The impact of remittances on Albania's GDP

Valentin Çela, MSc[1]
valentin.cela@uet.edu.al
Department of Economics & Finance
European University of Tirana, Albania

Abstract

The article will discuss the impact of remittances on Albania's GDP it is organized in four sections. The positive and negative theories of remittances, their distribution methods, kinds, and their theoretical link to GDP will be discussed in the first section. The second section will discuss the results of the VAR model's investigation of the influence of remittances on GDP, as well as a summary of their conclusions. The other segment will look at the micro impact of remittances, by conducting a survey of remittance's recipients and summarizing their findings. The last part will discuss the study's findings, as well as pertinent references. Official statistics is expected to record more remittances, even though the real number of remittances may drop, because digital transfers are better documented than cash remittances, especially those made by hand or transferred through other informal channels. Between 1992, when the first emigrant inflows began, until the end of 2019, some USD 29 billion in migrant inflows have entered the Albanian

---

[1] Valentin Çela is a young entrepreneur with excellent academic background. In 2019, he completed his Master of Science in Accounting and Auditing at the University of Tirana's Faculty of Economics, where he also works as external assistant professor. He also works as an assistant lecturer for economics at the Faculty of Economics, Business, and Development of European University of Tirana, UET. Mr. Çela is a co-founder of OZZO, a technological business that is young and active. He is an expert in Albania's startup environment, and thus one of the key players in its development. Valentin has 31 certified approved economics and entrepreneurship trainings under his belt. Valentin Cela has been named the winner of two scientific research conferences in Croatia and Albania early 2019. Research has been his driving force in becoming an academic, and he has demonstrated practical answers and possibilities by elaborating with students not only academic approaches but also practical solutions and options.

economy. During the last ten years, the average yearly inflow has been around 10% of GDP. They have provided revenue for 13% of the family's budget. The money was split half and half between food and education and other programs. As banks have curtailed services for migrants to 10 years, the current wave of migration has recovered the growth in remittances. What is the economic impact of remittances?

1. The features of immigration and remittances

1.1 Immigration's effect and hypotheses

There are several studies and ideas that explain and assess the consequences of immigration in either the nation of origin or the host country. As a result, there are theories that describe this phenomenon in a favorable light and theories that show it in a negative one.

1.1.1 Theories of optimism

Optimistic theories on immigration are also those that perceive its influence on the global economy. Immigration alleviates unemployment, assists abandoned families, and offers a fresh energy to the country from more developed countries. Immigration also results in a transfer of capital investment and increases traditional societies' exposure to liberal, rational, democratic principles and contemporary knowledge. From this vantage point, immigrants (particularly those returning home) are viewed as vital change agents, inventors of change, and prospective investors with immense potential.

Another good point in this regard is the influence of immigration on the public sector. There is a heated dispute about whether the money that the state receives through taxes is larger than the expense that the state incurs on them. Smith and Edmonton (1997) find that the net impact on the state budget is favorable based on research conducted in the United States.

1.1.2 Theories that are harmful

In addition to hopeful notions, there is widespread disagreement among academics about the detrimental consequences of immigration. The following are some of the hypotheses that are thought to be the most typical. The following are the negative repercussions of emigration to the nations of final destination (Meles, 2006):

- Increased criminality, as a result of growing population, diverse cultures, and beliefs.

- Overcrowding causes speculation in the real estate market.
- As a result of receiving free labor, companies have reduced their investment in technology and productivity.
- Increased unfair competition in the labor market, as well as the exclusion of a large number of immigrants from trade unions, etc.

Another detrimental consequence of migration on the nation of origin is the problem of "brain drain." The Royal Society of London first mentioned this phenomenon after World War II. In addition to the phrase "brain drain," there is also "brain abuse." This term refers to the situation in which highly qualified people in their home country are unable to adjust and find job with the same qualification status in the nation to which they emigrate.

Rivera-Batiz makes an intriguing point on the detrimental impacts of immigration (1982). The issue with remittances in this regard is that if they are just utilized for consumption rather than investment or improving the manufacturing process, the economy may endure constant inflation. Remittance inflows, according to Barajas et al. (2016), are also a possible contribution to monetary transmission inefficiency.

1.2 The connection between immigration and remittances

Most academics of the topic of economic emigration see it as a rather negative phenomena for the economy of the nation of origin. Scholars' writings up till the early 1980s contain such a thought. We recall the research done by Grubel and Scott (1966), as well as the work of Bhagwati and Hamada in 1974 and Knock and Leland's in 1980.

As a result, it happened that suffered a revenue loss. In reality, such a loss of revenue is only temporary, because once migrants begin working in the host nation, they usually begin sending money back to their home country. This monetary flow, which included remittances as well as the effect of so-called technological transfer, outweighed the initial negative impact on the Labour market of the nation of origin.

The initial revenue pinch in the origin nations was also resolved. Only the relative contraction of the economy in the nations of origin was detected by these researchers, not the beneficial benefits of remittances at a later stage. In many situations, the remittance effect was accompanied with technological transfer. In many cases, the remittance impact was accompanied by technological transfers from the host nation to the emigrants' home countries.

