. Variables included are the quality of institutions ($InstIndex_{j,t}$), quality of health care system and primary education ($HealthandEdu_{j,t}$), labour market efficiency ($Labor_{j,t}$), and age dependency ratio($DepRatio_{j,t}$). Age dependency ratio is defined as the ratio of older dependents (people older than 64) to the working-age population (aged 15-64). Investigating the age dependency ratio is important for the Albanian case considering continuous migration waves in recent years, particularly the migration of health personnel and other highly skilled professionals from Albania to mainly OECD countries in search of a better standard of living and higher salaries. Widely this phenomenon is described as brain drain.

Many researchers applying the gravity model in their studies have included common language and colonial past. Albania has its unique language and no colonial

past. Therefore, neither common language nor colonial past variables were included in the extended model. Thus, the extended model is as follows:

$$log(Rem_{ij,t}) = \alpha + \beta_1 log(GDP_{j,t}) + \beta_2 log(GDP_{i,t}) + \beta_3 log(Dist_{j,i}) +$$
$$\beta_4(Sharedborder_{j,i}) + \beta_5 log(Stock_{ij,t}) + \beta_6(Exch_{ij,t}) + \beta_7(FDIndex_{j,t}) +$$
$$\beta_8(InstIndex_{j,t}) + \beta_9(HealthandEdu_{j,t}) + \beta_{10}(Labor_{j,t}) + \beta_{11}(DepRatio_{j,t}) + \varepsilon_{ij,t}$$

$$(1.7)$$

3.1.3 Data

A comprehensive database is crucial in building the gravity model. As such, a significant investment in time was needed for collecting and processing data on targeted variables from various official sources. The extensive database in the model has its advantages and disadvantages. Large datasets reduce data redundancy and errors and increase data consistency and integrity. On the other hand, they are complex, difficult, and time-consuming to be processed. This study used a panel dataset consisting of annual data for 16 countries (n=16) from 2005 to 2019 (t=15), with a total number of 240 observations (N=240). All 16 countries combined account for almost 99% of the Albanian migrant living abroad. Table 4 shows the list of countries included in the study.

Table 4 List of Top 16 Host Countries for Albanian Migrants

1	Australia
2	Austria
3	Belgium
4	Canada
5	France
6	Germany
7	Greece
8	Italy
9	Montenegro
10	North Macedonia
11	Spain
12	Sweden
13	Switzerland
14	Turkey
15	United Kingdom
16	United States

Source: Author's selection based on data from the World Bank,
Migration and Remittances Data, 2021.

Bilateral remittance flows data was taken from the World Bank. Bilateral remittances matrices published by the World Bank are constructed using the methodology proposed by Ratha and Shaw (2007). Ratha and Shaw (2007) proposed three methods for the calculation of bilateral remittance flows. The first method uses the stock of migrants in host countries as weights and is mathematically expressed as:

$$w_{ij} = \frac{M_{ij}}{\sum_j M_{ij}} \quad (1.8)$$

Where M_{ij} is the number of migrants from country i in host country j. Therefore, bilateral remittances received by country i from host country j are $w_{ij}R_i$. This method assumes that each migrant sends the same amount of remittances regardless of income in the host country. To overcome such shortcoming, they proposed a second method using both stock of migrants and income level in the host country. The second method is expressed as:

$$w_{ij} = \frac{M_{ij}Y_j}{\sum_j M_{ij}Y_j} \quad (1.9)$$

Where M_{ij} is the number of migrants from country i in host country j, and Y_j is the average per capita of host country j. This method assumes that each migrant sends a fixed share of income regardless of the level of income of the family back home. To correct the limitations of both methods, Ratha and Shaw (2007) came up with the third method using weights based on the stock of migrants, per capita income in the host country, and per capita income in the home country. The third method is expressed as a function of per capita income of the migrant's host and home country:

$$r_{ij} = f(\bar{Y}_i Y_j) = \begin{cases} \bar{Y}_i & if \quad Y_j < \bar{Y}_i \\ \bar{Y}_i + (Y_j - \bar{Y}_i)^\beta & if \quad Y_j \geq \bar{Y}_i \end{cases} \quad (1.10)$$

Where Y_j is the average per capita income of migrant's host country j, $\bar{Y}_i$ is the per capita income of the migrant's home country, β is a parameter between 0 and 1. This method assumes that the amount sent by migrants is no less than the per capita

income of the home country, even when a migrant move to a lower-income country. The reason is that a migrant would leave the country only if the expected income is higher than the income earned in the home country. GNI in the host country is used as a proxy for migrant's income level, and GNI in the home country is used as a proxy for the household's income assuming that remittance flows would compensate at least the counter-factual loss of income because of migration. In this study, the third method was applied in calculating bilateral remittance flows to Albania from selected 16 countries for the years 2005 and 2006. Bilateral remittance flows from the year 2007 onwards were also estimated by the World Bank using the same methodology.

The estimations regarding the bilateral stock of migrants were gathered from the World Bank (2021a), and OECD (2021). It must be highlighted that calculation of very exact figures of stock of migrants is unlikely due to the complexity, the non-identical characteristics, and nature of this phenomenon.

However, official figures published by the World Bank and OECD were cross-checked and validated with figures reported by respective international and national datasets such as EUROSTAT, INSTAT, Australian Bureau of Statistics, Statistics Austria, STATBEL, Statistics Canada, INED, DESTATIS, Hellenic Statistical Authority, ISTAT, MONSTAT, MAKSTAT, INE, SCB, BFS, TURKSTAT, ONS, and DHS. Table 5 shows the share of Albanian migrants across 16 countries for the period 2005-2019.

Table 5 Stock of Albanian Migrants 2005-2019 Across Top 16 Host Countries

	2005	**2010**	**2015**	**2019**
Australia	0.43%	0.41%	0.35%	0.30%
Austria	0.43%	0.41%	0.35%	0.31%
Belgium	0.30%	0.50%	0.80%	0.90%
Canada	1.00%	1.20%	1.40%	1.40%
France	0.93%	0.89%	0.70%	0.62%
Germany	1.40%	1.30%	1.30%	4.20%
Greece	43.70%	41.50%	38.70%	35.30%

Italy	37.40%	39.30%	39.60%	39.40%
Montenegro	3.12%	2.66%	2.11%	1.63%
North Macedonia	3.25%	3.21%	4.41%	5.70%
Spain	0.27%	0.25%	0.22%	0.22%
Sweden	0.28%	0.23%	0.22%	0.22%
Switzerland	0.27%	0.25%	0.24%	0.23%
Turkey	0.67%	0.64%	0.52%	0.42%
United Kingdom	0.80%	0.70%	0.90%	0.90%
United States	5.70%	6.50%	8.10%	8.20%

Source: Author's computations based on data retrieved and validated from sources mentioned in the text, 2021.

Also, it must be mentioned that when estimating the stock of Albanian migrants in the USA only New Albanian Diaspora in the USA was taken into consideration. Old Albanian Diaspora in the USA was excluded from the study mainly for two reasons. Firstly, estimating the number of Albanian migrants who moved to the USA many decades ago is very difficult because many are naturalized as American citizens. Secondly, the very long migration period of the Old Albanian Diaspora in the USA allowed them to bring to the USA their family members. As such, Old Diaspora is considered to have cut ties with Albania in terms of sending remittances to their family remembers in Albania. A similar approach was adopted even for the Old Albanian Diaspora in Canada and Australia.

Exchange rate data is taken from the Bank of Albania (2021a) for EURO, USD, GBP, CHF, AUD, CAD, and SEK. No historical exchange rate data exists on the official website of the Bank of Albania for TRY-ALL and MKD-ALL currency pairs. In this case, exchange rate data for the USD-TRY currency pair was taken from the Central Bank of the Republic of Turkey (2021) and exchange rate data for the USD-MKD currency pair was taken from the National Bank of the Republic of North Macedonia (2021). Then considering USD as the base currency, TRY-ALL and MKD-ALL currency pairs are calculated. Yearly average currency exchange rates are shown in Table 6 as follows:

Table 6 Yearly Average Currency Exchange Rates

Year	USD	EURO	GBP	CHF	AUD	CAD	TRY	MKD	SEK
2019	109.851	123.014	140.250	110.569	76.379	82.817	19.370	2.016	11.624
2018	107.989	127.587	144.213	110.483	80.743	83.401	22.358	2.025	12.449
2017	119.100	134.150	153.203	120.908	91.243	91.743	32.679	2.333	13.932
2016	124.143	137.364	168.169	126.016	92.279	93.681	41.133	2.150	14.522
2015	125.962	139.742	192.542	131.094	94.778	98.717	46.325	2.250	14.948
2014	105.480	139.974	173.620	115.263	95.098	95.493	48.241	2.100	15.398
2013	105.669	140.263	165.187	113.998	102.326	102.654	55.519	2.385	16.232
2012	108.183	139.040	171.431	115.391	112.008	108.265	60.363	2.308	15.984
2011	100.896	140.331	161.718	113.982	104.068	102.038	60.388	2.133	15.558
2010	103.937	137.786	160.531	99.865	95.521	100.941	69.337	2.235	14.455
2009	94.979	132.058	148.293	87.501	74.902	83.410	61.447	2.267	12.463
2008	83.894	122.803	154.374	77.497	70.846	78.824	64.653	1.981	12.798
2007	90.428	123.625	180.826	75.304	75.658	84.293	69.544	2.182	13.372
2006	98.103	123.081	180.559	78.286	73.864	86.496	68.618	2.201	13.313
2005	99.871	124.188	181.582	80.231	76.116	82.488	74.503	1.953	13.395

Source: Author's computations based on data retrieved from sources mentioned in the text, 2021.

Data for other variables such as GDP of host countries, GDP of Albania, and age dependency ratio were taken from the World Bank Development Indicators database. Distance is measured using the data provided from the CEPII database (Mayer and Zignago, 2011). The financial development index was taken from the International Monetary Fund financial development index database. Quality of institutions, health and primary education, and labour market efficiency indices were taken from the Global Competitiveness Report published annually by the World Economic Forum.

3.1.4 Methods of Model Estimation

In this part of the study are described the methods applied to estimate the models. The data used in this study are of the panel type. Arellano and Bond (1991) defined panel data as the pooling of observations on a cross-section of units of observation

over time. Consequently, the methods examined are methods that consider the specific nature of this data, such as time variation and variation between different units observed. Commonly, the panel regressions are expressed as follows:

$$Y_{i,t} = \alpha + \beta X_{it} + c_i + \varepsilon_{it} \text{ (1.11)}$$

Where:

Y – is the dependent variable.

X – is the independent variable.

α and β – are the coefficients.

t and i – are indices for time and observed units.

c – is the individual-specific effect.

ε – is the error term (idiosyncratic error).

According to Arellano and Bover (1995), the regressions estimate the relationship between the dependent variable $Y_{i,t}$ and the explanatory variables $X_{i,t}$ along the cross-sections i and the time-series t. The error term (ε_{it}) is very important in the analysis. Assumptions about the error term determine whether fixed effects or random effects must be considered. Baltagi and Liu (2013) added that the error term reflects the unobservable unit of observation-specific effects as well the remainder of the disturbance. The individual-specific effect (c_i) is regarded as the term representing the heterogeneity of the panel data. Baltagi, Mátyás, and Sevestre (2008) referred to the so-called unobserved heterogeneity as the factors affecting the phenomenon under the study that cannot explicitly be specified because the respective statistical information either does not exist or is inaccessible. A major concern is whether the individual-specific effects (c_i) are correlated with the regressors. Hausman and Taylor (1981) emphasized the importance of the control of the individual-specific unobservable effects which potentially may be correlated with explanatory variables. Baltagi (2010) pointed out that not controlling these unobserved individual-specific effects leads to bias in the results.

To understand fixed and random effects, first, it is necessary to know how unobserved individual-specific effect (c_i) is affected by the time variation of the data and the variation of the data between the different units observed. When using panel data and choosing the best estimation method, another concern to be addressed is whether unobserved individual-specific effect (c_i) will be treated as a random variable or as a parameter. In the case that individual-specific effect (c_i) is treated as a random variable, the model is known as Random Effect Model (RE). In the case that that individual-specific effect (c_i) is treated as a parameter, the model is known as the Fixed Effect Model (FE).

The random effects model is expressed as:

$$Y_{it} = \alpha + \beta X_{it} + u_{it} + \varepsilon_{it} \ (1.12)$$

Where:

u_{it} – is the between-entity error.

ε_{it} – is the within-entity error.

The method used to estimate β coefficients in the Random Effects model influences the efficiency of the results. The Generalized Least Square (GLS) method and the Maximum Likelihood are the main methods used to estimate this model. According to Fahrmeir et al. (2013), Wald test measures the weighted distance between the unrestricted estimate and its hypothetical value. Put differently, this test is used to test the null hypothesis $H_0: \beta_i = 0$ versus alternative hypothesis $H_0: \beta_i \neq 0$. If the assumptions on which the RE is built are not met, then the estimates obtained with the OLS method are efficient and is not necessary to use additional other methods. The test proposed by Breusch and Pagan (1979) was used to test for heteroscedasticity and random coefficient variation.

The fixed effects model is expressed as:

$$Y_{it} = \beta_1 X_{it} + \alpha_i + +u_{it} \ (1.13)$$

Where:

Y_{it} – is the dependent variable, where i = entity and t = time.

X_{it}- is the independent variable, where i = entity and t = time.

α_i – (i = 1, 2…, n) is the unknown intercept for each entity (n entity-specific intercepts).

β_1- is the coefficient for the independent variable.

u_{it}- is the error term.

Farkas (2005) defined the Fixed Effects model as a statistical technique for analysing nonexperimental data that compared to ordinary regression analysis are closer to achieving unbiased estimates of casual effects in the presence of unmeasured, unchanging variables that are correlated with the independent variable of interest and exert their effect on the dependent variable. Torres-Reyna (2007) indicated that the FE model explores the relationship between predictor and outcome variable within an entity, and each entity has its specific characteristics that may or may not impact the predictor variables. There are two important assumptions to be made when using FE. The first assumption is that something within the individual may impact the predictor or outcome variables. Using FE, the net effect of the predictors on the outcome variable can be assessed, and the effect of time-invariant characteristics can be removed. The second assumption is that those time-invariant characteristics are unique to the individual and must not be correlated with other individual characteristics. In other words, each entity is different and as such the entity's error term and the constant must not be correlated with the others. In case error terms are correlated, then FE is not suitable because inferences may not be correct and is necessary to model the relationship. Unlike the fixed effects model (FE), random effects model (RE) assumes that the variation across entities is random and uncorrelated with the predictor or independent variables included in the model. Torres-Reyna (2007) argued that time invariant variables can be included in the random effects model, while these variables are absorbed by the intercept in the fixed effect model.

Pooled OLS is one of the most common methods for evaluating models that analyse panel data. The main difference between pooled OLS and OLS is that it does not consider the dimensions of the observed units. Homoscedasticity and the lack of autocorrelation are two of the most important conditions to be met for this method to

be suitable. If homoscedasticity and the lack of autocorrelation conditions are met, analysing the impact of macro factors on remittance inflows using the OLS would be suitable and the results efficiently. If homoscedasticity and the lack of autocorrelation conditions are not met and there is heteroskedasticity or serial correlation, then it is necessary to use other evaluation methods because the results are no longer efficient. The methods must be appropriate to the nature of the data and must eliminate the estimation error resulting from OLS. In these circumstances, RE or FE methods are utilized.

3.1.5 Best-Fit Model Selection

This study uses data containing observations about different cross-sections and across time. This data is referred to as longitudinal data or simply panel data. The method providing the most efficient results for this nature of data is either Random Effect Model (RE) or Fixed Effects Model (FE). The Hausman (1978) test is performed to determine the most suitable model. The test is used to test the endogeneity of explanatory variables in a regression. The test searches for a statistically significant difference between an efficient estimator under the null hypothesis and a consistent estimator under the alternative hypothesis. The difference is based on the difference of the sum of squared residuals of the Random Effect Model and Fixed Effects Model. A significant difference between the sum of squared residuals is seen as an indicator that the best-fitting model for evaluation and interpretation is Fixed Effect Model because FE is a consistent method where idiosyncratic error term is correlated with parameters, while in such cases Random Effect Model losses efficiency because the individual-specific effect is uncorrelated with the explanatory variables. Simply put, if the null hypothesis is accepted the best-fitting model is Fixed Effects, and if the null hypothesis is rejected (or the alternative hypothesis is accepted) the best-fitting model with the most efficient results is the Random Effects Model.

