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The Role of External Resources in Kosovo's Economic Growth: An Econometric Analysis

Abstract



This study addresses the importance of external resources for Kosovo's economic development. Given that Kosovo lacks sufficient industrial infrastructure, the role of foreign direct investments, exports, and remittances in overcoming capital shortages is examined. In this context, an empirical analysis of the role of external resources in GDP per capita is conducted using quarterly data from the period between Q1 2012 and Q2 2024. In this study, which utilizes VAR analysis, GDP per capita, foreign direct investments, exports, and remittances are the key variables. The results of the tests indicate that remittances are the most significant determinant of GDP in Kosovo, while foreign direct investments and exports do not have a long-term impact on Kosovo's economic growth. Additionally, the study found that GDP is an important determinant of foreign direct investments, and that increasing remittances also boosts exports.

Keywords: Kosovo Economy, Foreign Direct Investment, Economic Growth, Remittances, Exports, VAR Analysis

1. Introduction

Before the dissolution of Yugoslavia, Kosovo was a less developed region compared to other Yugoslav republics, and as a result, it lacked the necessary factories, infrastructure, and other elements required for sufficient production growth. After Kosovo's de facto independence in 1999, it struggled to make investments for a long period due to both the destruction of the few existing facilities during the war and the lack of sufficient resources as a result of the conflict (Bartlett, 2009).

As a result of these circumstances, Kosovo's economy has still not reached the desired level. Considering Kosovo's current conditions, it is clear that the country needs capital stock in order to achieve the desired level of development. The most effective way to achieve this is through external resources. In this context, foreign direct investments and exports are crucial. Additionally, remittances, as a form of external resources, play a significant role, especially in the case of Kosovo (Rexhepi, 2023).

Remittances are considered a highly valuable external financing source, particularly for countries that do not have sufficient capital. Given that Kosovo is in a similar situation, the importance of remittances for Kosovo's economy is better understood (Prekazi, 2018).

When looking at the benefits of foreign direct investments for national economies, it can be said that these investments support infrastructure, provide employment, and increase exports through production growth. Exports are also an important development tool as they generate foreign currency inflows, which can provide resources for further investments.

Based on this, this study analyzes the effects of remittances, foreign direct investments, and exports on Kosovo's GDP from 2012 to 2024, as external resources. In the first part of the study, a literature review is conducted. In the subsequent section the changes in GDP per capita, exports, foreign direct investments, and remittances over the years are presented with the help of graphs, and the current situation is assessed. In the next stage, a VAR model is established, and the relationships between the variables are analyzed.

Finally, the findings obtained from the empirical analysis are evaluated. It was determined that remittances are the most important determinant of GDP per capita in Kosovo. The study also found that remittances have an effect on exports in Kosovo and that foreign direct investments are influenced by GDP per capita.

2. Literature Review

A significant portion of studies testing the impact of foreign direct investments on economic development in Kosovo has revealed a positive effect between variables. Islami, Mulolli, and Skenderi (2016) examined the relationship between foreign direct investments and economic growth in Kosovo. This study, covering the period between 2005 and 2014, conducted Pearson correlation analysis and found a positive correlation between foreign direct investments and GDP in Kosovo.

Kida (2017) analyzed the impact of domestic and foreign direct investments on economic growth in Kosovo using Pearson correlation and multiple OLS regression methods. In the results section of the study, it was found that foreign direct investments in the services sector had a positive effect on economic growth.

Zogaj and Avdimetaj (2018) used data from Kosovo for the years 2005 to 2016 in their study. In this study, which examined the relationship between foreign direct investments and economic growth in Kosovo, the pooled OLS method was used, and it was found that there was a positive relationship between foreign direct investments and economic growth.

Sahiti, Sahiti, and Zeqiri (2020) analyzed the determinants of foreign direct investments in Kosovo using OLS methods with data from 2005 to 2018. They concluded that there is a strong relationship between foreign direct investments and economic growth in Kosovo, noting that as growth rates increase, foreign direct investments in the country also rise.

Similarly, in studies on the relationship between exports and growth in Kosovo, a positive relationship between the variables is emphasized. Vardari (2015) tested the impact of exports and imports on the Kosovo economy between 2004 and 2014 using Granger causality analysis. The study found that exports were a determinant of economic growth in both the short and long run, and that there was bidirectional causality between growth and exports.