1.3 Remittance types and the factors that impact them throughout the world

- Potential remittance, which reflects the emigrant's total savings. This can be estimated by subtracting the emigrant's essential personal costs in the nation of departure from his or her income.
- Constant remittance, which is the minimal amount of money that an emigrant sends home to support the family's basic necessities.
- Increased remittance, which represents the emigrant's additional income in addition to the constant amount sent. It is supposed to be utilized to invest in productive or financial activities rather than to support the family's basic requirements.
- Funds remittance, which indicates the amount of savings that the emigrant wants to invest in the nation of emigration rather than send as remittances.

Marking with:

- Y = income of the emigrant in the country of migration;
- C = necessary emigrant consumption;
- c = essential needs of the immigrant family;
- S = emigrant savings We can write: $Y = C + c + S$

The quantity of remittances sent by immigrants to their home country is governed by a number of variables, including:

(1) The number of employees who have travelled to and worked in other countries.
(2) The organization of emigrants according to age groups, civil status and family reunification, degree of qualification, proximity to the location of migration, legality, and so on.
(3) Working circumstances have a significant influence on remittances. The key factors influencing this issue are the amount of income, which differs according to migratory nations, the nature of employment, the facilities offered by local businesses for migrant employees, and so on.
(4) The volume of remittances also depends on the security, speed, and ease with which monetary values are sent to the place of origin.
(5) Political, economic, and social developments in both the origin and destination countries have a significant influence on the volume of remittances transmitted.

1.4 Channels for transferring remittances

1.4.1 Banks
The majority of remittances entering Albania are directed through unofficial physical routes, such as family or acquaintances. Because of the enormous volume of remittances flowing through informal channels, effort is needed to make official routes more appealing in terms of efficiency, cost, and anonymity. Despite the geographical development of commercial banks in recent years, immigrant households utilize banks at a suboptimal level.

High charges for money transfers charged by banks are sometimes used as a disincentive for individuals to avoid using this service.

Microcredit schemes, as well as upgrades to the bank's infrastructure and the launch of new financial products, will assist to attract additional remittances. Microfinance institutions currently make modest loans to the low-income population.

1.4.2 Money transfer operators
Western Union (WU) and Money Gram are the two biggest OTPs in Albania, with a total of 800 locations. WU has the benefit of an extensive network, which includes post offices. WU also has arrangements with banks to provide a competitive service to the banks' own transfer services.

There are three key reasons to assess OTPs' performance in conquering such a vast market:

(1) Quick service. In many circumstances, the time it takes to transfer money from overseas to Albania is less than an hour.
(2) Usability. The OTP service is considered as simple to use, especially for those who have little experience with the official banking system. Working with papers is restricted and straightforward.
(3) For undocumented immigrants, it is sometimes the sole option for personal money transit. Documents are frequently required by banks to facilitate the transfer. OTPs, on the other hand, do not require any papers for modest sums.

1.4.3 Personal Transfer
Personal transportation accounts for 60% of all transmitted remittances. Because the two host nations are so close, most legal migrants may visit them once or twice a year, allowing them to convey the money themselves in cash.

Personal transportation is thought to be more dependable and less expensive than bank transfers. Illegal immigrants who are unable to travel alone charge

others to act as couriers, bringing their money home. Personal transportation, on the other hand, is neither safe nor inexpensive.

Furthermore, there is anecdotal evidence that money delivered by couriers did not arrive at its destination. Personal transportation, on the other hand, is the only alternative for illegal migrants. Banks in both Italy and Greece need documents to complete the transfer, preventing illegal immigrants from efficiently using banks for these services.

1.5 Annual remittances, equal to one-tenth of GDP

According to the World Bank, remittances have a significant impact on the Albanian economy. According to their projections, remittances totaled $ 1.47 billion in 2019, equivalent to 9.6 percent of GDP.

Although it has increased in value, the ratio with BP has increased owing to the rise of the economy. Prior to 2011, remittances exceeded 13-14 percent of GDP. This proportion peaked in 1993, when remittances accounted for 28% of GDP. They have contributed significantly to world economic riches, accounting for over 13-16 percent of BP.

1.6 Food consumes half of the money, accounting for 13% of the family's budget

The majority of remittances are spent on "food and non-alcoholic drinks" as well as "housing, water, and electricity." According to the Bank of Albania's statistics, food and non-alcoholic drinks account for about half of all emigrant inflows, accounting for around 48 percent of all emigrant inflows. 3 percent of the inputs are anticipated to be spent on furnishing and renovating residences, 4.5 percent on tires to purchase garments, and 5 percent on health services, 4.8 percent on sports, 3.3 percent on education, and 3.2 percent in bars and restaurants from relatives in Albania.

According to Bank of Albania studies, remittances account for around 13% of the yearly household budget in Albania. A portion of the tire is given to the beneficiary family, which varies according on where you live in the country. Furthermore, remittances sent to rural regions may have a higher impact than those sent to metropolitan areas since they are more likely to be spent on local products and services.

1.7 Unrestricted streams account for 39% of all streams.

Albania is primarily a recipient of remittances. According to the Bank of Albania's research of the sending method, 39 percent of the flows are directed through

unregulated channels, 57 percent through non-bank financial institutions, and just 4 percent through banks. It has also been observed that remittances in Albania, even when funnelled through formal delivery channels, are given in cash, adding to the promotion of cash use in the Albanian economy. Cash is a costly tool for the Albanian economy, according to Bank of Albania measurements, costing payment service providers roughly 0.68 percent of GDP, while payment service customers pay up to 0.8 percent of GDP.