3.1.6 Results

The results are presented in this part of the study.

3.1.6.1 Descriptive Statistics

In table 7 are shown descriptive statistics for each of the variables.

Table 7 Descriptive Statistics

Variables	Mean	Std. Dev.	Min.	Max
Remittance flows to Albania (million USD)	90.18	195.30	0.62	859.62
GDP of Albania (billion USD)	12.20	1.87	8.05	15.30
GDP of the host country (billion USD)	2,180.00	3,940.00	2.26	21,400.00
Distance between the host country and Albania (km)	2,902	3,784	141	13,746
Exchange rate (1 foreign currency unit/lek)	105.08	45.68	1.95	192.54
Shared border (1 yes, 0 no)	0.25	0.43	0	1
Financial development index 0-1 (best)	0.19	0.02	0.14	0.21
Quality of institutions 1-7 (best)	3.57	0.29	3.09	4.00
Quality of health and primary education 1-7 (best)	6.03	0.39	5.50	6.70
Labour market efficiency 1-7 (best)	4.14	0.38	3.50	4.60
Stock of migrants	68,946	140,766	2,251	475,570
Age dependency ratio (% of working-age population)	48.29	2.78	45.55	53.85

Source: Author's computations based on data retrieved from sources mentioned in the text, 2021.

Based on the descriptive results of this study, the lowest amount of remittances sent in a single year from a host country included in the study to Albania is about US$620,000 and the highest amount of remittances sent by Albanian migrants in a single year from a host country is about US$859,620,000. The lowest amount of remittances was sent by Albanian migrants in Sweden during 2005, while the highest

amount of remittances was found out to be sent by Albanian migrants in Greece during 2008.

Montenegro is the host country with the lowest GDP to US$2.26 billion for the year 2005, while the USA is the host country with the highest GDP to US$21.4 trillion for the year 2019. Albania reached the highest GDP level in 2019 to US$15.3 billion and the lowest in 2005 to US$8.05 billion.

North Macedonia is the host country with the closest proximity to Albania (141 km) and Australia is the most distant country (13,746 km). The descriptive statistics suggest that the lowest number of Albanian migrants was in Spain for the year 2017 (2,250 migrants) and the highest number of Albanian migrants was in Italy for the year 2019 (475,570 migrants).

Concerning the exchange rate, the Albanian lek in 2015 recorded the strongest yearly average currency depreciation against the British pound sterling (1 GBP ≈ 192.54 ALL). In 2005, the Albanian lek reached the strongest yearly average currency appreciation against the Macedonian denar (1 MKD ≈ 1.95 ALL).

The mean of the financial development index for the period 2005-2019 is 0.19. This value is far from an ideal developed financial sector. The mean for the quality of institutions is 3.57 and the quality of health and primary education is 6.03, while the mean for labour market efficiency is 4.14. The mean for age dependency ratio over the 2005-2019 period is 48.29% with a standard deviation of only 2.78%.

The shared border is a dummy variable taking value 1 for a neighbouring country and 0 for a non-neighbouring country. Montenegro, North Macedonia, Greece, and Italy were considered neighbouring countries (value 1) and all the rest of the countries non-neighbouring (value 0).

3.1.6.2 Regression Results

Steps followed for evaluation were taken by observing the outcomes regarding the significance level of the model, as well as the degree of explainability of the variables and the statistical significance of the coefficients.

Two model specifications were used for estimation. The first specification was constructed using only the basic variables of the gravity model such as GDP of host and home country and distance between them and the fact whether countries share their borders. While the second specification was built by extending the existing model with other variables of interest.

3.1.6.2.1 The Basic Gravity Model Results

Initially, the gravity model was estimated using pooled OLS method to assess the acceptability and efficiency of the results. The results then were checked for the presence of heteroskedasticity through the Breusch-Pagan / Cook-Weisberg test. The following hypotheses are tested by the Breusch-Pagan / Cook-Weisberg test:

H_0: The residual variance of the model is constant.

H_a: The residual variance of the model is not constant.

If the null hypothesis (H_0) is rejected, then the OLS method is considered not to be efficient because of the presence of heteroskedasticity. The Breusch-Pagan / Cook-Weisberg test results are shown in Table 8:

Table 8 Heteroscedasticity Test Results for the Basic Gravity Model

The Breusch-Pagan / Cook-Weisberg test results	chi2(4)	23.10***
	Prob > chi2	(0.0001)
The presence of heteroscedasticity	Yes	

Source: Author's processing, 2021. Notes: ***$p<0.01$ (significance at 99% confidence interval); **$p<0.01$ (significance at 95% confidence interval); *$p<0.01$ (significance at 90% confidence interval).

The findings suggest the presence of heteroskedasticity in the gravity equation. Thus, Random Effects Model (RE) and Fixed Effects Model (FE) were used to correct the heteroskedasticity. Generalized Least Squares (GLS) and the Maximum Likelihood (ML) methods were employed for Random Effects estimation, FE-GLS and the Least-Square Dummy Variable (LSDV) methods for Fixed Effects estimation. The efficiency and suitability of the Random Effects model were checked through the Breusch-Pagan LM test, and the efficiency and suitability for the Fixed Effects model

were checked through F-test. Hausman test was used to conclude for the best-fitting method. The results of the best-fitting method for the basic gravity model are shown as follows:

Table 9 Goodness-of-Fit Test Results for the Basic Gravity Model

Breusch-Pagan LM test (RE)	F-test (FE)	Hausman test (RE vs FE)	Best-fitting method
952.05*** (0.0000)	6.30** (0.0103)	15.49*** (0.0004)	RE

Source: Author's processing, 2021. Notes: ***$p<0.01$ (significance at 99% confidence interval); **$p<0.01$ (significance at 95% confidence interval); *$p<0.01$ (significance at 90% confidence interval).

According to the Hausman test findings, the best-fitting method for interpretation is Random Effects. Thus, Random Effects was chosen as appropriate and estimation results are shown as follows:

Table 10 The Basic Gravity Model Estimation Results

Estimation Method	RE	
Dependent variable: log_remit	Coefficient	*P*-value
log_GDPal	0.68**	0.015
log_GDPhost	0.37**	0.014
log_dist	0.37	0.298
Shared border	5.11***	0.000
_cons	-27.39***	0.000
Wald chi2(4)	85.20	
Prob > chi2	0.0000	
R-squared (overall)	0.7994	
Number of observations	240	

Source: Author's processing, 2021. Notes: ***$p<0.01$ (significance at 99% confidence interval); **$p<0.01$ (significance at 95% confidence interval); *$p<0.01$ (significance at 90% confidence interval).

The outcomes suggest a reliable model indicating statistical significance at the 99% confidence interval ($p=0.00$). Based on the results for the coefficient of determination (R^2 overall), the proportion of variance in the dependent variable explained by the independent variables is 0.7994. Put differently, 79.94% of remittance flows in the case of Albania are explained by GDP of Albania, GDP of the host country, the distance between Albania and migrants' host country, and shared

border. An R-squared value of 0.7994 is a highly significant value compared to previous studies applying the gravity model in its basic form. However, a high value was expected in the case of Albania. Only Italy and Greece, two neighbouring countries of Albania, account for almost 75% of Albanian migrants residing abroad. When adding even Montenegro and North Macedonia, two other neighbouring countries of Albania considered in this study, the number rises to about 82% of total Albanians residing overseas. According to the findings, there is a statistically significant positive relationship between the GDP of Albania and remittances (p=0.015). Such a finding is positively correlated with remittances.

3.1.6.2.2 The Extended Gravity Model Results

The gravity model, in its traditional form, was extended with other variables. The extended gravity model was firstly estimated using pooled OLS method to measure the acceptability and efficiency of the results. The results later were controlled for the presence of heteroskedasticity through the Breusch-Pagan / Cook-Weisberg test. The Breusch-Pagan / Cook-Weisberg test results are as follows:

Table 11 Heteroscedasticity Test Results for the Extended Gravity Model

The Breusch-Pagan / Cook-Weisberg test results	chi2(11)	70.46***
	Prob > chi2	(0.0000)
The presence of heteroscedasticity	Yes	

Source: Author's processing, 2021. Notes: ***p<0.01 (significance at 99% confidence interval); **p<0.01 (significance at 95% confidence interval); *p<0.01 (significance at 90% confidence interval).

The presence of heteroskedasticity was found in the extended gravity model. Hence, Random Effects (RE) and Fixed Effects (FE) were used to correct the heteroskedasticity. Generalized Least Squares (GLS) and the Maximum Likelihood (ML) methods were used for Random Effects estimation, and FE-GLS and the Least-Square Dummy Variable (LSDV) were used for Fixed Effects estimation. The efficiency and suitability of both methods were checked through the Breusch-Pagan LM test for RE, and F-test for FE. The Hausman test is performed to decide the best-fitting method. Goodness-of-fit test results for the extended gravity model are as follows:

Table 12 Goodness-of-Fit Test Results for the Extended Gravity Model

Breusch-Pagan LM test (RE)	F-test (FE)	Hausman test (RE vs FE)	Best-fitting method
76.50*** (0.0000)	118.81*** (0.0000)	54.68*** (0.0000)	RE

Source: Author's processing, 2021. Notes: ***$p<0.01$ (significance at 99% confidence interval); **$p<0.01$ (significance at 95% confidence interval); *$p<0.01$ (significance at 90% confidence interval).

Based on Hausman test results, the best-fitting method for interpretation is Random Effects. Random Effects was chosen as appropriate and estimation results are shown as follows:

Table 13 The Extended Gravity Model Estimation Results

Estimation Method	RE	
Dependent variable: log_remit	Coefficient	*P*-value
log_GDPal	0.86***	0.001
log_GDPhost	0.28***	0.001
log_dist	0.03	0.839
Shared border	2.09**	0.022
log_stock	0.70***	0.000
Exchange rate	-0.001	0.430
Financial development index	-4.89*	0.066
Institutions	0.04	0.376
Labour market efficiency	-0.31***	0.000
Health and primary education	-0.20***	0.000
Dependency ratio	-0.03	0.418
cons	-27.67***	0.000
Wald chi2(11)	6792.50	
Prob > chi2	0.0000	
R-squared (overall)	0.9303	
Number of observations	240	

Source: Author's processing, 2021. Notes: ***$p<0.01$ (significance at 99% confidence interval); **$p<0.01$ (significance at 95% confidence interval); *$p<0.01$ (significance at 90% confidence interval).

Wald test results suggest a reliable model whose statistical significance is at the 99% confidence interval ($p=0.0000$). The proportion of variance in the dependent variable explained by the independent variables is 0.9303 (r-squared overall). In other words, the extended gravity model explains 93.03% of remittance flows.

Concerning the individual variables in the equation, GDP of Albania, GDP of the host country, shared border, stock of migrants as well as financial development index, quality of health and primary education, and labour market efficiency are found to be statistically significant. The data reveals that distance, exchange rate, quality of institutions, and age dependency ratio are not statistically significant at any given confidence interval (99%, 95%, 90%).

There is a positive correlation between remittances and GDP of Albania significant at a 99% confidence interval. For each change by one unit in the GDP of Albania, remittance flows change by 0.86 unit. A positive correlation exists between remittances and GDP of host countries significant at a 99% confidence interval. For each change by one unit in GDP of host countries, remittance flows change by 0.28 unit. The correlation between remittances and stock of migrants is significant at a 99% interval confidence. An increase by one unit in the stock of migrant increases remittances by 0.70 unit. Significant at the same 99% confidence interval is even the relationship between remittances and labour market efficiency as well as remittances and quality of health and primary education. However, both variables have an inverse relationship with remittance flows. For each change by one unit in the Albanian labour market efficiency, there is a change of remittance flows by 0.31 unit. Financial development was found to be significant at 90% interval confidence. For each change by one unit in the financial development index, there is an inverse change in remittances by 4.89 units. Based on the findings, no statistical significance was found between remittance flows and exchange rate, quality of institutions, distance, and age dependency ratio.

3.1.7 Discussion

This study found a positive relationship between remittance flows and the GDP of Albania where for each change by one unit in GDP of Albania, remittance flows change by 0.86 unit. Shera and Meyer (2013) studied the same relationship between remittances and GDP of Albania but for the period 1992-2012. Their findings indicated a statistically significant positive relationship as well. Topxhiu and Krasniqi (2017) utilized panel data from 2005 to 2015 for six Balkan countries. Their results suggested

a statistically significant positive relationship between remittances and GDP. Instead of GDP, Gashi and Sylejmani (2020) used GDP per capita and reported a statistically significant positive relationship between remittances and GDP per capita in the Western Balkan countries. On the other side, Cantrinescu et al. (2006) could not reach a firm conclusion regarding the economic impact of remittances on GDP. Trokić (2012) stated that remittances and GDP have a negative relationship in the case of Bosnia and Herzegovina. Trokić, Sutradhar (2020) confirmed a negative correlation between remittances and GDP for Bangladesh, Pakistan, and Sri Lanka for the period 1977-2016. Anetor (2019) also demonstrated a negative and significant correlation between remittances and GDP for Nigeria.

This study presented a strong positive correlation between remittances and the GDP of host countries. Using the gravity model covering bilateral remittances from 103 Italian provinces to 107 developing countries from 2005 to 2011, Bettin, Presbitero, and Spatafora (2014) found out a positive correlation between remittances and economic conditions in the source province. Vargas and Huang (2005) examined data from Brazil, Colombia, the Dominican Republic, El Salvador, Mexico, and the US. The data revealed that remittances respond more to changes in the macroeconomic situation of the host country compared to changes in the macroeconomic situation of the home country. Akkoyunlu and Kholodilin (2006) reported a strong positive correlation between remittances and the GDP of the host country for the case of Turkish migrants in Germany. It was shown that remittances of Turkish migrants in Germany positively respond to changes in the German output and do not react at any given level of significance to the changes in Turkish output. On the contrary, Ahmed and Martinez-Zarzoso (2014) showed that the economic condition of source countries plays little or no role in remittance flows to Pakistan.

The geographical distance was found to be insignificant and have no impact on remittance flows. However, findings suggest a statistically significant positive correlation between remittances and shared border. In the case of Albania, the shared border factor was expected to be significant considering that four neighbouring countries included in this study (Italy, Greece, North Macedonia, Montenegro) account

for almost 82% of Albanian migrants overseas. Using the same gravity model but a different dataset for 64 pairs of countries, Frankel (2010) found a significant and negative relationship between distance and remittance flows. On the other side, Frankel (2010) found no statistical significance between remittance flows and shared border. Ahmed and Martinez-Zarzoso (2014) applying the gravity model concluded that geographical distance is of no importance for remittance inflows to Pakistan. Monitoring bilateral remittances between 27 Latin American and Caribbean countries and 18 host countries, McCracken, Ramlogan-Dobson, and Stack (2016) reported a negative relationship between remittances flows and the geographical distance stating that remittances tend to fall with distance.

The stock of migrants is found to be statistically significant. This finding is not consistent with findings from other authors. Moussir and Safaa (2016) assessed various macroeconomic factors of remittances for 22 developing countries from 1990 to 2004 and found out insignificant impact of the migrant stock on remittances. Lianos and Cavounidis (2010) pointed out that migrants employed in unsteady job remit more than migrant in steady jobs. This demonstrates that the stock of migrants alone does not automatically mean more remittances, but socio-demographics of migrant abroad play a vital role. Nurse (2019) highlighted the importance of diaspora savings as a factor having an impact on remitting behaviour of migrants. Mannan and Farhana (2015) described an inverse relationship between the stock of migrants and remittances explaining that even though the number of Bangladeshi migrants in Malaysia was decreasing the remittances flows back home to Bangladesh was increasing.

The exchange rate was found to be insignificant with no impact on remittance flows. Using a sample of 114 developing countries from 1970 to 2013, Kim (2019) presented a significant relationship between remittance inflows and exchange rate indicating that remittances lead to domestic currency appreciation. Acosta, Baerg, and Mandelman (2009) stated that remittances tend to put upward pressure on the real exchange rate, however, the impact is weaker in countries with more sophisticated financial markets. Lopez, Molina, and Bussolo (2007) provided empirical evidence that remittances lead to a significant real exchange rate appreciation for several Latin

American countries. Brahim, Nefzi, and Sambo (2017) found that remittances are significantly and negatively correlated to the exchange rate in all MENA countries. Olubiyi and Kehinde (2015) discovered a negative impact of exchange rate on remittances for the case of Nigeria as well.