In his theoretical study, Aliu (2021) examined the effect of exports on Kosovo's economic development. The study concluded that exports had a positive and significant impact on the Kosovo economy.

Pukaj and Berisha (2022) used quarterly data from 2010 to 2021 in their study. Using a VAR model and conducting Granger causality analysis, they found that while there was no long-term relationship between the variables, there was bidirectional causality between exports and GDP in the short term.

Kukaj and Hameli (2022) examined the relationship between exports, imports, and economic growth in Kosovo from 2010 to 2021 using quarterly data and Johansen cointegration analysis. The study concluded that exports have an effect on economic growth.

Markaj and Haxhimustafa (2024) analyzed the factors determining economic growth in Kosovo between 2009 and 2022. Using a VAR model, their study reached the conclusion that, contrary to other studies, the increase in goods and services negatively affected economic growth.

Studies on the relationship between remittances and economic growth in Kosovo similarly highlight a positive relationship between the variables. Peci, Holzner, and Kutllavci (2010) worked within the framework of the Gravity Model to identify the factors affecting trade flows between Kosovo and its trading partner countries. The study concluded that remittances affected both exports and imports in Kosovo.

Govori and Fejzullahu (2020) analyzed the impact of external resources on Kosovo's economic growth. The study, which used foreign direct investments, remittances, exports, and external debt as variables and covered the period between 2012 and 2018, concluded that remittances were the most significant external resource contributing to GDP.

Gjikolli and Krasniqi (2021) conducted a study covering the years 2010 to 2020. Using the ANOVA model, they found that remittances were an important mechanism for Kosovo's economic growth.

Collaku and Merovci (2021) analyzed the impact of remittances on economic growth in the Western Balkans. Using the pooled least squares method, they found that for each 1% increase in remittances in the Western Balkans, GDP increased by an average of 0.12%.

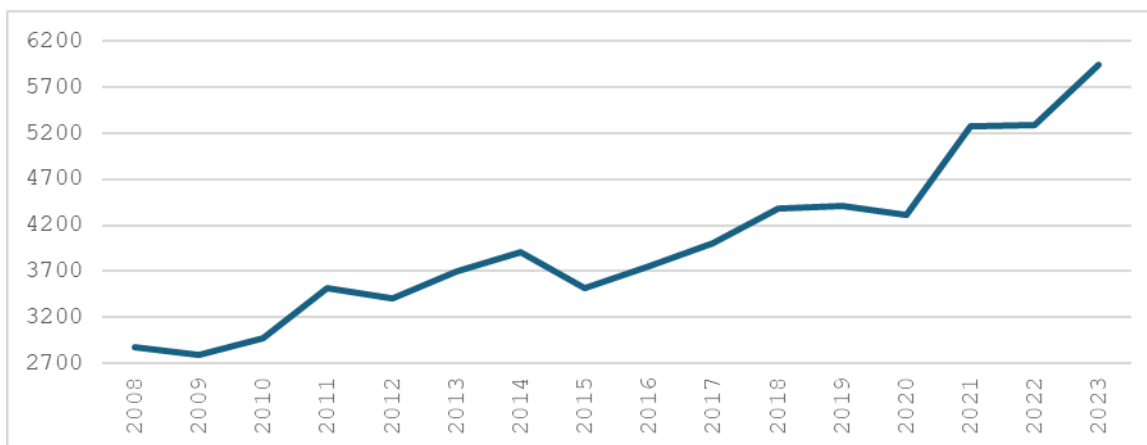
Berisha, Pukaj, and Sejdiija (2022) tested the impact of remittances on Kosovo's economic growth for the years 2010 to 2021 using the VAR model and Granger causality analysis. The results of the study showed bidirectional causality between remittances and growth in the short run.

Bellaqa, Skala, and Bellaqa (2023) used the ANOVA method in their study. In this study, the impact of remittances and foreign direct investments on the Kosovo economy was tested, and it was found that foreign direct investments and remittances are among the most important sources of socioeconomic development in Kosovo.