1.8 Formalization and Its Consequences.

Remittances are projected to have a direct influence on the population's level of financial inclusion. Despite considerable remittance inflows, Albania's financial inclusion percentage is assessed at 40%, a low level compared to the worldwide average of 69 percent, according to the Bank of Albania.

Using official channels for remittances, for example, boosts the intermediary activity of financial institutions, which contributes to the country's financial development. According to the Bank of Albania, promoting the use of the financial system for remittances has been a focus of attention in the context of minimizing the usage of cash in the economy. In 2017, the Bank of Albania, in collaboration with the World Bank, conducted a comprehensive assessment of the remittance industry with the goal of finding infrastructural and regulatory shortcomings in comparison to best practices.

Remittances must be channeled through formal channels in order for host families of emigrants to have access to basic banking services. Establishing such a connection with banks and non-bank financial organizations allows access to even more complex finance and investment solutions, while also assisting in the development of a client history.

1.9 Remittances and their Economic Impact.

According to the Bank of Albania, remittances contributed around 11.8 percent of Albania's GDP throughout the study period (2008-2017). Estimates, on the other hand, suggest that the extent of this contribution has been gradually falling, from 14.4 percent in 2008 to under 10 percent in 2017. A similar pattern may be seen in the contribution of remittances to Albania's nominal economic development. The contribution was negative in 2010-2013, averaging -0.3 percentage points, due to a decline in inflows, but it increased in subsequent years. According to the Bank of Albania, the impact of remittances on economic development was 0.2 percentage points from 2014 to 2017. In 2014, a considerable impact (0.7 percentage points) was found, while in 2015, a little contribution was observed (0.2 percentage points).

The nominal rate of economic growth in 2014 was reported to be 3.4 percent, with remittances accounting for around 20 percentage points of this pace. Cases when remittances have had a negative contribution correspond to periods when flows have been declining.

Remittances are a significant component of Albania's balance of payments data. This is reflected in the relative importance of this item in terms of GDP and other macroeconomic metrics. In recent years, the remittances-to-GDP ratio has averaged 9.1 percent. This weight has only marginally diminished since the global crisis, without jeopardizing the item's considerable contribution to the country's macroeconomic framework.

The Table shows that expenditures are concentrated in the categories of "food and non-alcoholic drinks" and "housing, water, energy, and so on." Remittances in Albania have increased household spending, causing the country's economy to thrive in the near term. Despite having an influence on GDP, remittances would have a bigger impact if families had spent more on capital investment or education.

1.9.1 Microeconomics contributions

Remittances have a huge influence in Albania since they provide an additional source of income for host families. According to a World Bank study11 on families receiving remittances, remittances account for around 13% of the yearly household budget in Albania. The influence of remittances is seen not just at the home level; a sizable portion of them is sent to recipient families residing in rural regions. Furthermore, remittances sent to rural regions may have a higher impact than those sent to metropolitan areas since they are more likely to be spent on local products and services.

According to the Living Standards Measurement Survey (the Kuks area has the greatest poverty rate at 22.5 percent, and remittances have a beneficial impact on poverty reduction in this region. The accurate identification of the use of additional family income in a remittance, as well as the ban of other revenue, is a difficulty. However, when wages rise, remittances in their homes shift toward investment and savings. Measuring empirically (INSTAT, Household Budget Survey, 2016).

2. Methodology

This portion of the study will go through the empirical analysis that was utilized and how it was applied. This part attempts to address the research issues posed at the beginning of the study about the relationship between remittances and GDP. The literature review is a crucial aspect of any study since it familiarizes you with the most widely used analyses and helps you identify the most accurate approach

to apply them. The analysis of the VAR (vector auto regressive) model will be employed in this study. This analysis will be used to determine if there is a positive, negative, or no link between remittances given to Albania and the country's GDP.

For statistical reasons such as heteroskedasticity, serial correlation, parameter stability, and establishing the model's normal residual distribution, both variables will be changed to logarithmic form. The return in logarithmic form of variables, according to Sims, the professor who envisioned the formation of VAR-VECM models, does not impact the outcomes of a research but provides a stable VAR-VECM model for its statistical side (Sims 1980). This section will be separated into two sections, with the first dealing with the Granger test of causality between variables, the second with the test for selecting acceptable lag-delays of the model, and the third with stability tests (graphic test-AR Root and graphical test - CUSUM of parameter stability). The VAR model will be generated with the corresponding lag-delays in the second part, the generation of probability values for each coefficient of variables will be treated through OLS to determine their importance, and the statistical consistency of the equation that is the focus of this paper will be examined (because two equations will be generated).

2.1 Granger causality of selection of lag-delay

The following are the two assumptions that emerge:

- *GDP is caused by remittances.*
- *H0: Remittances have no effect on GDP.*

We can see the probability value, where prob = 0.0035 is less than 5%, implying that H0 holds, implying that the variable Remittances drives GDP.

The selection of lag-delays based on AIC, FPE, SC, and HQ criteria is another critical step before developing the VAR model. Table 4 shows the outcomes for two lag-delays for each metric. Based on the criterion answers, AIC and HQ recommend using two lag-delays for the VAR model, hence two lag-delays will be utilized to produce the VAR model.