The outcomes of this study revealed a statistically significant negative correlation between remittance flows and financial development in Albania over the period 2005-2019. Anetor (2019) examined the relationship between remittances, financial sector development for Nigeria over the period 1981-2017. The author attested a statistically significant negative relationship between remittances and financial development for the Nigerian case. Olayungbo and Quadri (2019) investigated the relationship among remittances and financial development for sub-Saharan African countries from 2000 to 2015. They found no causal link between remittances and financial development for the given period and sub-Saharan African countries. Similarly, Kumar et al. (2018) reported no statistically significant relationship between remittances and financial development for North Macedonia. However, Kumar et al. (2018) found statistical significance and negative relation between remittances and financial development for Kyrgyzstan. Misati and Nyamongo (2011) stated that the informal sector widely plays an important role in determining the level of private investments in Africa.

The quality of institutions was found to be insignificant. Ajide and Raheem (2016) studied the relationship between remittances and the ECOWAS region over the period 1996-2013. The results showed a positive correlation between remittance flows and the quality of institutions suggesting that institutions act as a spur on remittances. Lartey and Mengova (2016) explored the role of the quality of institutions in driving remittances using a sample of 90 countries. The findings suggested a positive impact of quality of institutions on remittances highlighting the role of property rights and strength of the legal system especially for countries scoring lower than the median level of quality institution index. Similarly, Ezeoha (2013) studied 32 countries in Sub-Saharan Africa region from 1995 to 2009 and found evidence of the impact of

institutional quality on remittance flows emphasizing the importance of the institutional quality particularly in emerging economies.

Quality of health and primary education was found to be significantly and negatively correlated. Frank et al. (2009) investigated the remittances sent by Mexican migrants from the USA to Mexico. The authors explained that remittances allowed households to access better health care service even compared to individuals covered by an employer-based insurance program. Ponce, Olivié, and Onofa (2011) found a significant impact of remittances on medical expenses in Ecuador, especially when illness occurs. Nathaniel (2019) assessed the impact of remittances on healthcare utilisation and expenditure in developing countries between 2002 and 2018 and discovered that remittances contribute to healthcare access, utilisation, and increased expenditures. Chezum, Bansak, and Giri (2018) examined the relationship between remittances and healthcare usage in Nepal and found that remittance income leads to higher accessibility of healthcare services as well as an increase in higher-priced medical care. Amega and Tajani (2018) investigated the impact of remittances on education and health outcomes for 46 Sub-Saharan African countries from 1975 to 2014 and concluded that remittances significantly improve education and health. Zhunio, Vishwasrao, and Chiang (2011) studied the impact of remittances on primary and secondary education and health outcomes for 69 low and middle-income countries and suggested that remittances improve primary and secondary school attainment and increase life expectancy. Gyimah-Brempong and Asiedu (2015) provided evidence from Ghana that remittances significantly increase primary and secondary school enrolment emphasizing that female-headed households were more prone to enrol their children more than male-headed households.

According to the findings of this study, remittances and labour market efficiency are negatively correlated, although at a low impact level. This finding suggests that a rise in unemployment at home causes substantial income losses for family members which consequently increases remittance flows from relative migrants abroad. On the other side, De Sousa and Duval (2010) highlighted that a rise in the unemployment rate in the host country is likely to cause a reduction in remittances because of

migrant's uncertainty about future income. Dermendzhieva (2009) investigated the effects of remittances on labour supply in Albania. The author confirmed a negative effect of remittances on labour supply for females, however, a significant negative effect of remittances on labour supply for older males aged 46-60 was not confirmed. Peković (2017) examined the relationship between remittances and poverty alleviation including countries such as Armenia, Georgia, Moldova, and Ukraine for the period 2002-2013. Peković also attested a statistically significant negative relationship between remittances and poverty.

The age dependency ratio was found to be insignificant. Simionescu and Dumitrescu (2017) analysed the impact of remittances on the government tax revenue in 74 developing countries for the period 1989-2015. The authors indicated that remittances are statistically significantly correlated with age dependency ratio in models including GDP per capita and private consumption. Yuni, Omeje, and Asogwa (2013) carried out research across 21 African countries from 1980 to 2011 and revealed that remittances were statistically significant and positively correlated. The authors suggested that a high dependency ratio attracts higher levels of remittances. Veeramoothoo (2009) studied the relationship between remittances and age dependency ratio for Latin American and the Caribbean countries from 2002 to 2007 and found out a statistically significant positive relationship between age dependency ratio and remittances. An increase in age dependency ratio leads to an increase in the remittance flows to Latin American and the Caribbean countries. Coon and Neumann (2018) found out a statistically significant negative relationship between remittances and age dependency ratio. Their results were consistent with results reported by Buch and Kuckulenz (2010) who argued that remittance flows may be decreased in case of a higher number of dependents. In case of a higher number of dependents, financial support coming from remittances may not be enough and thus it is expected for a part of dependents to be working or search for alternative financing sources.

3.2 Microeconomic Implications of Remittances

3.2.1 Evidence from Albanian Migrants in the Czech Republic

Diplomatic relations between Albania and Czechoslovakia were established on July 5, 1922 (Albanian Embassy in the Czech Republic, 2021). Diplomatic relations between the two countries were interrupted during World War II, to be restored in 1945. Later in 1954, they were upgraded on the ambassadorial level and then degraded in 1961 at the level of chargé d'affaires. Finally, diplomatic relations between Albania and the Czech Republic were upgraded on the ambassadorial level in 1992.

The positive political bilateral relations of the last three decades are echoed also in the economic cooperation between the two countries. Constantly Albania and the Czech Republic have expressed mutual interest in intensifying economic relations. Particularly the last five years have been marked by a positive expansion of economic cooperation such as an increase of the Czech foreign direct investments in Albania and a very high number of Albanian tourists choosing the Czech Republic as a destination. Improvements in terms of trade were recorded as well. Their trading volume has grown to reach 100 million euros in 2018 from 75 million euros in 2017.

Apart from members of the diplomatic mission established in 1922, the very first arrival of an Albanian to Czechoslovakia was a student named Anton Lufi in 1928. Piro Milkani, a prominent film director and former Albanian Ambassador to the Czech Republic, referred to him as "the first swallow" during the international academic conference held online from Charles University on 26.11.2020 titled "Czech(-Slovak)-Albanian Relations: One Hundred Years in the Making". Cultural and economic relations between the two countries were fostered especially during 1945-1961. Tens of Albanian students arrived in Czechoslovakia studying mainly in fields such as medical sciences, agronomy, engineering, architecture, art, and culture. The Soviet-Albanian split culminated in the termination of relations in 1961, which affected Albanian-Czechoslovak relations as well. From 1961 until 1990 relations between the two countries were almost inexistent. In 1990 during the so-called "Embassies Brake-In", some of the Albanians who rushed foreign embassies in Tirana in a bid to emigrate arrived in Prague. Most of them moved to other Western countries, while a very small

part remained in Czechoslovakia. In the early 1990s following democratic changes in Albania, the Czech Republic served as a relatively inexpensive base for Albanians who were intending to migrate to Germany. Again, a tiny minority of those who couldn't make it for Germany remained in the Czech Republic. Meanwhile, a small but steady number of Albanians came to the Czech Republic for studies where still a minority of them stayed in the Czech Republic after their graduation.

In the last 10 years, there is an increasing tendency towards Albanian citizens residing in the Czech Republic. Although the number of Albanian citizens residing in the Czech Republic has almost doubled from 2011 to 2020, still, the number is relatively low. As of 2020, there were 555 Albanian citizens in the Czech Republic.

Chart 10 Albanian Citizens in the Czech Republic, 2011-2020

Source: Author's processing based on data from Ministry of the Interior Czech Republic, *Directorate of Alien Police Service*, 2021.
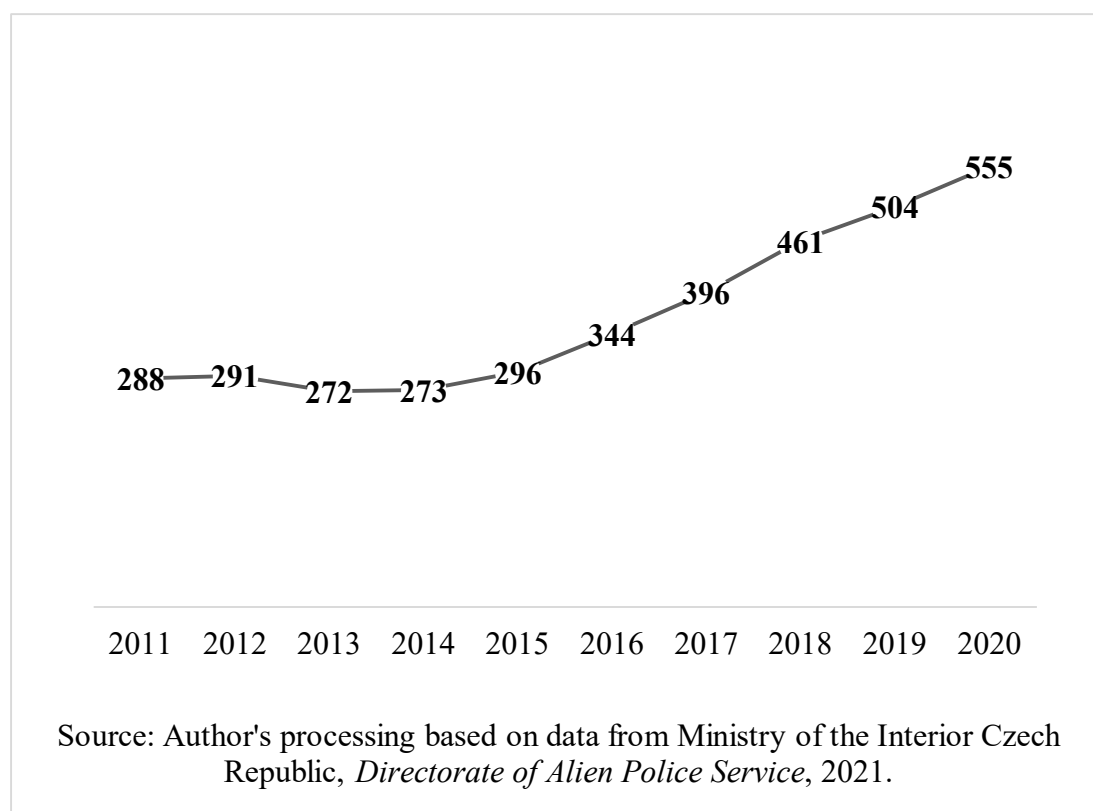
Table 14 presents the status of Albanian citizens residing in the Czech Republic from 2011 to 2020:

Table 14 The Status of Albanian Citizens in the Czech Republic, 2011-2020

Year	Type of Stay	Male	Female	Total	*Total Sum*
2011	Temporarily (Přechodně)	85	52	137	288
	Permanently (Trvale)	102	49	151	
2012	Temporarily (Přechodně)	93	40	133	291
	Permanently (Trvale)	106	52	158	
2013	Temporarily (Přechodně)	75	33	108	272
	Permanently (Trvale)	109	55	164	
2014	Temporarily (Přechodně)	69	38	107	273
	Permanently (Trvale)	109	57	166	
2015	Temporarily (Přechodně)	80	53	133	296
	Permanently (Trvale)	107	56	163	
2016	Temporarily (Přechodně)	90	83	173	344
	Permanently (Trvale)	115	56	171	
2017	Temporarily (Přechodně)	116	108	224	396
	Permanently (Trvale)	117	55	172	
2018	Temporarily (Přechodně)	159	129	288	461
	Permanently (Trvale)	118	55	173	
2019	Temporarily (Přechodně)	198	127	325	504
	Permanently (Trvale)	123	56	179	
2020	Temporarily (Přechodně)	230	142	372	555
	Permanently (Trvale)	127	56	183	

Source: Author's processing based on data from Ministry of the Interior Czech Republic, *Directorate of Alien Police Service*, 2021.

In 2020, 183 Albanian citizens had permanent residency in the Czech Republic and 372 had permanent resident status (long-term visa, long-term stay, employment card, family members of EU nationals). There were only 32 Albanian citizens more residing with permanent status in the Czech Republic from 2011 to 2020. While for the same 10-years span the picture seems to be a little bit different for temporary residents. There were 137 persons residing temporarily in the Czech Republic in 2011 while in 2020 there were 371 individuals. These figures represent an increase with 235 persons which is significant comparing with permanent residents, however, still insignificant compared to other foreign nationalities residing in the Czech Republic or compare to Albanian citizens residing in other EU countries.

Table 15 shows the geographical distribution of Albanian citizens in the Czech Republic as of 2020:

Table 15 The Geographical Distribution of Albanian Citizens Residing in the Czech Republic as of 2020

Praha	Jihomoravský	Středočeský	Moravskoslezský	Zlínský
256	92	34	31	28
Ústecký	Olomoucký	Liberecký	Jihočeský	Karlovarský
25	15	14	13	13
Plzeňský	Pardubický	Královéhradecký	Vysočina	Unknown
11	9	8	4	2

Source: Author's processing based on data from Ministry of the Interior Czech Republic, *Directorate of Alien Police Service*, 2021.

As shown in Table 15, nearly half of Albanian citizens residing in the Czech Republic reside in the Prague region. The second and third regions to follow are Jihomoravský and Středočeský.

3.2.2 Survey

Empirical data was obtained using surveys distributed online and in person. Surveys were distributed and administered during October, November, and December 2020 as well as January 2021. Daniel's formula (1999) is used to calculate the sample size for this study:

$$\frac{Z^2 P(1-P)}{e^2} \quad (1.14)$$

Where:

- Z^2 represents the critical value of the normal distribution (value found in Z table)
- e is the margin of error
- p is the sample proportion

However, formula (1.14) is applied when studying large populations. In the case of smaller and finite populations formula is adjusted as follows:

$$n = \frac{\frac{Z^2*P(1-P)}{e^2}}{1+(\frac{Z^2*P(1-P)}{e^2 N})} \; (1.15)$$

Where:

- n is recommended sample size
- N is the population size

Considering a small and finite population in this study, formula (1.15) is used in determining the sample size. Total population 555 persons (Albanian citizens residing in the Czech Republic as of 2020). Also, a 95% confidence level with at least (+/-) 5% margin of error is assumed. A 95% confidence level corresponds to Z=1.96. As such, the calculations are as follows:

$$n = \frac{\frac{1.96^2*0.5*(1-0.5)}{0.05^2}}{1 + (\frac{1.96^2*0.5*(1-0.5)}{0.05^2*555})}$$

$$n = \frac{\frac{3.8416*0.5*0.5}{0.0025}}{1 + (\frac{3.8416*0.5*0.5}{0.0025*555})}$$

$$n = \frac{384.16}{1+(0.69)}$$

$$n = 227$$

3.2.3 Results

In this study a total of 234 surveys were analyzed. The statistical program SPSS was used to perform the statistical analyses.

3.2.3.1 Respondents' Socio-Economic Profile

Table 16 shows the gender distribution of participants in the survey. Out of 234 participants, 162 were male (69.20%) and 66 participants were female (28.20%). 6 respondents preferred not to disclose their gender.

Table 16 Respondents' Gender

Gender	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male	162	69.20	69.20	69.20
Female	66	28.20	28.20	97.40
Undisclosed	6	2.60	2.60	100.00
Total	234	100.00	100.00	

Source: Author's processing, 2021.

The age distribution consists of six age groups as shown in Table 17. Age group 26-35 years old is the largest group respectively with 144 individuals, followed by 36-45 years old age group with 48 persons, and then by 18-25 years old age group with 24 participants belonging to that age group.

Table 17 Respondents' Age

Age	Frequency	Percentage	Valid Percentage	Cumulative Percentage
18-25 years old	24	10.30	10.30	10.30
26-35 years old	144	61.50	61.50	71.80
36-45 years old	48	20.50	20.50	92.30
46-55 years old	12	5.10	5.10	97.40
56-65 years old	6	2.60	2.60	100.00
Over 65 years old	0	0	0	100.00
Total	234	100.00	100.00	

Source: Author's processing, 2021.

About marital status 144 respondents were married (61.50%) and 90 were single (38.50%).

Table 18 Respondents' Marital Status

Marital Status	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Married	144	61.50	61.50	61.50
Single	90	38.50	38.50	100.00
Total	234	100.0	100.00	

Source: Author's processing, 2021.