3. Trends in GDP Per Capita, Exports, Foreign Direct Investments, and Remittances in Kosovo Over the Years

Kosovo's economy has been behind the desired level due to both the lack of necessary investments during the Yugoslav era and the war that followed. However, over the years, it can be observed that the Kosovo economy has started to recover, and GDP per capita has increased. Graph 1 shows the change in GDP per capita over time in Kosovo.

Graph 1. GDP per capita in Kosovo (2008-2023, \$)

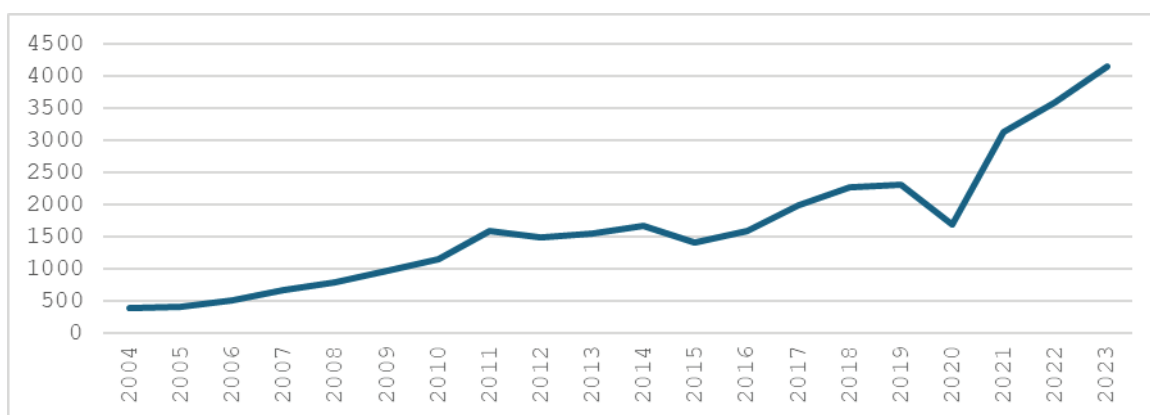


Source: (World Bank, 2024a)

In 2008, Kosovo's GDP per capita was \$2,873, but due to the impact of the 2009 global financial crisis, this figure dropped to \$2,790. However, as the effects of the crisis dissipated, Kosovo's GDP increased to \$3,524 in 2011 and \$3,902 in 2014. Although this figure fell back to \$3,520 in 2015, GDP showed a continuous increase until 2019, reaching \$4,416. Due to the negative impact of the COVID-19 pandemic, GDP decreased to \$4,310 in 2020, but after this, it started to rise again, and by 2023, Kosovo's GDP per capita had increased to \$5,943. In this regard, it can be said that Kosovo's GDP per capita has generally shown a stable increase. Indeed, from 2008 to 2023, the GDP per capita decreased only four times, and during this 15-year period, GDP increased by 2.06 times.

Looking at the situation of exports in Kosovo, a growth trend is also visible here. However, despite this increase, Kosovo's export figures are still far from the desired level. Graph 2 shows the value of goods and services exported by Kosovo between 2004 and 2023.

Graph 2. Export in Kosovo (2008-2023, \$)



Source: (World Bank, 2024b)