2.2 CUSUM test and model stability

Model stability tests are highly significant since they demonstrate whether or not the stated model is stable. This is the graphical representation-AR of unitary roots, where all points of the graph must be situated within the circle (+1: -1) and the test-CUSUM, which offers the graphical representation of the parameters used with a 5% significance to determine whether or not this model holds. According

to the graph's presentation, all points are positioned within the circle with values +1, -1, showing that the model is stable and fully describe.

Observing graph 8 of the CUSUM test with 5% significance, the blue line representing the VAR model is positioned inside the two red lines of 5% significance, suggesting that the parameters are stable and the VAR model may be constructed

2.3 Development of VAR models.

GDP and remittances will be the two variables in the VAR model that will be constructed. Each variable will be designated as a dependent variable, while the other will be designated as an independent variable. So, with GDP as a dependent variable and remittances as an independent variable, the first equation, which is the equation of interest in this research, may be used to examine the influence of remittances on GDP.

Then the second equation will be generated, with Remittances as the dependent variable and GDP as the independent variable; however, this equation is irrelevant to this paper because it is not the purpose of this paper to examine the impact of GDP on Remittances, so the analysis will focus on the first equation.

So the two equations that will be generated are:

(1) GDP = C(1) *GDP(-1) + C(2)*GDP(-2) + C(3)*R(-1) + C(4)*R(-2) b+ C(5)
(2) R = C(6) *GDP(-1) + C(7)*GDP(-2) + C(8) *R(-1) + C(9)*R(-2) + C(10)

The coefficients, standard deviation, and t-statistical value for each dependent variable are shown.

The explanatory value (R2) and other statistical statistics for each equation are provided. According to Table 5, the first equation relevant to this study is created in the first column, with the dependent variable GDP and the independent variable Remittances with two lag-delays. It has a solubility of 96.52 percent, however each of the variable coefficients must be considered for its relevance, as well as for the model as a whole. The significance of each dependent variable, followed by the overall significance of the model, will be addressed first.

Because the findings derived by the OLS technique yield for both equations, the OLS method described in Table 5 will create the probability values of the VAR model and then execute the WALT test for the individual significance of the coefficients and the model as a whole.

As observed in the table 6 presentation, they are connected with one another. Table 6 displays the ten coefficients of the VAR model, where the WALT test is

done for the first five coefficients (C (1), C (2), C (3), C (4), C (5)) of equation (1) to determine their significance using the two hypotheses shown in the table.

H0: C (1) = C (2) = 0
Ha: The coefficients are not equal to zero.

The value of Chi-square where prob = 0.0026 0.05 indicates that hypothesis H0 fails, indicating that the coefficients C (1), C (2) deviate from zero. This demonstrates that GDP (-1) and GDP (-2) have a positive effect on GDP of 23.44 and 28.25 percent, respectively. Given that Albania had only positive economic growth from 2008 to 2017, this can potentially act as a control variable for the model.

Similarly, we can observe the significance of the coefficients C (3) and C (4) for the independent variable Remittances in table 8.

H0: C (3) = C (4) = 0
Ha: The coefficients are not equal to zero.

Table 8 shows that ***Prob=0.0001<0.05***, indicating that hypothesis H0 fails, and that the coefficients C (3) and C (4) deviate from zero. demonstrating that remittances from a prior period and remittances from two previous periods may have an influence on GDP, with a positive effect of 16.25 percent and 7.85 percent, respectively.

Through the WALT test the global significance of equation (1) can be seen by raising again the following two hypotheses

H0: C (1) = C (2) = C (3) = C (4) = C (5) = 0 statistically insignificant
Ha: statistically significant

From table 9 the chi-square value of the probability is probb = 0.0000 <0.05 which means that H0 falls down and equation (1) of VAR stands.

Equation (1) conclusions:

(1) GDP from the previous period (GDP-1) and GDP from the two preceding periods (GDP-2) are statistically significant, with positive effects on GDP of +23.44 percent and +28.25 percent, respectively.
(2) The preceding period's remittances (R-1) and two previous periods' remittances (R-2) are statistically significant, having positive effects on GDP of + 16.25 percent and + 7.85 percent, respectively.

2.4 Additional VAR model testing

Other tests used to determine whether the model is valid include normal waste distribution and heteroskedasticity.

Waste analysis, which shows us whether or not the VAR approach is effective. Because, according to this technique, the residues must be white noise, or their sum of squares must be equal to zero, or their average must be equal to zero.

In graph 9, we can examine the histogram result to illustrate the normal distribution of waste.

Again, in this test there are two hypotheses that arise:

H0: Waste has normal distribution
Ha: Waste has no normal distribution

From the histogram data we see that prob = 0.680307> 0.05, which means that hypothesis H0 stands and the residues have normal distribution. Other indicators such as Skewness = -0.2, Kurtosis = 1.71 can also be seen around the values 0, 2 while the indicator JB = 0.77 is located away from the value 0 explaining why the histograms do not give a completely perfect normal presentation.

One of the VAR model's assumptions is that the residual variance is a limited number. The heteroskedasticity assumption is another name for this assumption. The Breusch-Pegan-Godfrey test is used to put this assumption to the test in practice. We get the following result from the model's data:

The following are the two assumptions that emerge:

H0: The residual variance has a fixed value.
Ha: Waste variance is not a fixed number.

From the data in Table 10 we see that prob Chi-Square = 0.1703> 0.05, which means that H0 stands, which means that the variance is a finite number and the model does not suffer from heteroskedasticity.