A very significant number of respondents had a bachelor or master's degree before migrating to the Czech Republic representing 74.30% of all respondents.

Table 19 Respondents' Education Level Before Migration to the Czech Republic

Education	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Primary/Secondary School	18	7.70	7.70	7.70
High School (General)	36	15.40	15.40	23.10
High School (Professional)	6	2.60	2.60	25.70
Bachelor's degree	84	35.90	35.90	61.60
Master's degree	90	38.40	38.40	100.00
Doctoral degree	0	0	0	100.00
Total	234	100.0	100.00	

Source: Author's processing, 2021.

Findings of this study suggest that the actual education level of participants is even higher respectively 82.10% of respondents holding a bachelor, master, or doctoral degree.

Table 20 Respondents' Actual Education Level

Education	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Primary/Secondary School	12	5.10	5.10	5.10
High School (General)	18	7.70	7.70	12.80
High School (Professional)	12	5.10	5.10	17.90

Bachelor's degree	72	30.80	30.80	48.70
Master's degree	114	48.70	48.70	97.40
Doctoral degree	6	2.60	2.60	100.00
Total	234	100.0	100.00	

Source: Author's processing, 2021.

Findings provided in Table 18 and Table 19 confirm a high level of education of Albanian migrants residing in the Czech Republic.

Table 21 presents respondents' profession before migration to the Czech Republic.

Table 21 Respondents' Profession Before Migration to the Czech Republic

Profession	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Student	54	23.10	23.10	23.10
Intellectual	18	7.70	7.70	30.80
Musician/Cinematographer/Actor etc.	0	0	0	30.80
Economist/Lawyer/Engineer/Doctor etc.	84	35.90	35.90	66.70
Self-employed	12	5.10	5.10	71.80
Craftsperson	6	2.60	2.60	74.40
Farmer	6	2.60	2.60	77.00
Other profession	54	23.00	23.00	100.00
Total	234	100.0	100.00	

Source: Author's processing, 2021.

Almost a quarter of respondents or 23.10% were students before moving to the Czech Republic, while 35.90% or 84 individuals were economists, lawyers, engineers, doctors, or from a similar profession.

Table 22 shows respondents' actual profession.

Table 22 Respondents' Actual Profession

Profession	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Student	12	5.10	5.10	5.10
Intellectual	24	10.30	10.30	15.40
Musician/Cinematographer/Actor etc.	0	0	0	15.40
Economist/Lawyer/Engineer/Doctor etc.	108	46.20	46.20	61.60
Self-employed	36	15.40	15.40	77.00
Craftsperson	6	2.60	2.60	79.60
Farmer	0	0	0	79.60
Other profession	48	20.40	20.40	100.00
Total	234	100.0	100.00	

Source: Author's processing, 2021.

Findings from Table 21 and Table 22 indicate a decrease in the number of students and a significant increase in the professions such as economist, lawyer, engineer, or doctor as well as self-employed individuals. These results suggest that a considerable number of Albanian citizens arrive in the Czech Republic as students and after their studies, they continue to reside and work in the Czech Republic as skilled workers.

In Table 23 are given respondents' reasons for migration to the Czech Republic. Education appears to be the main reason (28.20%) for migration to the Czech Republic followed by economic reason (25.60%).

Table 23 Respondents' Reasons for Migration to the Czech Republic

Reasons	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Education reason	66	28.20	28.20	28.20
Economic reason	60	25.60	25.60	53.80
Family reason	54	23.10	23.10	76.90
Other reasons	54	23.10	23.10	100.00

Total	234	100.0	100.00	

Table 24 shows respondents' years of residence in the Czech Republic. 38.50% of them are living in the Czech Republic between 1-3 years while 20.50% are living in the Czech Republic over 10 years.

Table 24 Respondents' Years of Residence in the Czech Republic

Length	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Less than 1 year	42	17.90	17.90	17.90
1-3 years	90	38.50	38.50	56.40
4-6 years	30	12.80	12.80	69.20
7-10 years	24	10.30	10.30	79.50
Over 10 years	48	20.50	20.50	100.00
Total	234	100.0	100.00	

Table 25 depicts the net monthly income of the respondents. The most common monthly net income for respondents is between 30.001 CZK and 65.000 CZK.

Table 25 Respondents' Net Monthly Income

Net Monthly Income	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Less than 30.000 CZK	66	28.20	28.20	28.20
30.001-65.000 CZK	84	35.90	35.90	64.10
65.001-100.000 CZK	24	10.30	10.30	74.40
100.001-145.000 CZK	6	2.60	2.60	77.00
Over 145.000 CZK	6	2.60	2.60	79.60
Undisclosed	48	20.40	20.40	100.00

Total	234	100.0	100.00	

Source: Author's processing, 2021.

Respondents were asked also about the economic impact of Covid-19 on their income. Chart 11 depicts the answers of respondents.

Chart 11 Covid-19 Impact on Earnings

10.30%

41%

48.70%

- Covid-19 had no impact on my earnings
- Covid-19 had negative impact on my earnings
- Covid-19 had positive impact on my earnings

Source: Author's processing, 2021.
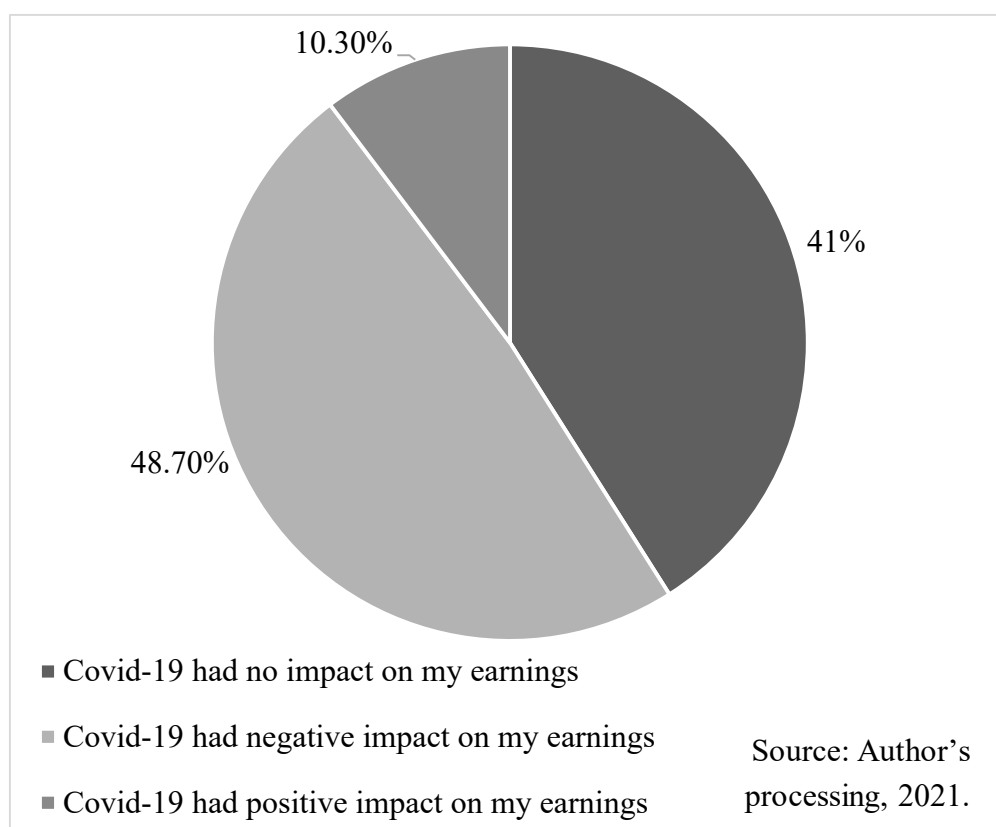
96 persons or 41% of participants responded that Covid-19 had neither positive nor negative impact on their earnings. 114 persons or 48.70% of participants replied that Covid-19 negatively impacted their earnings while 24 individuals or 10.30% declared a positive impact of Covid-19 on their earnings.

3.2.3.2 Respondents' Remittance-Related Answers

Out of 234 respondents 102 or 43.60% claimed that they never remitted. 132 participants or 56.40% stated that they remitted to Albania.

Chart 12 Remittance Senders as a Share of Total Number of Respondents

Source: Author's processing, 2021.
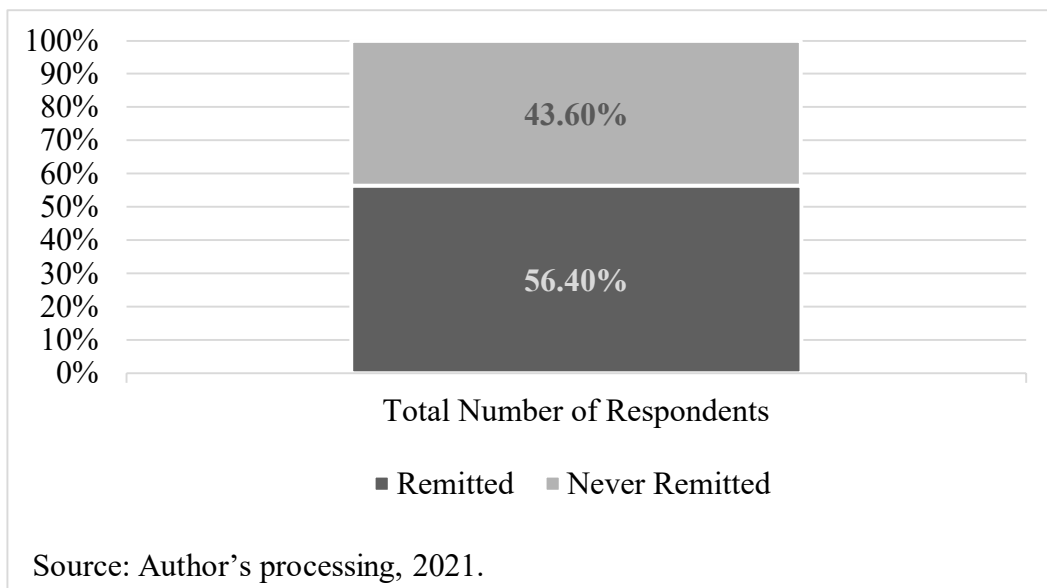
Chart 13 depicts remitting frequency of 132 respondents claiming to remit back home to Albania.

Chart 13 Remitting Frequency

Source: Author's processing, 2021.
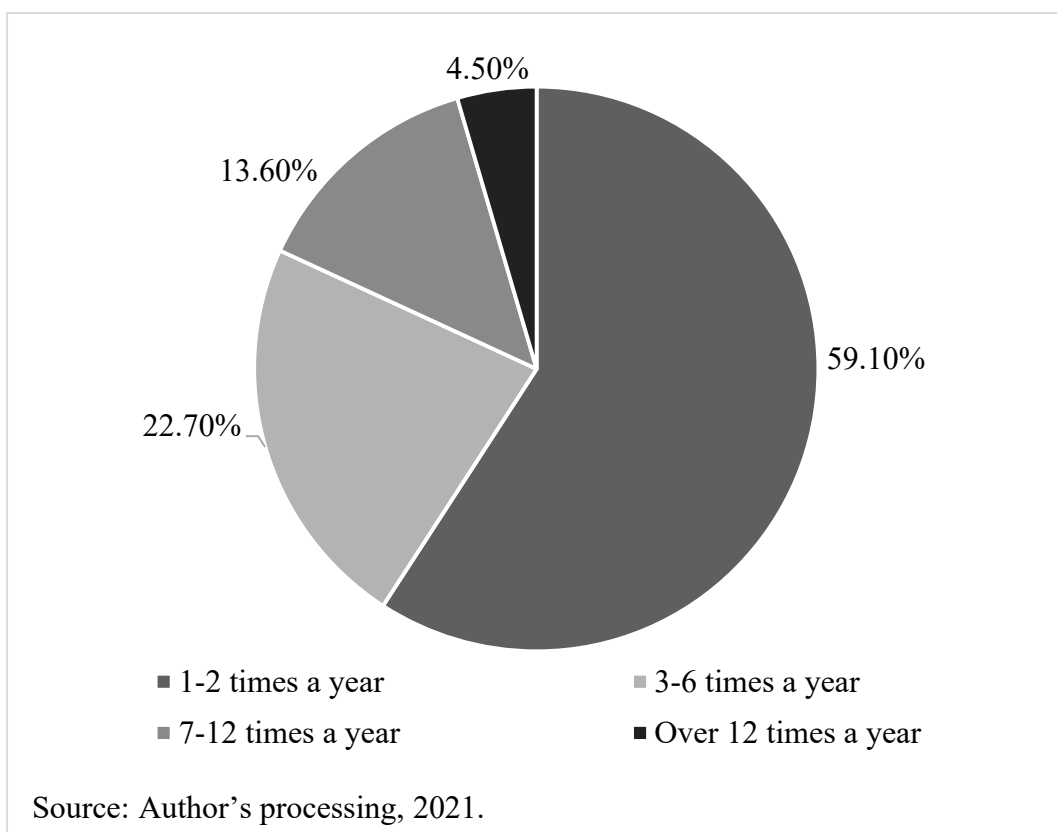
78 individuals or 59.10% claimed to have remitted 1-2 times a year, 30 individuals or 22.70% stated to have remitted 3-6 times a year, 18 individuals have remitted 7-12 times a year and 6 individuals have remitted over 12 times a year.

Regarding motivations for remitting, about 54.50% of remittance senders declared that they remit because they feel a moral responsibility to support the family back home. While 31.80% stated that they remit because of a simple desire to help. It is worth mentioning that none of the remittance senders claimed to remit because of a possible financial gain in the future. Chart 14 shows motivations for remitting as follows.

Chart 14 Motivations for Remitting

Source: Author's processing, 2021.
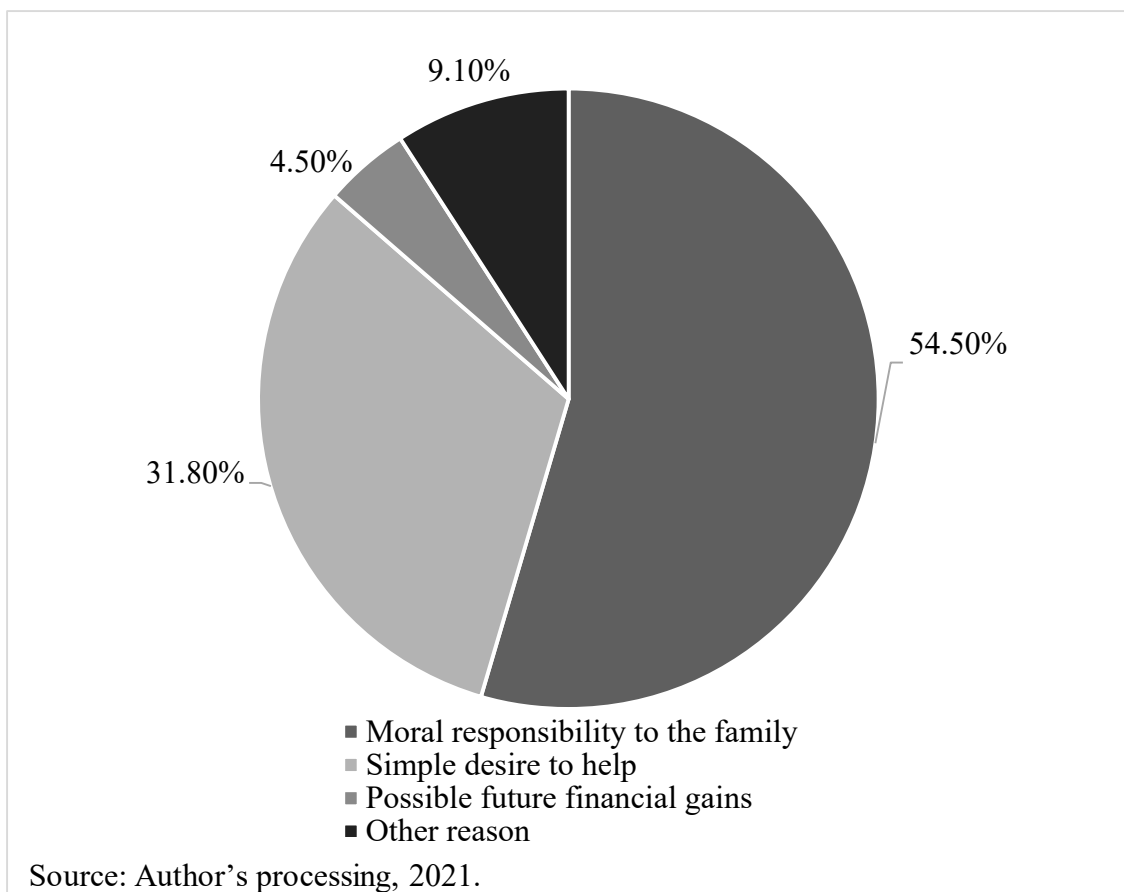
Concerning the remitting purposes, 63.60% of remittance senders claimed that the main remitting purpose is consumption. Only a few of them remit to invest in buying properties and/or business. Chart 15 presents the purpose of remittances:

Chart 15 Remitting Purposes

27.30%

63.70%

4.50%

4.50%

- Consumption
- Education
- Investment in buying property (home, land etc.)
- Investment in business
- Other reason

Source: Author's processing, 2021.
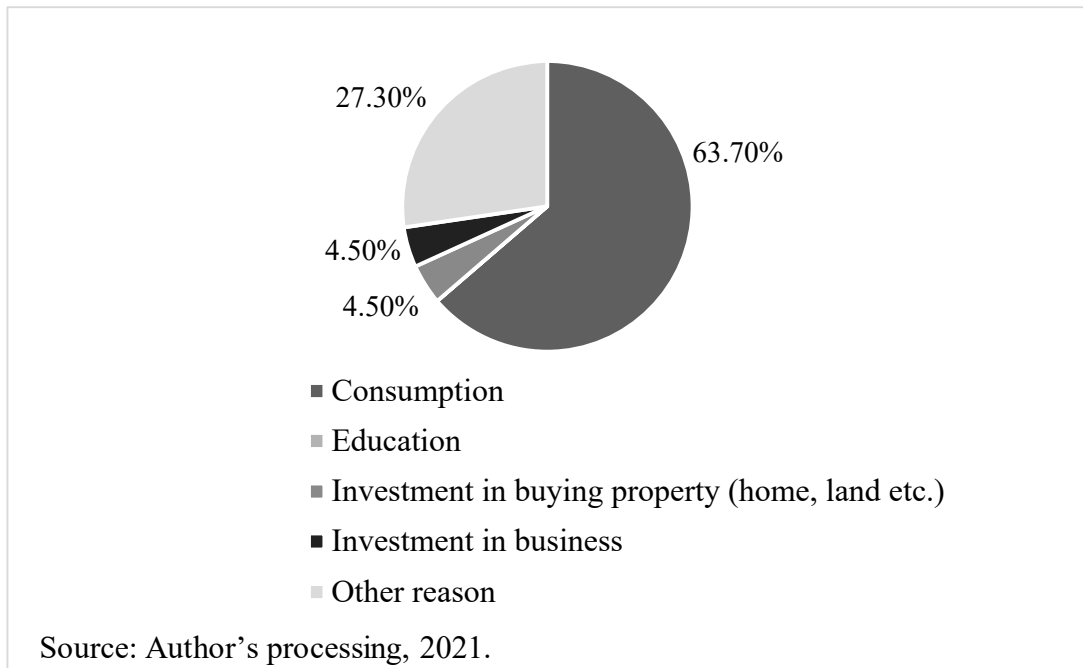
Chart 16 depicts money transfer channels used by remitters.

Chart 16 Money Transfer Channels

36.40%

40.90%

13.60%

9.10%

- Personally
- Friends or acquaintances
- Banking system
- Money transfer companies (e.g. Western Union etc.)

Source: Author's processing, 2021.
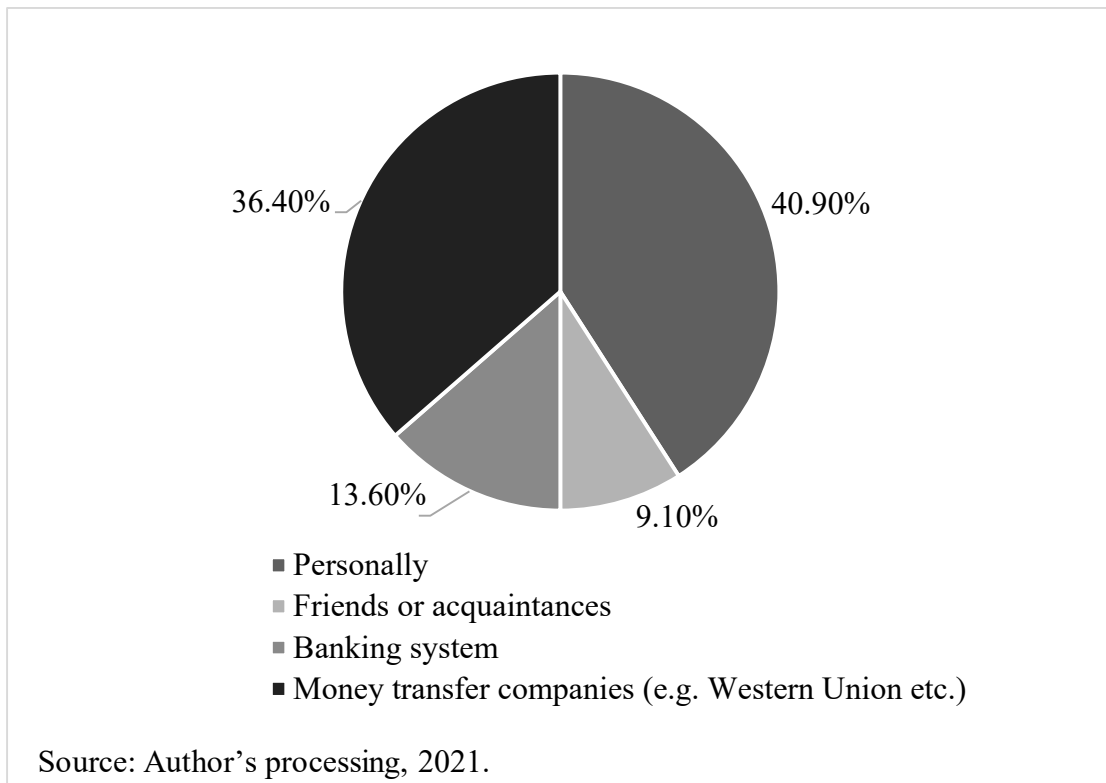
About 40.9% of remitters or 54 individuals prefer to bring money personally when travelling to Albania. About 36.4% of remitters or 48 individuals transfer money using channels of companies offering financial services (e.g., Western Union, MoneyGram etc.). Only 13.6% of remitters or 18 individuals declared to use the banking system for money transfers, and 12 participants declared that they bring money with friends or other acquaintances.

Chart 17 shows the reasons for choosing selected money transfer channels.

Chart 17 Reasons for Choosing the Selected Money Transfer Channels

Source: Author's processing, 2021.
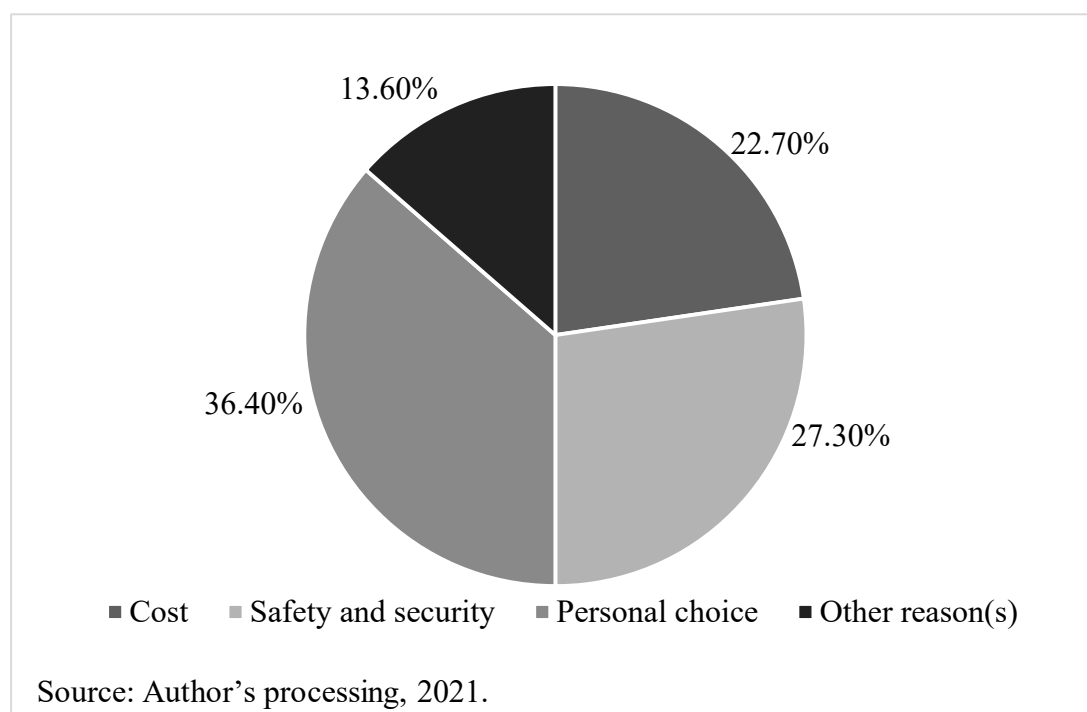
About 36.40% claimed no specific reason but referred to it as a personal choice. About 27.30% of remitters declared that the main reason for choosing the selected money transfer channel is safety and security. About 22.70% confirmed that costs associated with money transfer are the main reason for choosing the selected money transfer channel. Only 13.60% claimed to have other reasons for choosing the selected money transfer channel. According to the findings, there is no singular predominant reason for choosing the selected money transfer channels.

Chart 18 presents the remittances as a share of yearly savings.

Chart 18 Remittances as a Share of Yearly Savings

Source: Author's processing, 2021.
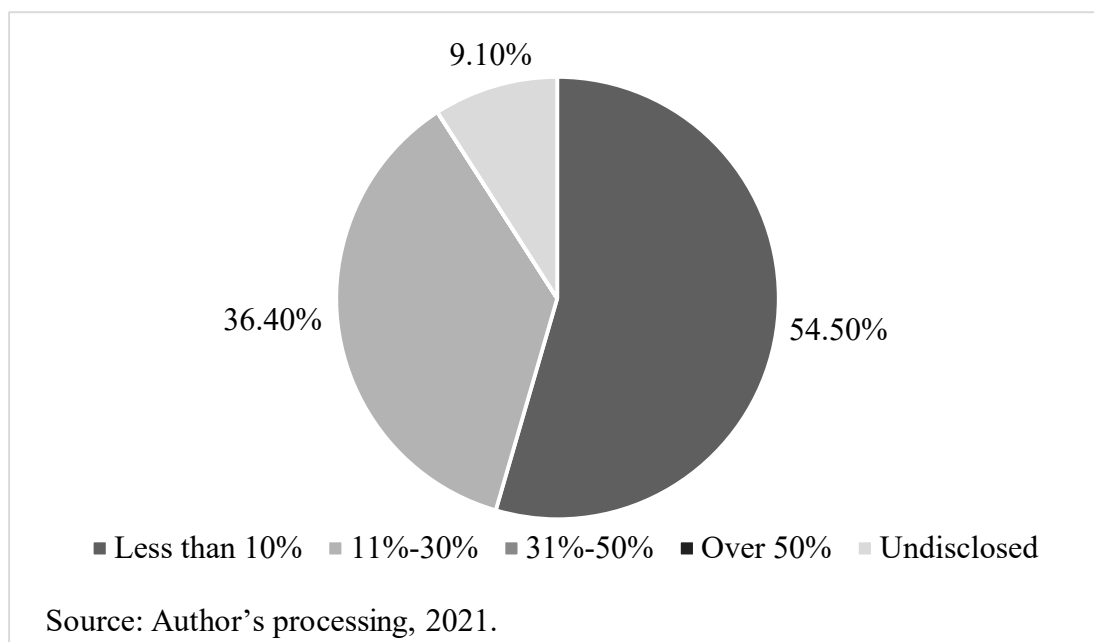
72 individuals or 54.5% claimed that they remit less than 10% of their yearly savings. 48 respondents or 36.4% responded that they remit between 11%-30% of their yearly savings. No Albanian migrant residing in the Czech Republic was found to remit more than 30% of yearly savings.

Chart 19 shows the total yearly remitted amount.

Chart 19 Total Yearly Remitted Amount

Source: Author's processing, 2021.
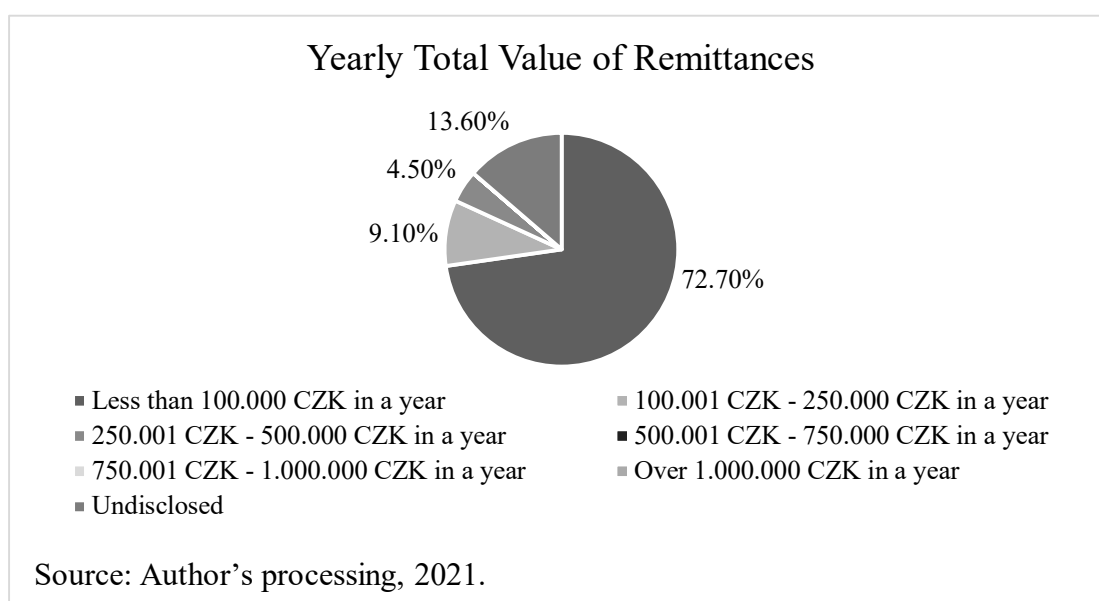
In terms of money remitted back home in Albania, 96 persons representing 72.7% of respondents that remit declared that they remit less than 100.000 CZK in a year. 12 persons or 9.1% stated that they remit between 101.000 CZK - 250.000 CZK.

Concerning the remittance flows in the future, remitters replied as follows in Chart 20.

Chart 20 Remittance Flows in the Future

■ Will stay at the same levels ■ Will be increased ■ Will be reduced ■ Do not know

Source: Author's processing, 2021.
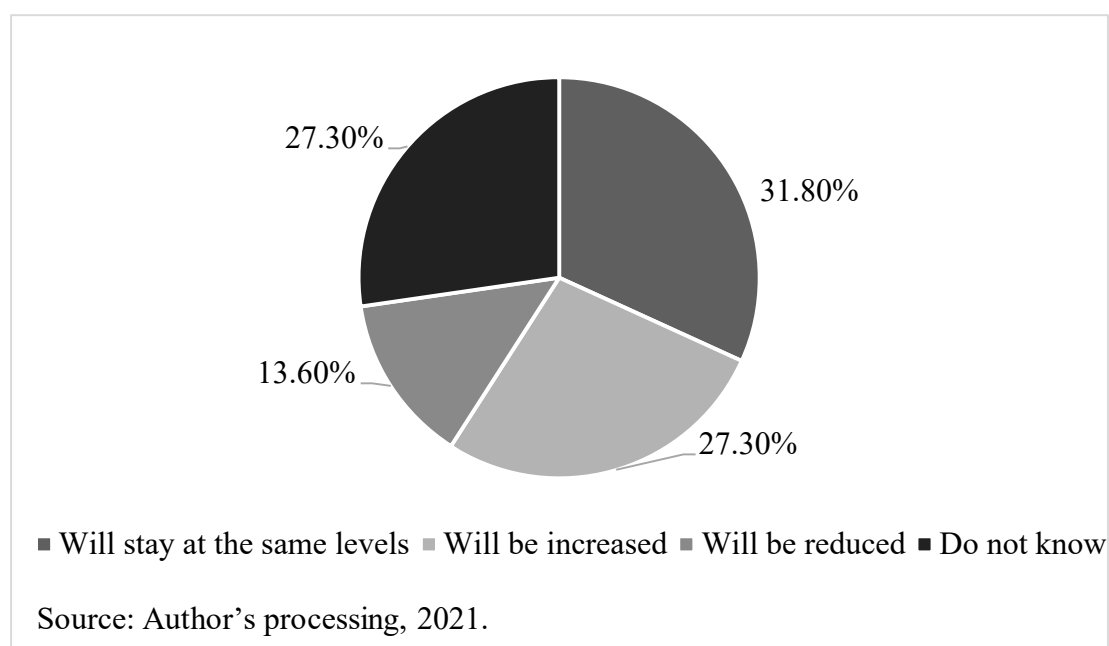
42 remitters (31.8%) claimed that remittances will remain at the same levels in a foreseeable future, 36 remitters (27.3%) stated that remittances will be increased in the future, and 18 remitters (13.6%) claimed that remittances will be reduced in a foreseeable future. Meanwhile, 36 individuals do not know whether they will continue to send remittances and to what degree.