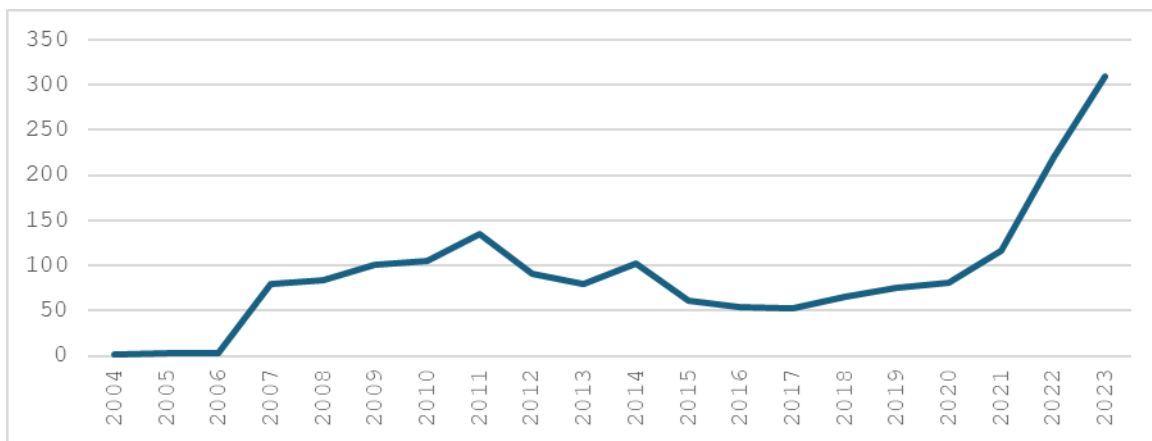
In 2004, Kosovo's exports of goods and services amounted to \$385 million, but this figure rose to \$1.59 billion in 2011. From 2011 to 2016, the export figures fluctuated but did not change significantly. However, in 2017 and 2018, exports experienced growth, reaching \$1.98 billion and \$2.27 billion, respectively. In 2020, there was a decline in exports, with Kosovo's total goods and services exports dropping to \$1.68 billion that year. Nevertheless, in the following three years, exports continuously increased, reaching \$4.15 billion in 2023.

At this point, it is clear that exports have significantly increased over the years. However, when comparing this figure with the export numbers of neighboring countries, it becomes apparent how low it still is. In 2023, Albania's total exports of goods and services amounted to \$9.18 billion and North Macedonia's to

\$10.75 billion.

A promising aspect for Kosovo's exports is that, especially in recent years, Kosovo has significantly increased its exports in the field of information and communication technology services. Graph 3 shows the export quantities of Kosovo's information and communication technology services.

Graph 3. Kosovo's Information and Communication Technology Services (ICT) Exports (2004-2023, \$)



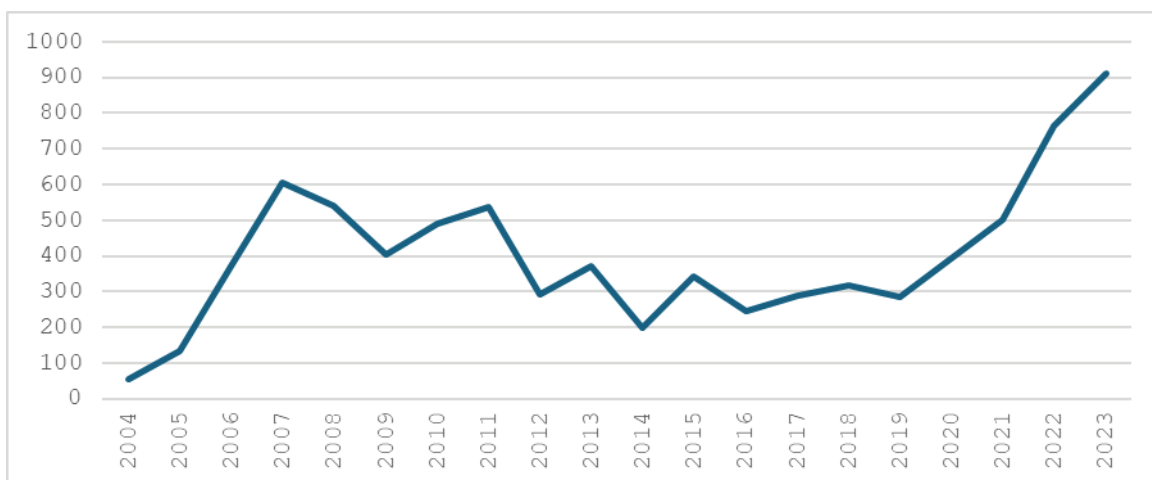
Source: (World Bank, 2024c)

In 2004, Kosovo exported only \$1.7 million worth of Information and Communication Technology (ICT) services, but this figure increased to \$79.9 million in 2007 and reached \$134.9 million in 2011. After 2011, however, this figure began to decline, dropping to \$53 million in 2017. However, after this year, Kosovo's ICT services exports started to rise rapidly, reaching \$309 million by 2023. In this sense, Kosovo's ICT services exports have increased by 179 times from 2004 to 2023.