3. Remittance's survey

In addition to the macroeconomic examination of GDP, I did a brief survey on the micro impact on household budgets. The poll is aimed at family members who have at least one emigrant relative who gives you monetary money at least once a year. The survey was performed online using Google forms, but in order to cover as many age groups as possible, a field survey was undertaken, mostly for those over the age of 35.

3.1. Empirical analysis of results.

(1) The age of the respondents prevails from the age of 18-24 years with 35% and less <18 years with 5%.
(2) 100% of respondents have at least one individual in emigration who sends you money at least once a year.
(3) The question regarding the years in emigration and how long they have been receiving money from emigrants is presented as follows:

According to the findings, immigrants transmit money for at least a year after they arrive in the place of emigration. This is due to factors such as a change in lifestyle, difficulty at work or with their employment contract if they have one (if they are legal), debt payback for illegal immigrants who have been unemployed for a long time, and so on.

Looking at the two figures above, we can see that the UK has a high proportion of transfers and that OTP, along with personal transportation, accounts for 80 percent of the delivery channels. This is due to the fact that the majority of immigrants to this nation are illegal, and these two methods of sending are simpler, and the work with paperwork is restricted and straightforward.

3.1.1 Individuals who gain from remittances and their relationships with emigrants.

According to the study results, the bulk of remittances (70 percent) provide money for 3-5 persons for each emigrant. In addition, 70 percent of them have a girl/boy or sister/brother relationship with immigrants. This demonstrates that the major source of remittances is youth, which not only contributes to an aging population, but also demonstrates the extent of unemployment for young people who have no alternative but to emigrate.

This is corroborated by the other question about the reasons for leaving Albania, in which 75% departed for a better job and only 15% for school. This 15% represents 15–22-year-olds, when young people go for school while both working and sending money home to their family with the following data:

- 25% of them claim they put money aside for their children's education, and these are the examples where remittances assist 3-5 persons per emigrant.
- They spend 30% in small businesses and 25% in purchasing a home or land on which to build a home, which is also considered an investment because the property's value never decreases.

4. Conclusions

Immigrant families and the economy benefit directly and immediately from remittances.

Immigration alleviates unemployment, assists abandoned families, and instills a new spirit in the country by bringing people from more developed countries. Immigration also facilitates the transfer of money and increases traditional cultures' exposure to liberal, rational, democratic beliefs and modern knowledge.

Immigration has both positive and bad effects, in addition to positive ideas. As the population grows, so does the diversity of cultures and beliefs, resulting in an increase in crime.

There are 4 types of remittances: Potential Remittances, Constant Remittances, Additional and Savings Remittances.

Banks, Money Transfer Operators (OTPs), and Personal Transport are the three types of remittance procedures.

Remittances have decreased, especially as the Eurozone's economic crisis has worsened. 2008 was the best year for remittances, with $ 1867 million. Remittances into the Albanian economy have begun to climb again in the previous two years, 2016 and 2017, when compared to 2015.

For the study period, 2008-2019, the value of FDI has always been higher than the value of remittances. The gap between FDI and remittances, which was relatively minor in the first five years, has grown due to increased investment on the one hand and decreased remittances on the other.

Remittances have been crucial in financing imports and bridging the trade deficit. They have played a crucial role in preserving the national currency's exchange rate as well as the rapid development of the construction and service sectors. As a result, they have had a favorable impact on the country's macroeconomic stabilization.

The Bank of Albania estimates that during the analysis period, remittances have contributed to about 11.8% of Albania's GDP. On the other hand, estimates show that the size of this contribution has been slightly declining from 14.4% in 2008, to about 10% in 2017. However, remittance contributions have increased in recent years, compared to performance during 2010-2013.

The impact of remittances in Albania is significant because they constitute an additional source of income for host families.

Remittances represent about 13% of the annual family budget in Albania. The impact of remittances is not only felt at the household level, a significant part of them goes to beneficiary families living in rural areas. Moreover, remittances spent in rural areas may have a greater effect than those spent in urban areas, as they tend more towards the consumption of local goods and services.

5. Conclusions on VAR Analysis

- GDP from the preceding period (GDP-1) and the two prior periods (GDP-2) had statistically significant positive effects on GDP of +23.44 percent and +28.25 percent, respectively.
- The preceding period's remittances (R-1) and two previous periods' remittances (R-2) are statistically significant, having positive effects on GDP of + 16.25 percent and + 7.85 percent, respectively.
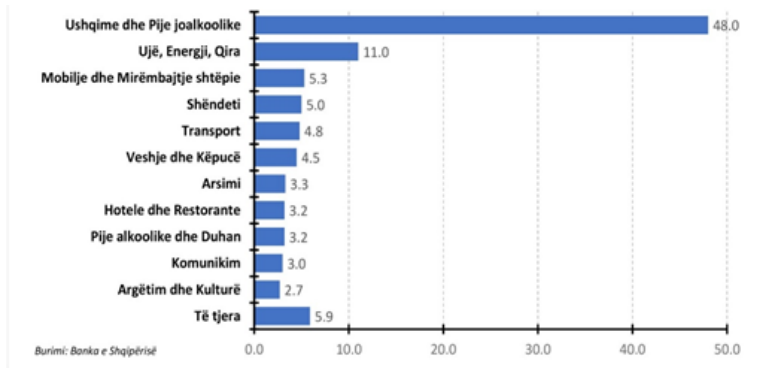
6. References

Bhagwati, J., Hamada, K. (1974), Monetary flow in immigration process, *Journal of Development Economics*, vol. 1, issue 1.