3.2.4 Discussion

Based on results, most of the participants (61.5%) were aged between 26-35 years old, and 20.5% were aged between 36-45 years old. Both these age groups are considered as the most active working age groups. At the present, 48.7% of respondents hold a master's degree, 30.8% hold a bachelor's degree, and 2.6% hold a doctoral degree. Such a finding is an indication of highly educated migrants which is

a proxy of employment quality. On the other side, several arguments support such a finding. Adaptation of selective immigration policies by the Czech governments as well as the fact that the Czech Republic is being considered as an affordable destination in the EU offering state-of-the-art education appears to have a role. Also, nearly 1 out of 3 respondents living and working in the Czech Republic receives between 30.001 CZK – 65.000 CZK net monthly income while around 46.2% of respondents work in professions such as economist, lawyer, engineer, or doctor. Concerning the impact of Covid-19, 41% of participants stated that Covid-19 had neither a negative nor positive impact on their income. Nevertheless, 48.7% of respondents declared that Covid-19 negatively impacted their income while the financial situation for 10.3% was positively impacted.

Regarding remittances, out of 234 respondents, 56.4% stated that they remit back home to Albania while 43.6% of respondents declared that they never remitted. 59.1% of migrants that remit back home send money at a frequency 1-2 times a year and 22.7% at a frequency 3-6 times a year. Also, 31.8% of participants sending remittances affirmed that remittances would stay at the same levels in a foreseeable future, 27.3% declared that remittances would increase and 13.6% stated that remittances would be reduced. Hence, in a foreseeable future, no significant changes are expected in terms of amounts to be remitted from Albanian migrants in the Czech Republic.

About 63.6% of remittances are sent for basic consumption purposes. Also, nearly 54.5% declared that they remit because of moral responsibility toward the family back home and 31.8% stated that they remit because of a simple desire to help. Similarly, Azizi (2017) found out that the primary incentive of remittances is altruism. Agarwal and Horowitz (2002) suggested significant differences in remittance behavior of multiple and single migrants. They noticed that such differences support the altruistic incentive. Briere et al. (2002) analyzed the role of gender in explaining remittances. They concluded that sending remittances as an investment is a motive pursued regardless of gender. However, in this study remittances sent for investing purposes and possible future financial gain reasons were not observed. About 50% bring money with themselves or by friends and acquittances during the travel making

it difficult to track money flow. Only 13.6% of remittances sent by participants were sent using the banking system.

Data obtained from the survey reveals that altruism is the main motive for remitting. This finding is widely in line with other previous studies. Schiopu and Siegfried (2006) analyzed the importance of altruistic versus investment motives from 21 Western European and 7 EU neighboring countries. They affirmed the importance of altruism emphasizing a positive correlation between the GDP differential of sending and receiving countries. Shimamoto (2014) provided evidence from Albania regarding the motives for remitting. The author affirmed a combination of altruistic, exchange, and inheritance motivations as the driving force behind remittances. Tchouassi and Sikod (2010) identified altruism motives from the Central African region concluding that altruistic migrants represent the key strategic agents stimulating development in that region. Borja (2013) observed the same altruistic motives for El Salvador and the Dominican Republic. Bouoiyour and Miftah (2015) reported the same motives even for the case of Morocco. Azizi (2017) confirmed altruism as the primary motivation for remittances. McCracken, Ramlogan-Dobson, and Stack (2016) using the gravity model estimated that remittances sent from migrants of 27 Latin American and Caribbean countries working in 18 developed economies are motivated by a combination of altruism and self-interest. Lim and Morshed (2015) could not support the pure altruism hypothesis in their study.

Based on the results of the survey, about half of Albanian remitters in the Czech Republic transfer their money back home by bringing them personally and/or via friends and acquaintances. Freund and Spatafora (2005) highlighted that about 35-75 percent of official remittances are transferred through informal channels. The authors reported significant variation between regions referring to Eastern Europe as a region scoring relatively high concerning the use of informal channels. Siegel and Lücke (2009) emphasized migrant's irregular legal status in the host country, and low transfer costs rather than speed, convenience, or security as two key reasons concerning the choice to use informal channels. Kosse and Vermeulen (2014) demonstrated that important drivers exist in determining the choice of payment channels. Among the

main drivers, the authors mentioned personal characteristics, country-specific factors, perceived costs, as well as ease of use and the availability of remittance options. Flore (2018) approached the issue of migrants' preference for informal channels by suggesting that blockchain-based technology may revolutionize the money transfer in the international remittance industry.

According to the findings of the survey, the purpose of remittances is predominantly consumption. The contribution of remittances to households' welfare and poverty alleviation is almost unquestionable reality. Mondal and Khanam (2018) assessed the impact of remittances on reducing the volatility of household consumption for 84 developing countries over the period 1980-2014. Their results showed that migrants' remittances significantly reduced the volatility of household consumption.

The results indicate that more than half remit less than 10% of their annual savings. A large majority (72.7%) remits in a year less or equal to 100.000 CZK (≈4,000 euro). This finding provides evidence that principally migrants tend to remit nearly to the extent of the amount of GDP per capita in the home country. Šimková and Langhamrová (2015) observed that remitting behavior of migrants in the Czech Republic is linked to the length and purpose of their stay. The authors stated that migrants settled in the Czech Republic or planning to settle remit less compared to migrants residing in the country for a short time. These migrants remit more and immediately. Simpson and Sparber (2019) estimated remittances to be more responsive to the household with more adult woman relative to men.

4. Conclusions

4.1 Summary

The main purpose of this dissertation was to explain the impact of remittances on Albania's economy. The study employs panel data from 2005 to 2019. Based on the gravity model two estimation models are constructed. Initially, the simplistic form of the gravity model is used to analyse the relationship of remittances and four factors: GDP of Albania, GDP of the host country, distance, and shared border. Later, the traditional form of the gravity model is extended with other factors.

The results of this study suggest that the basic form of the gravity model explains 79.94% of remittance flows in the case of Albania. Such a result is very significant; however, it can be expected when considering that only two neighbouring countries of Albania, Italy and Greece, account for almost 75% of the stock of Albanian migrants across the world. The extended gravity model explains 93.03% of remittance flows. The results show a statistically significant relationship of positive nature between the GDP of the host country and remittances flows to Albania. For each change of one unit in migrants' economic prosperity in the host countries, remittance flows change about 0.28 units. As anticipated, migrants' economic welfare affects remittances. This study finds a statistically significant positive relationship between remittance flows and the GDP of Albania. For each change of one unit in the GDP of Albania, remittance flows change about 0.86 units. A positive relationship implies that an increase in GDP of Albania increases remittance flows and vice versa. Such a finding is not in congruence with previous studies reporting a negative relationship between remittance flows and the GDP of Albania. The negative relationship suggests that a decrease in GDP of Albania increases remittance flows implying that migrants remit more, principally for consumption, in case of worsening financial situation at home. The study reveals that the positive relationship between remittance flows and the GDP of Albania is an indication that remittances are being channelled into investments rather than consumption. Put differently, the GDP growth of Albania can attract remittances arguably through investments. Channelling remittance flows into investments has been the focus of attention of the central bank of Albania and other official monetary

authorities. On the other side, the central bank of Albania and other institutions have been taking numerous measures to strengthen the financial development aiming at injecting remittances into the Albanian economy and facilitate investments. Contrary to conventional wisdom, this study finds out a statistically significant negative correlation between remittance flows and financial development. An increase in financial development by one unit decreases remittance flows by 4.9 unit. Paradoxically, strengthening financial sector development in Albania shrinks remittance flows. This finding may allude to the role and impact of the so-called underground economy. The results show a statistically significant negative correlation between remittances and labour market efficiency. A less efficient labour market increases remittance flows and a more efficient labour market decreases remittance flows. Labour market inefficiency at home prompts Albanian migrants overseas to remit more. Remittances represent still a financial source in supporting unemployed family members or employed ones with insufficient levels of income. A statistically significant correlation is manifested even between remittances and quality of health and primary education. For each change by one unit in the quality of health and primary education, there is about a 0.20-unit change in remittance flows. Poor quality health care imposes additional expenditures on households. The outcomes show that remittances are still used to cover the medical expenses of households allowing them access to (quality) health services. No statistical significance and impact on explaining remittance flows are observed for other factors such as exchange rate, quality of institutions, age dependency ratio, and distance.

Besides, a survey is conducted to understand the micro-factors affecting remittance flows and their economic impact. A sample size of Albanian migrants residing in the Czech Republic is chosen for this purpose. Data obtained from 234 respondents of this survey shows that only 56.4% remit back to Albania. About 63.6% of remittances are sent for basic consumption purposes. Half of the remittance senders (50%) express that they transfer money by bringing them personally/physically or via friends and acquaintances with only 13.6% using the banking system as a money transfer channel. This finding confirms the general belief that Albanian migrants mainly prefer informal channels for money transfers. Nearly 86% of senders state that

they remit because of moral responsibility toward the family or because of a simple desire to help. This finding is in line with other studies reporting that the primary motivation of remittances is altruism. More than half of remitting respondents (54.5%) remit less than 10% of their annual savings earned by working in the Czech Republic. 72.7% of them declare that the total sum of yearly remitted amount does not exceed 100.000 CZK ($\approx$ 4.000 €).

4.2 Contributions and Implications

Many authors have investigated the role and importance of remittance flows in the case of Albania. However, this study aimed to contribute to the literature by using a different approach. This dissertation applied the gravity model in investigating remittances even though that this model is widely considered to have a solid theoretical foundation, especially when applied in international trade. The results suggested that the gravity model was very appropriate in explaining the remittance flows in the case of Albania. The study sheds light on the relationship between remittances and many factors whose role was obscure in the Albanian context. Using recent and new data the dissertation also provides up-to-date insights into the phenomenon. To the best knowledge of the author, the survey conducted in this dissertation represents the first attempt in exploring the micro-implications of remittances sent by Albanian migrants in the Czech Republic. The findings of this dissertation and conclusions can be used by policymakers and practitioners.

4.3 Limitations and Recommendations for Future Research

Although the research findings provide insights into the phenomenon and contribute to the literature, several limitations must be considered to improve future research in this area. The first limitation identified is data. Absolute data reliability cannot be stated concerning stock of migrants and bilateral remittances flows. The exact number of Albanian migrants living in selected host countries, as well as the exact bilateral remittance figures, are unlikely due to the complexity, the non-identical characteristics, and nature of this phenomenon in the Albanian context. To overcome this issue, all data were cross-checked, validated, and calculated using different official sources at the national and international level. Future research must take into

consideration this limitation if the same gravity model is to be applied. Authors applying the same model can use estimations reported in this study concerning the stock of migrants and bilateral remittance flows and can expand the model with other variables.

Several important limitations must be considered regarding the survey. All data from the survey was obtained using the self-reporting method. Response bias and validity are widely discussed as main limitations when using self-reported data. Future studies might reduce such bias by referring to different sources such as national and international institutions as well as other public and private agencies. A parallel dilemma with the use of the self-report method is social desirability. Even though the anonymity of the respondents was ensured, still they may be motivated to present themselves in a complimentary form and give a socially desirable answer in their evaluations. Future studies might apply social desirability scales to overcome this problem.

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Appendices

Appendix 1 - Bilateral Remittance Flows from Selected 16 Countries to Albania

Graphs by Country
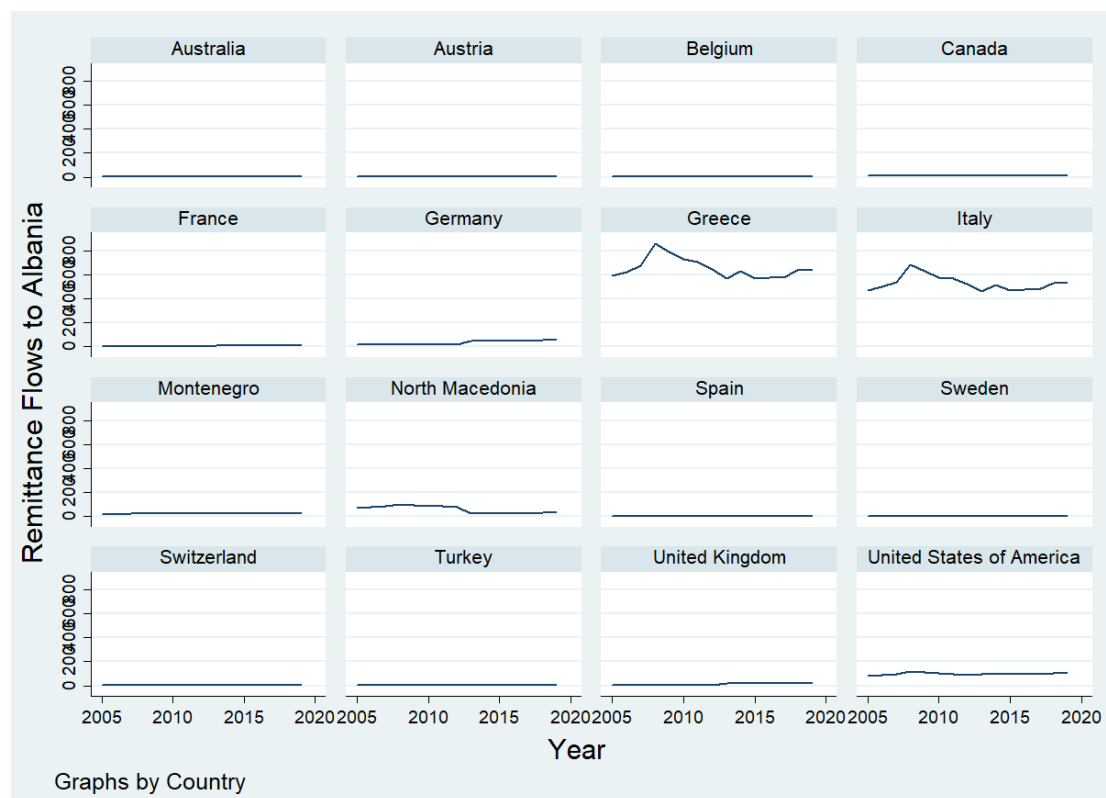
Appendix 2 – The Basic Model Estimation Results

Pooled OLS Results

```
. regress log_remit log_GDPhost log_GDPal log_dist Border
```

Source	SS	df	MS
Model	739.557037	4	184.889259
Residual	137.945458	235	.587001948
Total	877.502495	239	3.67155855

Number of obs	= 240
F(4, 235)	= 314.97
Prob > F	= 0.0000
R-squared	= 0.8428
Adj R-squared	= 0.8401
Root MSE	= .76616

log_remit	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
log_GDPhost	.695234	.0378651	18.36	0.000	.6206355	.7698325
log_GDPal	.4841371	.3004508	1.61	0.108	-.1077842	1.076058
log_dist	.0441545	.0721745	0.61	0.541	-.0980372	.1863462
Border	5.358092	.1808829	29.62	0.000	5.001733	5.714451
_cons	-29.28414	6.972416	-4.20	0.000	-43.02056	-15.54771