Given the increasing global demand for information and communication technologies, if the developments in this sector continue, Kosovo's economy will inevitably be significantly impacted in a positive way. In conclusion, when evaluating Kosovo's exports, it can be said that positive developments have occurred, but the desired level has not yet been reached.

Another key factor in economic growth, direct foreign investments, has shown an increase in Kosovo over the years, although this increase remains insufficient. Graph 4 illustrates the changes in direct foreign investments in Kosovo over the years.

Graph 4. Foreign Direct Investments in Kosovo (2004-2023, \$)



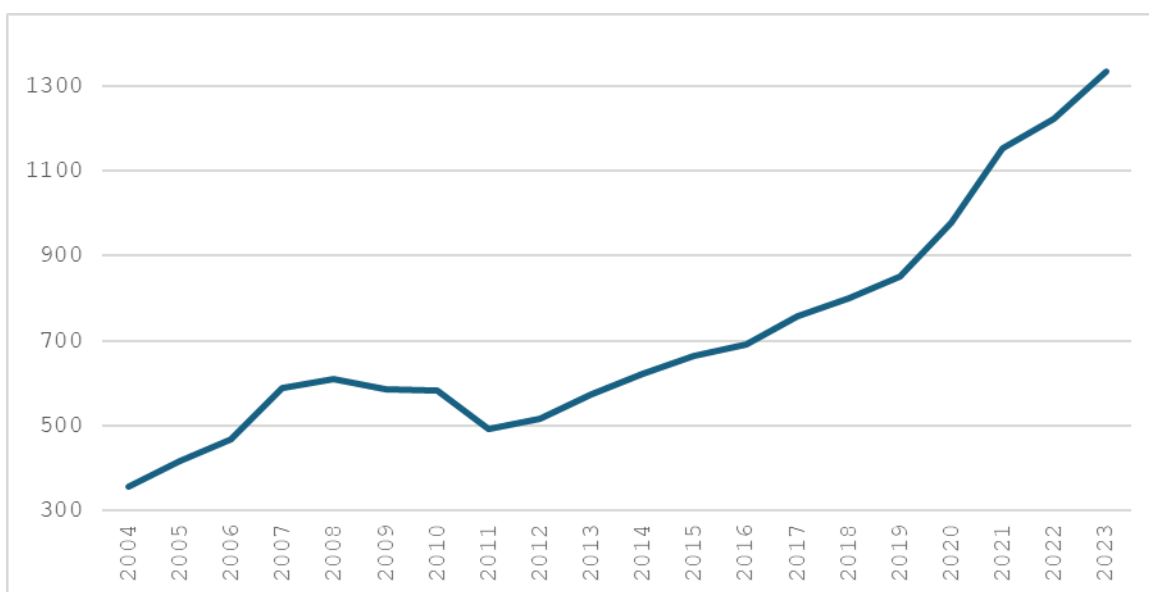
Source: (World Bank, 2024c)

In 2004, foreign direct investments in Kosovo amounted to \$53.3 million, and by 2007, this figure had risen to \$604 million. However, foreign direct investments followed a fluctuating trend until 2019, decreasing to \$285 million. After 2019, FDI in Kosovo began to increase, reaching \$913 million by 2023. In this sense, although FDI have risen in recent years, it is clear that there has not been a consistent upward trend in the foreign direct investments. Moreover, it can be said that the current level of foreign direct investments remains low (Sejdiu, 2024).

Foreign direct investments in Kosovo are largely concentrated in the real estate, leasing, and business sectors. Following these, other notable sectors include financial services, industry, construction, transportation, and communications (Sahiti, Ahmeti, & Sahiti, 2020).

Another important source for Kosovo's economy, remittances, has also shown an increasing trend over the years. Graph 5 illustrates the changes in remittances in Kosovo over the years.

Graph 5. Remittances in Kosovo (2004-2023, €)



Source: (Central Bank of the Republic of Kosovo, 2024)

It can be said that remittances have steadily increased over the years, particularly after 2011. In fact, remittances, which were €492 million in 2011, reached €690 million in 2016, €979 million in 2020, and finally €1.3 billion in 2023. However, the economic development achieved through remittances is not sustainable. For sustainable development, it is necessary to create production-based resources.