Bank of Albania (2017). Remittances, a support for development - Scientific research on Remittances' market in Albania - Current situation and needs for intervention, pp.24-36. https://www.bankofalbania.org/rc/doc/Remitancat_Revista_eng_12103.pdf

Barajas, A., Chami, R., Ebeke, C., Oeking, A. (2016). Remittance inflows, Monetary transmission inefficiency, pp. 112A.

Bendixen, S., Amandi, F. (2018). Survey about remittances in Ethiopia, Economic Indicators. http://microdata.worldbank.org/index.php/catalog/595/download/15622

EViews (2010) Tutorial, Know How on data collection and processing. Methodical application. http://www.eviews.com/Learning/seriesgroups.html

EViews (2019), Vector Autoregressions Model Generation (VAR), Statistical analysis on database for immigration remittances in Albania.

http://www.eviews.com/help/helpintro.html#page/content/VAR-Vector_Autoregressions_(VARs).html

Grubel, H. Scott, A. (1966). Economic negative emigration effects. The remittance impact, Working Paper: No. 11.

INSTAT, (2017), Structure of the budget of families according to prefectures from Albanian officials Government reports. Analytical data on spread of budget in portions. http://databaza.instat.gov.al/pxweb/sq/DST/START__HBS__CE/CE0012/?rxid=a2c5bb24-487c-4985-99da-aac875927dc7

Kapoor, P. (2016). The economic times journal leading with Remittances: Easy options for transferring money, *Top three methods applied to poor development countries*. https://economictimes.indiatimes.com/slideshows/nri/remittances-easy-options-for-transferring-money/slideshow/8342446.cms

Knox, L. Leland, H. (1980). Potential remittance in new world trades. Relative contraction of the economy, in the nations of origin, pp. 12-23.

Mohr, F. (2018). r-econometrics. An introduction to vector autoregression (VAR) and its understandable comparing models. https://www.r-econometrics.com/timeseries/varintro/

Monitor (2019). Pandemia, BB: Remitancat në Shqipëri në 2020 arritën 1.5 mld dollarë, më të ulëtat në rajon. https://www.monitor.al/pandemia-bb-remitancat-ne-shqiperi-ne-2020-arriten-1-5-mld-dollare-me-te-uletat-ne-rajon

Nickell, S., Saleheen, J. (2008). The impact of immigration on occupational wages, Direct and

indirect impact. https://www.nuffield.ox.ac.uk/users/nickell/papers/ImpactofImmigration-Apr08.pdf

Niimi, Y., Özden, Ç. (2006). Migration and Remittances: Causes and Linkages. Policy Research *Working Paper* No. 4087. World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/8839

Open Data Albania (2017), Remittances and the country of origin. Most frequented countries that are applied by Albanian citizens.

http://open.data.al/sq/lajme/lajm/id/2352/titull/Remitancat-2002-2017-origjina-dhe-destinacioni-sipas-vendeve-

Rivera Rodriguez, M., Baits, A. (1982). Detrimental impacts of immigration, The issue with remittances in immigration. *Working Paper*: No. 1.

Smith, J., Edmonton, B. (1997). Net impact on the state budget. Disputation about whether the money that the state receives through taxes, Public Report at CNN,

https://edition.cnn.com/2021/10/28/financial/net-impact-on-state-budget-1997/index.html.

Tavanxhiu, M. (2016). Remittances: Determinants and their importance - The case of Albania, Immigrants do not spend their money, which keeps them isolated and away from banks, pp.145-150.

Thanasi, T. (2015). Remittances' analysis in Albania, Economic impact of immigration in remittances, and its effect on Albanian macroeconomy, pp. 211-253.

Unioni Financiar Tiranë (2019), Remitancat dhe Ndikimi madhor në Shqipëri - Efekti i parave të sjella në mikroekonomi dhe sistemi bankar në Shqipëri. https://uft.al/remitancat-ndikimi-madhor-ne-ekonomine-shqiptare/

World Bank (2019). Estimates based on IMF balance of payments data, License: CC BY-4.0, Personal Remittances, received (current $). https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=AL&view=chart

World Bank national accounts data, and OECD National Accounts data files (2019), Current GDP of Albania, License: CCBY-4.0. https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=AL&view=chart

Yaseen, H. (2012. The Positive and Negative Impact of Remittances on Economic Growth in MENA Countries, The positive effects of remittances in terms of economic development, pp.9-39. http://www.jimsjournal.org/2%20Hadeel%20S.%20Yaseen.pdf

Zenawi, M. (2006). Consequences of Immigration. Negative repercussions of emigration to the nations of final destination. pp.no 14/1

Extension (List of Graphs and Tables)

GRAPH 1. Structure of Remittance expenses (In%/total)

Ushqime dhe Pije joalkoolike	48.0
Ujë, Energji, Qira	11.0
Mobilje dhe Mirëmbajtje shtëpie	5.3
Shëndeti	5.0
Transport	4.8
Veshje dhe Këpucë	4.5
Arsimi	3.3
Hotele dhe Restorante	3.2
Pije alkoolike dhe Duhan	3.2
Komunikim	3.0
Argëtim dhe Kulturë	2.7
Të tjera	5.9