Heteroskedasticity Results

```
. estat hettest log_GDPhost log_GDPal log_dist Border
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: log_GDPhost log_GDPal log_dist Border

         chi2(4)      =      23.10
         Prob > chi2  =     0.0001
```

Random Effects GLS Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border, re vce(robust)

Random-effects GLS regression            Number of obs     =        240
Group variable: Country                  Number of groups  =         16

R-sq:                                    Obs per group:
    within  = 0.1286                                     min =         15
    between = 0.8272                                     avg =       15.0
    overall = 0.7994                                     max =         15

                                         Wald chi2(4)      =      85.20
corr(u_i, X)   = 0 (assumed)             Prob > chi2       =     0.0000

                       (Std. Err. adjusted for 16 clusters in Country)

                          Robust
   log_remit |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]

 log_GDPhost |   .3743826   .1527064    2.45   0.014     .0750836    .6736817
   log_GDPal |   .6807315   .2796913    2.43   0.015     .1325466    1.228916
    log_dist |   .3662135   .3517812    1.04   0.298    -.3232649    1.055692
      Border |   5.111114    .713305    7.17   0.000     3.713062    6.509166
       _cons |  -27.38713   7.149163   -3.83   0.000    -41.39923   -13.37503

     sigma_u |   .76205908
     sigma_e |   .36110057
         rho |   .81663824   (fraction of variance due to u_i)
```

Random Effects ML Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border, re mle

Fitting constant-only model:
Iteration 0:    log likelihood =  -163.6869
Iteration 1:    log likelihood = -163.14837
Iteration 2:    log likelihood = -163.13662
Iteration 3:    log likelihood = -163.13662

Fitting full model:
Iteration 0:    log likelihood = -137.55781
Iteration 1:    log likelihood = -134.59592
Iteration 2:    log likelihood = -134.27747
Iteration 3:    log likelihood = -134.24914
Iteration 4:    log likelihood = -134.24873
Iteration 5:    log likelihood = -134.24873

Random-effects ML regression             Number of obs     =        240
Group variable: Country                  Number of groups  =         16

Random effects u_i ~ Gaussian            Obs per group:
                                                     min =         15
                                                     avg =       15.0
                                                     max =         15

                                         LR chi2(4)        =      57.78
Log likelihood  = -134.24873             Prob > chi2       =     0.0000
```

log_remit	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
log_GDPhost	.3659198	.1648351	2.22	0.026	.0428489	.6889908
log_GDPal	.6859169	.1755881	3.91	0.000	.3417704	1.030063
log_dist	.3747081	.2972325	1.26	0.207	-.2078569	.9572731
Border	5.1046	.7295583	7.00	0.000	3.674692	6.534508
_cons	-27.33709	3.977204	-6.87	0.000	-35.13227	-19.54192
/sigma_u	.7904519	.1850471			.4995819	1.250674
/sigma_e	.3673659	.0177868			.3341075	.403935
rho	.8223707	.0718003			.6493772	.9285717

LR test of sigma_u=0: chibar2(01) = 279.69   Prob >= chibar2 = 0.000

Breusch and Pagan Lagrangian Multiplier Test Results

```
. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border, re

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        log_remit[Country,t] = Xb + u[Country] + e[Country,t]

        Estimated results:
```

	Var	sd = sqrt(Var)
log_remit	3.671559	1.916131
e	.1303936	.3611006
u	.580734	.7620591

```
        Test:   Var(u) = 0
                            chibar2(01) =    952.05
                        Prob > chibar2 =    0.0000
```

Fixed-Effects (within) Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border, fe vce(robust)
note: log_dist omitted because of collinearity
note: Border omitted because of collinearity
```

Fixed-effects (within) regression		Number of obs	=	240
Group variable: **Country**		Number of groups	=	16

```
R-sq:                                   Obs per group:
    within  = 0.1639                                min =         15
    between = 0.0009                                avg =       15.0
    overall = 0.0024                                max =         15

                                        F(2,15)         =       6.30
corr(u_i, Xb)  = -0.2667                Prob > F        =     0.0103
```

                        (Std. Err. adjusted for 16 clusters in Country)

log_remit	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
log_GDPhost	-.2950034	.4351545	-0.68	0.508	-1.222513	.6325066
log_GDPal	1.090883	.3641525	3.00	0.009	.3147099	1.867055
log_dist	0	(omitted)				
Border	0	(omitted)				
_cons	-14.77019	8.600855	-1.72	0.106	-33.10248	3.5621
sigma_u	2.0125003					
sigma_e	.36110057					
rho	.96880947	(fraction of variance due to u_i)				

Hausman Test Results

```
. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border, re

. quietly estimates store random_group

. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border, fe

. quietly estimates store fixed_group

. hausman fixed_group random_group
```

	── Coefficients ──			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fixed_group	random_group	Difference	S.E.
log_GDPhost	-.2950034	.3743826	-.669386	.1700565
log_GDPal	1.090883	.6807315	.4101511	.0983177

```
                 b = consistent under Ho and Ha; obtained from xtreg
      B = inconsistent under Ha, efficient under Ho; obtained from xtreg

   Test:  Ho:  difference in coefficients not systematic

          chi2(2) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                  =         15.49
          Prob>chi2 =        0.0004
          (V_b-V_B is not positive definite)
```

Appendix 3 – The Extended Model Estimation Results

Pooled OLS Results

```
. regress log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex Instit
> onsIndex HealthandPrimaryEducation Laformarketefficiency Dependencyratio
```

Source	SS	df	MS		Number of obs	=	240
					F(11, 228)	=	357.37
Model	829.398348	11	75.3998498		Prob > F	=	0.0000
Residual	48.1041468	228	.2109831		R-squared	=	0.9452
					Adj R-squared	=	0.9425
Total	877.502495	239	3.67155855		Root MSE	=	.45933

log_remit	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
log_GDPhost	.0473301	.0402262	1.18	0.241	-.0319326	.1265929
log_GDPal	1.058858	.5339217	1.98	0.049	.0068067	2.11091
log_dist	.0014314	.0445804	0.03	0.974	-.0864109	.0892737
Border	.1665845	.2759631	0.60	0.547	-.3771796	.7103485
log_stock	1.1172	.0546184	20.45	0.000	1.009579	1.224822
ExchangeRate	.0000962	.0007264	0.13	0.895	-.001335	.0015274
FDIndex	-4.885679	4.904845	-1.00	0.320	-14.5503	4.778941
InstitutionsIndex	.0529507	.1681296	0.31	0.753	-.2783358	.3842372
HealthandPrimaryEducation	-.2109615	.2234991	-0.94	0.346	-.6513492	.2294262
Labormarketefficiency	-.3602275	.251418	-1.43	0.153	-.8556274	.1351725
Dependencyratio	-.0195372	.0254381	-0.77	0.443	-.069661	.0305866
_cons	-29.64913	11.92539	-2.49	0.014	-53.14719	-6.151064

Heteroskedasticity Results

```
. estat hettest log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex Institutio
> ndex HealthandPrimaryEducation Labormarketefficiency Dependencyratio

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex
                   InstitutionsIndex HealthandPrimaryEducation Labormarketefficiency
                   Dependencyratio

        chi2(11)    =     70.46
        Prob > chi2 =    0.0000
```

Random Effects GLS Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex Institut
> sIndex HealthandPrimaryEducation Labormarketefficiency Dependencyratio, re vce(robust)

Random-effects GLS regression                    Number of obs      =        240
Group variable: Country                          Number of groups   =         16

R-sq:                                            Obs per group:
    within  = 0.1535                                          min =         15
    between = 0.9638                                          avg =       15.0
    overall = 0.9303                                          max =         15

                                                 Wald chi2(11)      =    6792.50
corr(u_i, X)   = 0 (assumed)                     Prob > chi2        =     0.0000

                                        (Std. Err. adjusted for 16 clusters in Country)

                                     Robust
             log_remit |    Coef.   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----------------------+----------------------------------------------------------------
           log_GDPhost |  .2786117   .085223     3.27   0.001    .1115776    .4456457
             log_GDPal |  .8628117   .2575506    3.35   0.001    .3580217    1.367602
              log_dist |  .0293278   .1446062    0.20   0.839   -.2540951    .3127507
                Border |  2.091559   .9144136    2.29   0.022    .2993411    3.883777
             log_stock |  .6987147   .178121     3.92   0.000    .3496041    1.047825
          ExchangeRate | -.001623    .0020583   -0.79   0.430   -.0056573    .0024112
               FDIndex | -4.893508   2.657504   -1.84   0.066   -10.10212    .3151041
       InstitutionsIndex |  .0488442   .0551549    0.89   0.376   -.0592575    .1569459
HealthandPrimaryEducation | -.1952791   .0154528  -12.64   0.000   -.2255661   -.1649921
   Labormarketefficiency | -.3056409   .0580517   -5.26   0.000   -.4194201   -.1918616
        Dependencyratio | -.0301429   .037214    -0.81   0.418   -.103081    .0427953
                  _cons | -27.67321   5.025176   -5.51   0.000   -37.52237   -17.82404
-----------------------+----------------------------------------------------------------
               sigma_u |  .26650654
               sigma_e |  .35317461
                   rho |  .3628241   (fraction of variance due to u_i)
```

Random Effects ML Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex Institut
> sIndex HealthandPrimaryEducation Labormarketefficiency Dependencyratio, re mle

Fitting constant-only model:
Iteration 0:   log likelihood =  -163.6869
Iteration 1:   log likelihood = -163.14837
Iteration 2:   log likelihood = -163.13662
Iteration 3:   log likelihood = -163.13662

Fitting full model:
Iteration 0:   log likelihood =  -132.1174
Iteration 1:   log likelihood = -123.69311
Iteration 2:   log likelihood = -121.48413
Iteration 3:   log likelihood = -121.04859
Iteration 4:   log likelihood = -120.99097
Iteration 5:   log likelihood = -120.98921
Iteration 6:   log likelihood = -120.98921

Random-effects ML regression                     Number of obs      =        240
Group variable: Country                          Number of groups   =         16

Random effects u_i ~ Gaussian                    Obs per group:
                                                             min =         15
                                                             avg =       15.0
                                                             max =         15

                                                 LR chi2(11)        =      84.29
Log likelihood  = -120.98921                     Prob > chi2        =     0.0000


             log_remit |    Coef.   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----------------------+----------------------------------------------------------------
           log_GDPhost |  .343927    .1062634    3.24   0.001    .1356545    .5521994
             log_GDPal |  .7323868   .4477052    1.64   0.102   -.1450992    1.609873
              log_dist |  .0952224   .1870569    0.51   0.611   -.2714023    .4618471
                Border |  3.018396   .7582968    3.98   0.000    1.532161    4.50463
```

Border	3.018396	.7582968	3.98	0.000	1.532161	4.50463
log_stock	.4875004	.1386335	3.52	0.000	.2157837	.759217
ExchangeRate	-.0032851	.002321	-1.42	0.157	-.0078341	.0012639
FDIndex	-4.437902	3.914736	-1.13	0.257	-12.11064	3.234838
InstitutionsIndex	.0430379	.1313564	0.33	0.743	-.2144158	.3004917
HealthandPrimaryEducation	-.1801933	.1749208	-1.03	0.303	-.5230317	.1626451
Laformarketefficiency	-.2716706	.1975774	-1.38	0.169	-.658915	.1155739
Dependencyratio	-.0369561	.0205231	-1.80	0.072	-.0771806	.0032684
_cons	-24.90172	10.02789	-2.48	0.013	-44.55602	-5.247425
/sigma_u	.4824129	.1312473			.2830333	.8222433
/sigma_e	.3584022	.0176421			.32544	.3947031
rho	.6443486	.1313745			.3740761	.8557211

LR test of sigma_u=0: chibar2(01) = 53.37   Prob >= chibar2 = 0.000

Breusch and Pagan Lagrangian Multiplier Test Results

```
. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex
> titutionsIndex HealthandPrimaryEducation Laformarketefficiency Dependencyratio, re

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        log_remit[Country,t] = Xb + u[Country] + e[Country,t]

        Estimated results:
                         Var      sd = sqrt(Var)

            log_remit    3.671559    1.916131
                    e    .1247323    .3531746
                    u    .0710257    .2665065

        Test:    Var(u) = 0
                        chibar2(01) =    76.50
                        Prob > chibar2 =   0.0000
```

Fixed-Effects (within) Regression Results

```
. xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex Institut
> sIndex HealthandPrimaryEducation Laformarketefficiency Dependencyratio, fe i( Country) vce(ro
> t)
note: log_dist omitted because of collinearity
note: Border omitted because of collinearity

Fixed-effects (within) regression           Number of obs     =        240
Group variable: Country                     Number of groups  =         16

R-sq:                                       Obs per group:
     within  = 0.2254                                   min =         15
     between = 0.1768                                   avg =       15.0
     overall = 0.1784                                   max =         15

                                            F(9,15)           =     118.81
corr(u_i, Xb)  = 0.0770                     Prob > F          =     0.0000

                                  (Std. Err. adjusted for 16 clusters in Country)
```

		Robust				
log_remit	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
log_GDPhost	-.233301	.5925147	-0.39	0.699	-1.496216	1.029614
log_GDPal	.8633735	.5431893	1.59	0.133	-.2944072	2.021154
log_dist	0	(omitted)				
Border	0	(omitted)				
log_stock	.1872329	.3984376	0.47	0.645	-.6620166	1.036483
ExchangeRate	-.0050182	.0054306	-0.92	0.370	-.0165933	.006557
FDIndex	-1.935843	1.456783	-1.33	0.204	-5.040902	1.169215
InstitutionsIndex	-.0051852	.0535876	-0.10	0.924	-.1194044	.1090341
HealthandPrimaryEducation	-.1242268	.0265268	-4.68	0.000	-.1807674	-.0676863
Laformarketefficiency	-.2221586	.0526986	-4.22	0.001	-.3344831	-.1098342
Dependencyratio	-.0449899	.0411249	-1.09	0.291	-.1326456	.0426658
_cons	-8.201312	6.370984	-1.29	0.218	-21.78074	5.37812
sigma_u	1.7617172					
sigma_e	.35317461					
rho	.96136381	(fraction of variance due to u_i)				

Hausman Test Results

```
. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex
> titutionsIndex HealthandPrimaryEducation Labormarketefficiency Dependencyratio, re

. quietly estimates store random_group

. quietly xtreg log_remit log_GDPhost log_GDPal log_dist Border log_stock ExchangeRate FDIndex
> titutionsIndex HealthandPrimaryEducation Labormarketefficiency Dependencyratio, fe

. quietly estimates store fixed_group

. hausman fixed_group random_group

                 ———— Coefficients ————
                (b)          (B)            (b-B)      sqrt(diag(V_b-V_B))
             fixed_group  random_group   Difference         S.E.

 log_GDPhost   -.233301     .2786117      -.5119127       .2065745
   log_GDPal    .8633735     .8628117       .0005617       .1150224
   log_stock    .1872329     .6987147      -.5114818       .0763453
ExchangeRate   -.0050182    -.001623       -.0033952       .0025257
     FDIndex   -1.935843    -4.893508       2.957665          .
Institutio~x   -.0051852     .0488442      -.0540294          .
HealthandP~n   -.1242268    -.1952791       .0710523          .
Labormarke~y   -.2221586    -.3056409       .0834823          .
Dependency~o   -.0449899    -.0301429      -.0148471          .

                     b = consistent under Ho and Ha; obtained from xtreg
          B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

           chi2(9) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                   =       54.68
         Prob>chi2 =       0.0000
         (V_b-V_B is not positive definite)
```

Appendix 4 – Dataset for Albania

GDP of Albania (US$)

2019	*15,279,183,289.94*
2018	*15,147,020,535.39*
2017	*13,019,693,450.88*
2016	*11,861,200,797.47*
2015	*11,386,846,319.16*
2014	*13,228,144,008.34*
2013	*12,776,217,194.79*
2012	*12,319,830,252.48*
2011	*12,890,765,324.23*
2010	*11,926,928,505.52*
2009	*12,044,223,352.54*
2008	*12,881,354,103.84*
2007	*10,677,321,490.38*
2006	*8,896,073,938.31*
2005	*8,052,075,642.11*

Distance between Albania and the Host Countries (km)

Australia	*13,746*
Austria	*836*
Belgium	*1,594*

Canada	*8,088*
France	*1,546*
Germany	*1,339*
Greece	*271*
Italy	*638*
Montenegro	*185*
North Macedonia	*141*
Spain	*2,005*
Sweden	*2,113*
Switzerland	*1,142*
Turkey	*1,304*
United Kingdom	*2,336*
United States	*9,147*

Financial Development Index of Albania (0-1 scale)

2019	*0.197770401*
2018	*0.194444075*
2017	*0.202086136*
2016	*0.199178040*
2015	*0.201780751*
2014	*0.208608523*
2013	*0.209310293*
2012	*0.208699167*
2011	*0.207158238*
2010	*0.205661833*
2009	*0.199621260*
2008	*0.202205688*
2007	*0.169947997*
2006	*0.149629653*
2005	*0.140160933*

Age Dependency Ratio (%)

2019	*46.20352176*
2018	*45.81003739*
2017	*45.68209749*
2016	*45.64503371*
2015	*45.55040246*
2014	*45.77467951*
2013	*46.25665586*
2012	*47.0330799*
2011	*48.11805823*
2010	*49.47790868*
2009	*50.04407756*
2008	*50.75273712*
2007	*51.6043425*

2006	*52.61953224*
2005	*53.8499697*

Age Dependency Ratio (1-7 scale)

	Labor Market Efficiency Index	*Quality of Insituations Index*	*Health and Primary Education Index*
2019	*4.57*	*3.63*	*6.01*
2018	*4.54*	*3.77*	*6.08*
2017	*4*	*3.9*	*6.2*
2016	*3.9*	*3.8*	*6.3*
2015	*4*	*3.7*	*6*
2014	*4*	*3.4*	*5.8*
2013	*4.3*	*3.3*	*5.9*
2012	*4.40*	*3.60*	*5.60*
2011	*4.60*	*4.00*	*5.70*
2010	*4.50*	*4.00*	*5.90*
2009	*4.40*	*3.60*	*5.50*
2008	*4.40*	*3.30*	*5.50*
2007	*3.50*	*3.10*	*6.7*
2006	*3.55*	*3.09*	*6.68*
2005	*3.50*	*3.32*	*6.60*

Appendix 5 – Dataset for the Host Countries

GDP of Australia (US$)

2019	*1,396,567,014,733.23*
2018	*1,432,881,172,002.17*
2017	*1,329,188,475,752.32*
2016	*1,208,846,993,739.99*
2015	*1,351,693,984,524.50*
2014	*1,467,483,705,131.74*
2013	*1,576,184,467,015.49*
2012	*1,546,151,783,872.96*
2011	*1,396,649,906,339.35*
2010	*1,146,138,465,603.81*
2009	*927,805,183,330.88*
2008	*1,053,995,523,724.26*
2007	*853,099,630,996.31*
2006	*746,054,207,846.66*
2005	*693,407,758,231.85*

GDP of Austria (US$)

2019	*445,075,391,688.16*

2018	*455,094,861,902.06*
2017	*417,237,869,115.93*
2016	*395,568,644,341.04*
2015	*381,817,565,893.57*
2014	*441,996,131,736.51*
2013	*430,068,712,971.87*
2012	*409,425,234,155.26*
2011	*431,120,310,088.82*
2010	*391,892,746,544.69*
2009	*400,172,297,860.52*
2008	*430,294,287,388.31*
2007	*388,691,445,387.35*
2006	*335,998,557,270.10*
2005	*315,974,418,604.65*

GDP of Belgium (US$)

2019	*533,097,455,834.51*
2018	*543,734,366,831.22*
2017	*502,698,069,366.94*
2016	*475,739,588,764.76*
2015	*462,149,679,343.82*
2014	*534,678,075,827.36*
2013	*521,642,714,407.84*
2012	*496,181,260,258.30*
2011	*522,645,519,183.59*
2010	*480,951,629,493.03*
2009	*481,345,929,424.84*
2008	*515,223,524,241.98*
2007	*470,324,254,037.78*
2006	*407,918,078,032.87*
2005	*385,570,948,886.95*

GDP of Canada (US$)

2019	*1,736,425,629,519.96*
2018	*1,716,262,621,082.22*
2017	*1,649,878,054,226.82*
2016	*1,528,243,213,982.08*
2015	*1,556,129,524,418.21*
2014	*1,803,533,209,844.65*
2013	*1,847,208,522,155.34*
2012	*1,828,689,329,348.99*
2011	*1,788,647,906,047.76*
2010	*1,613,464,422,811.13*
2009	*1,371,153,004,986.44*
2008	*1,549,131,208,997.19*

2007	*1,464,977,190,205.75*
2006	*1,315,415,197,461.21*
2005	*1,169,357,979,864.66*

GDP of France (US$)

2019	*2,715,518,274,227.45*
2018	*2,787,863,958,885.49*
2017	*2,595,151,045,197.65*
2016	*2,471,285,607,081.72*
2015	*2,438,207,896,251.84*
2014	*2,852,165,760,630.27*
2013	*2,811,077,725,703.59*
2012	*2,683,825,225,092.63*
2011	*2,861,408,170,264.60*
2010	*2,642,609,548,930.36*
2009	*2,690,222,283,967.77*
2008	*2,918,382,891,460.38*
2007	*2,657,213,249,384.07*
2006	*2,318,593,651,988.46*
2005	*2,196,126,103,718.44*

GDP of Germany (US$)

2019	*3,861,123,558,039.21*
2018	*3,963,767,526,250.98*
2017	*3,682,602,479,929.42*
2016	*3,467,498,002,104.33*
2015	*3,356,235,704,119.75*
2014	*3,883,920,155,292.26*
2013	*3,732,743,446,218.92*
2012	*3,527,344,944,139.83*
2011	*3,744,408,602,683.94*
2010	*3,396,354,075,663.73*
2009	*3,397,791,053,070.30*
2008	*3,730,027,830,672.33*
2007	*3,421,229,126,745.14*
2006	*2,992,196,713,084.93*
2005	*2,845,802,760,850.64*

GDP of Greece (US$)

2019	*209,852,761,132.84*
2018	*218,138,367,208.80*
2017	*203,588,424,740.30*
2016	*195,222,443,844.78*
2015	*196,591,353,872.13*

2014	237,029,578,730.03
2013	239,862,011,051.78
2012	245,670,666,767.53
2011	287,797,821,676.14
2010	299,361,576,293.33
2009	330,000,251,458.74
2008	354,460,802,695.18
2007	318,497,937,311.80
2006	273,317,736,795.89
2005	247,783,002,114.17

GDP of Italy (US$)

2019	2,003,576,145,498.04
2018	2,091,544,955,092.31
2017	1,961,796,197,354.36
2016	1,875,797,463,583.87
2015	1,835,899,237,320.04
2014	2,159,133,919,743.77
2013	2,141,315,327,318.21
2012	2,087,077,032,435.15
2011	2,291,991,045,770.29
2010	2,134,017,843,247.16
2009	2,191,241,872,742.43
2008	2,398,856,598,798.89
2007	2,210,292,636,189.43
2006	1,947,919,708,944.93
2005	1,857,524,312,896.41

GDP of Montenegro (US$)

2019	5,542,577,964.98
2018	5,504,255,213.58
2017	4,844,606,145.77
2016	4,373,958,353.53
2015	4,053,097,851.45
2014	4,587,741,791.11
2013	4,464,502,433.55
2012	4,087,561,649.51
2011	4,544,575,151.99
2010	4,142,931,812.78
2009	4,159,330,369.55
2008	4,545,674,527.61
2007	3,680,711,743.77
2006	2,721,903,148.91
2005	2,257,174,480.79

GDP of North Macedonia (US$)

2019	12,547,040,498.91
2018	12,683,073,866.11
2017	11,307,058,382.34
2016	10,672,471,860.72
2015	10,064,515,432.03
2014	11,362,272,837.88
2013	10,817,712,138.95
2012	9,745,251,126.01
2011	10,494,632,699.39
2010	9,407,168,702.43
2009	9,401,731,495.72
2008	9,909,548,410.83
2007	8,336,478,142.09
2006	6,861,222,331.96
2005	6,258,600,713.83

GDP of Spain (US$)

2019	1,393,490,524,517.64
2018	1,422,153,839,840.78
2017	1,312,539,279,462.36
2016	1,232,076,017,361.53
2015	1,195,119,269,971.52
2014	1,369,398,844,599.58
2013	1,354,757,433,212.72
2012	1,324,820,091,194.67
2011	1,478,772,824,224.03
2010	1,420,722,034,063.00
2009	1,485,583,495,415.39
2008	1,625,224,842,536.99
2007	1,472,131,125,102.66
2006	1,259,343,871,534.31
2005	1,153,285,660,987.44

GDP of Sweden (US$)

2019	530,883,869,004.98
2018	555,455,371,487.09
2017	541,018,749,769.10
2016	515,654,671,469.55
2015	505,103,781,349.76
2014	581,964,017,237.10
2013	586,841,821,796.89
2012	552,483,727,282.80
2011	574,094,112,972.73

2010	495,812,558,843.31
2009	436,537,014,293.55
2008	517,706,149,201.20
2007	491,252,589,217.02
2006	423,093,437,423.76
2005	392,218,088,878.78

GDP of Switzerland (US$)

2019	703,082,435,158.86
2018	705,140,620,046.70
2017	679,950,481,622.84
2016	671,309,197,478.18
2015	679,832,292,004.98
2014	709,182,559,935.30
2013	688,504,173,431.45
2012	668,043,613,696.29
2011	699,579,638,413.01
2010	583,782,978,345.83
2009	541,506,500,321.66
2008	554,363,487,212.63
2007	479,913,033,988.67
2006	430,921,192,375.18
2005	408,689,354,320.59

GDP of Turkey (US$)

2019	761,425,499,358.16
2018	778,381,859,840.94
2017	858,988,610,574.04
2016	869,683,121,562.53
2015	864,314,287,105.73
2014	938,934,394,763.92
2013	957,799,371,565.73
2012	880,555,967,207.49
2011	838,785,707,000.17
2010	776,967,610,957.29
2009	649,289,324,631.26
2008	770,449,330,198.35
2007	681,321,211,458.13
2006	557,076,027,808.82
2005	506,314,592,066.54

GDP of the United Kingdom (US$)

2019	2,829,108,219,165.80
2018	2,860,667,727,551.97

2017	*2,666,229,179,958.01*
2016	*2,694,283,209,613.29*
2015	*2,928,591,002,002.51*
2014	*3,063,803,240,208.01*
2013	*2,786,022,872,706.81*
2012	*2,704,887,678,386.72*
2011	*2,659,310,054,646.23*
2010	*2,475,244,321,361.11*
2009	*2,410,909,799,034.12*
2008	*2,922,667,279,411.76*
2007	*3,100,882,352,941.18*
2006	*2,713,749,770,009.20*
2005	*2,538,680,000,000.00*

GDP of the United States (US$)

2019	*21,433,226,000,000.00*
2018	*20,580,159,776,000.00*
2017	*19,519,353,692,000.00*
2016	*18,714,960,538,000.00*
2015	*18,224,704,440,000.00*
2014	*17,527,163,695,000.00*
2013	*16,784,849,196,000.00*
2012	*16,197,007,349,000.00*
2011	*15,542,581,104,000.00*
2010	*14,992,052,727,000.00*
2009	*14,448,933,025,000.00*
2008	*14,712,844,084,000.00*
2007	*14,451,858,656,000.00*
2006	*13,814,611,414,000.00*
2005	*13,036,640,230,000.00*

Appendix 6 - Survey

Czech University of Life Sciences Prague
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Prague, Czech Republic

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Date ___.___.202_
Time___:___

SURVEY

A Survey about the Albanian Emigration Characteristics in the Czech Republic and Remittances.

In this survey, there will be questions solely for the research purposes. The survey is organized into two parts: part one contains questions related to migrant's socio-economic profile; part two contains questions regarding remittances. This survey is completely anonymous and does not last more than 10-15 minutes. Thank you very much for agreeing to take part in the survey!

I. Socio-Economic Profile Questions

1. <u>Where were you born?</u>

Berat County	Dibër County	Durrës County	Elbasan County	Fier County	Gjirokastër County
☐	☐	☐	☐	☐	☐
Korçë County	Kukës County	Lezhë County	Shkodër County	Tiranë County	Vlorë County
☐	☐	☐	☐	☐	☐

2. <u>What age group do you belong to?</u>

18-25 years old	26-35 years old	36-45 years old	46-55 years old	56-65 years old	Over 65 years old
☐	☐	☐	☐	☐	☐

3. <u>Gender: How do you identify?</u>

Man	Woman	Prefer not to answer
☐	☐	☐

4. <u>What is your marital status?</u>

Single	Married	Divorced	Widowed
☐	☐	☐	☐

5. <u>What was your education level before emigration?</u>

Primary/Secondary School	High School	Vocational School	Bachelor's degree
☐	☐	☐	☐
Master's degree	Doctorate	Post-Doctoral Degree	
☐	☐	☐	

6. <u>What is your actual education level?</u>

Primary/Secondary school	High school	Vocational school	Bachelor's degree
☐	☐	☐	☐
Master's degree	Doctorate	Post-doctoral degree	
☐	☐	☐	

7. <u>What was your profession before emigration?</u>

Student	Intellectual	Musician/Filmmaker/ Actor/Actress etc.	Self-Employed
☐	☐	☐	☐
Craftsman	Farmer	Economist/Lawyer Doctor/Engineer etc.	Other
☐	☐	☐	☐

8. <u>What is your actual profession?</u>

Student	Intellectual	Musician/Filmmaker/ Actor/Actress etc.	Self-Employed
☐	☐	☐	☐
Craftsman	Farmer	Economist/Lawyer Doctor/Engineer etc.	Other
☐	☐	☐	☐

9. <u>What was the reason for emigrating to the Czech Republic?</u>

Study reasons	Economic reasons	Family reasons	Other reasons
☐	☐	☐	☐

10. <u>How many years have you lived in the Czech Republic?</u>

Less than 1 year	1-3 years	4-6 years	7-10 years	Over 10 years
☐	☐	☐	☐	☐

11. <u>What is your average net monthly income?</u>

Up to 30,000 CZK	30,001-65,000 CZK	65,001-100,000 CZK
☐	☐	☐
100,001-145,000 CZK	Over 145,000 CZK	I prefer not to answer
☐	☐	☐

12. <u>Has the Covid-19 pandemic affected your financial situation?</u>

Yes, it has affected and made it worse	Yes, it has affected and improved it	It has not affected
☐	☐	☐

II. Remittance Questions

1. <u>Have you sent money to family and/or other acquaintances (cousins, friends) in recent years?</u>

Yes	No
☐	☐

2. <u>Mainly what is the purpose is remitted amount?</u>

Consumption (food, bill payments, etc.)	Education Expenses	Home/Property Purchase	Business Investment	Other
☐	☐	☐	☐	☐

3. <u>Mainly what is your motivation for remitting?</u>

A moral obligation to the family	A simple desire to help
☐	☐
Possible financial benefits	Other Reason
☐	☐

4. <u>Mainly what channels do you use for money transfer?</u>

Banking system	Money transfer companies (Wester Union, MoneyGram, etc.)
☐	☐
I personally/physically bring the money	I send the money via friends and/or other acquaintances
☐	☐

5. What is the main reason for using this money transfer channel?

Costs	Safety	Personal preference	Other reasons
☐	☐	☐	☐

6. How often do you send money home during a year?

Once/twice	3-6 times	7-12 times	More than 12 times
☐	☐	☐	☐

7. What percentage of your annual savings from work in the Czech Republic do you send home?

Less than 10%	11%-30%	31%-50%	Over 50%	I prefer not to answer
☐	☐	☐	☐	☐

8. What is the total value of remittances sent home in a year?

Less than 100,000 CZK	100,001 CZK - 250,000 CZK	250,001 CZK - 500,000 CZK	500,001 CZK - 750,000 CZK
☐	☐	☐	☐

750,000 CZK - 1,000,000 CZK	Over 1 million CZK	I prefer not to answer
☐	☐	☐

9. Do you think that in the future your remittances will (choose one)?

Will be the same	Will be increased	Will be reduced	I don't know
☐	☐	☐	☐

10. If you think that remittances will be increased, for what reason do you think so?

Worsened financial situation of family members/friends	Thinking to invest	Other reasons
☐	☐	☐

11. If think that remittances will be reduced, for what reason do you think so?

Improved financial situation of family members/friends	The negative impact of the pandemic on your income	Other reasons
☐	☐	☐