Burimi: Banka e Shqipërisë

GRAPH 7. Stability of the VAR model

Inverse Roots of AR Characteristic Polynomial
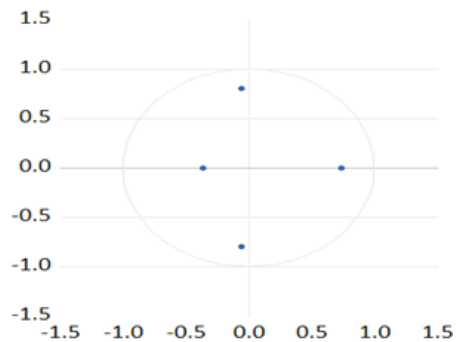
GRAPH 8. CUSUM stability test with 5% of parameters

CUSUM .... 5% Significance

GRAPH 9. Graphic presentation of the histogram
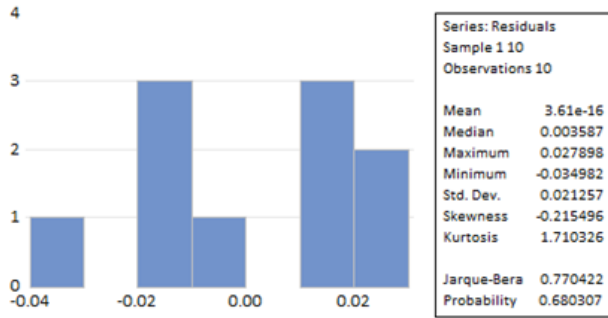
GRAPH 5. Weight of remittances in GDP in the years 2008-2017
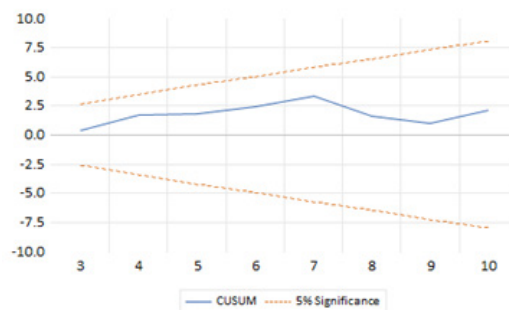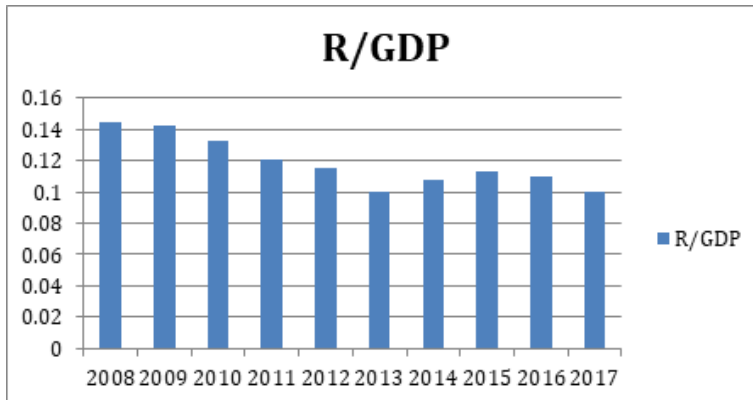

GRAPH 6. Monthly expenses of households that receive
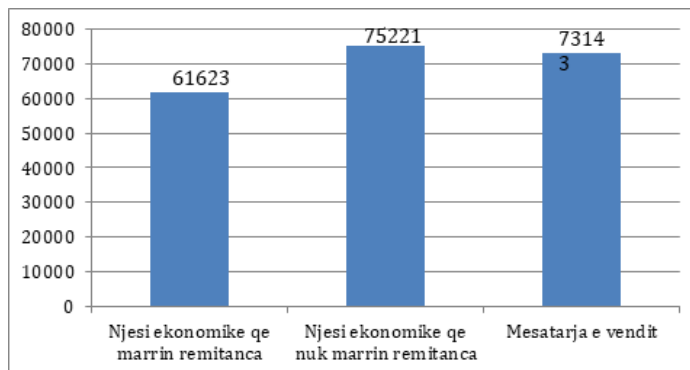and those that do not receive remittances

TABLE 2. Consumer expenditure by remittance-receiving families is segmented.

Grupet kryesore të konsumit	% ndaj totalit
Ushqime dhe pije jo-alkoolike	48
Pije alkoolike, duhan	3.2
Veshje dhe Këpucë	4.5
Shpenzime për banesën, ujë, energji elektrike, qira të paguar	11
Mobilim, pajisje shtëpiake dhe mirëmbajtje të zakonshme të banesës	5.3
Shëndet	5
Transport	4.8
Komunikim	3
Argëtim dhe kulturë	2.7
Arsim	3.3
Restorante dhe hotele	3.2
Të tjera mallra dhe shërbime	5.9
Gjithsej	100

TABLE 3. Granger causality test

VAR Granger Causality/Block Exogeneity Wald Tests
Date: 01/25/19   Time: 11:40
Sample: 1 10
Included observations: 8

Dependent variable: GDP

Excluded	Chi-sq	df	Prob.
R	11.30626	2	0.0035
All	11.30626	2	0.0035

Dependent variable: R

Excluded	Chi-sq	df	Prob.
GDP	0.883264	2	0.6430
All	0.883264	2	0.6430

TABLE 4. Lag-delay selection test.

VAR Lag Order Selection Criteria
Endogenous variables: GDP R
Exogenous variables: C
Date: 01/25/19 Time: 11:41
Sample: 1 10
Included observations: 8

Lag	LogL	LR	FPE	AIC	SC	HQ
0	35.03743	NA*	8.90e-07	-8.259357	-8.239496	-8.393307
1	39.99647	6.198798	7.54e-07	-8.499116	-8.439535	-8.900967
2	49.41215	7.061764	2.78e-07*	-9.853038*	-9.753736*	-10.52279*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

TABLE 6. OLS I VAR generation.

Vector Autoregression Estimates
Date: 01/25/19   Time: 11:48
Sample (adjusted): 3 10
Included observations: 8 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	GDP	R
GDP(-1)	0.234482	0.090958
	(0.25867)	(0.56876)
	[0.90650]	[0.15992]
GDP(-2)	0.282518	-0.456634
	0.229226	(0.49016)
	[-3.63872]	[-0.93160]
R(-1)	0.162512	0.027298
	(0.22017)	(0.48410)
	[-3.32016]	[0.05639]
R(-2)	0.078525	0.546233
	(0.18461)	(0.40591)
	[3.19464]	[1.34570]
C	0.523781	2.819145
	(1.36772)	(3.00733)
	[5.03801]	[0.93742]
R-squared	0.965251	0.762451
Adj. R-squared	0.931709	0.445720
Sum sq. resids	0.000463	0.002237
S.E. equation	0.012420	0.027309
F-statistic	5.276044	2.407249
Log likelihood	27.67934	21.37607
Akaike AIC	-5.669836	-4.094018
Schwarz SC	-5.620185	-4.044367
Mean dependent	4.093992	3.143512
S.D. dependent	0.023047	0.036681

TABLE 5. VAR generation

System: UNTITLED
Estimation Method: Least Squares
Date: 01/25/19   Time: 12:00
Sample: 3 10
Included observations: 8
Total system (balanced) observations 16

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.234482	0.258668	0.906497	0.3996
C(2)	0.282518	0.229226	-3.638725	0.0109
C(3)	0.162512	0.220166	-3.320156	0.0160
C(4)	0.078525	0.184605	3.194637	0.0187
C(5)	0.523781	1.367718	5.038009	0.0024
C(6)	0.090958	0.568758	0.159923	0.8782
C(7)	-0.456634	0.490162	-0.931600	0.3875
C(8)	0.027298	0.484100	0.056389	0.9569
C(9)	0.546233	0.405909	1.345703	0.2270
C(10)	2.819145	3.007330	0.937425	0.3847

Determinant residual covariance		1.48E-08

Equation: GDP = C(1)*GDP(-1) + C(2)*GDP(-2) + C(3)*R(-1) + C(4)*R(-2) +
    C(5)
Observations: 8

R-squared	0.965251	Mean dependent var	4.093992
Adjusted R-squared	0.931709	S.D. dependent var	0.023047
S.E. of regression	0.012420	Sum squared resid	0.000463
Durbin-Watson stat	3.306530		

Equation: R = C(6)*GDP(-1) + C(7)*GDP(-2) + C(8)*R(-1) + C(9)*R(-2) +
    C(10)
Observations: 8

R-squared	0.762451	Mean dependent var	3.143512
Adjusted R-squared	0.445720	S.D. dependent var	0.036681
S.E. of regression	0.027309	Sum squared resid	0.002237
Durbin-Watson stat	1.995997		

TABLE 7. WALT test for coefficients C (1), C (2)

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	11.87134	2	0.0026

Null Hypothesis: C(1)=C(2)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	0.234482	0.258668
C(2)	0.282518	0.229226

TABLE 8. WALT test for coefficients C (3), C (4)

Test Statistic	Value	df	Probability
Chi-square	19.02153	2	0.0001

Null Hypothesis: C(3)=C(4)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(3)	0.162512	0.220166
C(4)	0.078525	0.184605

TABLE 9. WALT test of equation (1)

Test Statistic	Value	df	Probability
Chi-square	869254.1	5	0.0000

Null Hypothesis: C(1)=C(2)=C(3)=C(4)=C(5)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	0.234482	0.258668
C(2)	0.282518	0.229226
C(3)	0.162512	0.222923
C(4)	0.078525	0.184605
C(5)	0.523781	1.367718

TABLE 10. Breusch-Pegan-Godfrey test of heteroskedasticity

```
Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic          1.853060   Prob. F(1,8)           0.2105
Obs*R-squared        1.880695   Prob. Chi-Square(1)    0.1703
Scaled explained SS  0.427490   Prob. Chi-Square(1)    0.5132
```

TABLE 11. Time period of receiving remittances and years in emigration

Years in emigration		Time period for receiving remittances	
4-5 years	45%	4-5 years	20%
>5 years	35%	>5 years	20%
1-3 years	15%	1-3 years	50%
<1 year	5%	<1 year	5%

TABLE 12. Source country where remittances come from

United Kingdom	40%	Greece	10%
Italy	25%	USA	10%

TABLE 13. How to receive remittances

OTP (Money Transfer Operators)	65%
Banks	10%
Personal Transport / Courier	15%