In conclusion, GDP per capita and exports in Kosovo show an upward trend. However, despite this growth, the current levels of GDP and exports are still not at the desired level. Direct foreign investments in Kosovo are also not at the desired level, and increases in this area have not occurred steadily. Remittances, on the other hand, have shown a consistent increase.

4. Economic Methods and Data

The relationship between the series in the study was examined within the framework of the VAR model. The VAR model is a commonly used method in macroeconomic variables. In this method, future predictions are made by examining the past periods of the variables (Sims, 1980).

A VAR model with variables Y_t and Y_{2t} is as follows:

$$Y_t = \theta_{1t} + \sum_{i=1}^p a_{11i} + \sum_{i=1}^p a_{12i} + Y_{2t-1} + u_{1t}$$

$$Y_{2t} = \theta_{2t} + \sum_{i=1}^p a_{21i} Y_{1t-i} + \sum_{i=1}^p a_{22i} + Y_{2t-i} + u_{2t}$$

In the model, u represents the error term, p denotes the lag value, and θ is the constant term.

The advantages of the VAR model are: it can be used for non-theoretical models as well. By treating all the variables in the model as endogenous, it allows for better prediction results. In the VAR model, Ordinary Least Squares (OLS) is applied separately to each variable for each equation. Therefore, compared to other simultaneous equations, the VAR model is considered superior in terms of operational simplicity.

The disadvantages of the VAR model are: the series must be made stationary to be used in the VAR model. In the process of making non-stationary series suitable for the model, some data may be lost. Besides this to obtain accurate results, it is essential to correctly select the variables. Otherwise, misleading results can occur (Gottschalk, 2001).

3.1. Data

This study uses quarterly data from the period between Q1 2012 and Q2 2024 for Kosovo. The data on GDP per capita and exports were obtained from the Kosovo Agency of Statistics, while the data on foreign direct investments and remittance inflows were sourced from the Central Bank of the Republic of Kosovo. A total of 58 quarterly time series from Q1 2012 to Q2 2024 were analyzed. The variables are presented in Table 1.

Table 1. Variables

| Variables | Abbreviation | Source |
|----------------------------|--------------|--|
| GDP Per Capita | gdp | Kosovo Agency of Statistics |
| Export | ex | Kosovo Agency of Statistics |
| Foreign Direct Investments | edi | Central Bank of the Republic of Kosovo |
| Remittances inflows | Ren | Central Bank of the Republic of Kosovo |

Before conducting the VAR analysis with the variables, the logarithms of all series were taken in this study to standardize the units and reduce variance. Since quarterly data was used, the logarithmic series were also seasonally adjusted. Below, Figure 1 shows the logarithmic graphs of the series, and Figure 2 shows the seasonally adjusted graphs.

Figure 1: Graphs of the Logarithmic Series

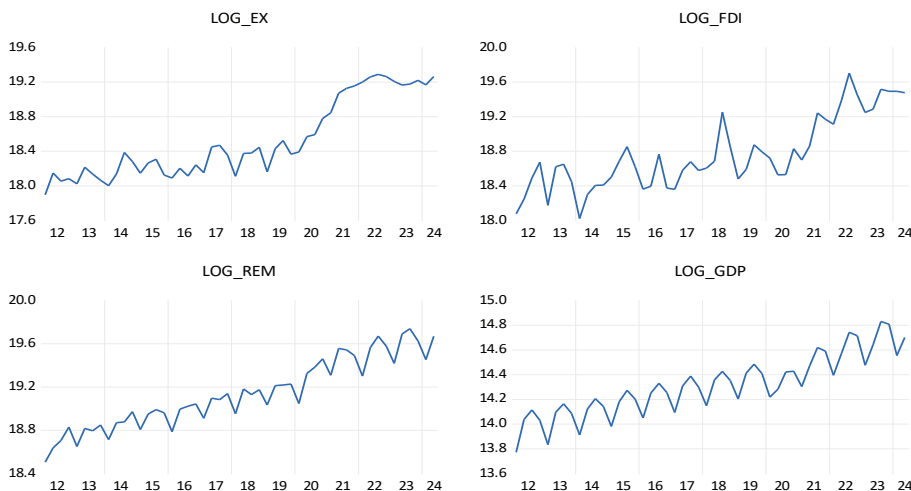
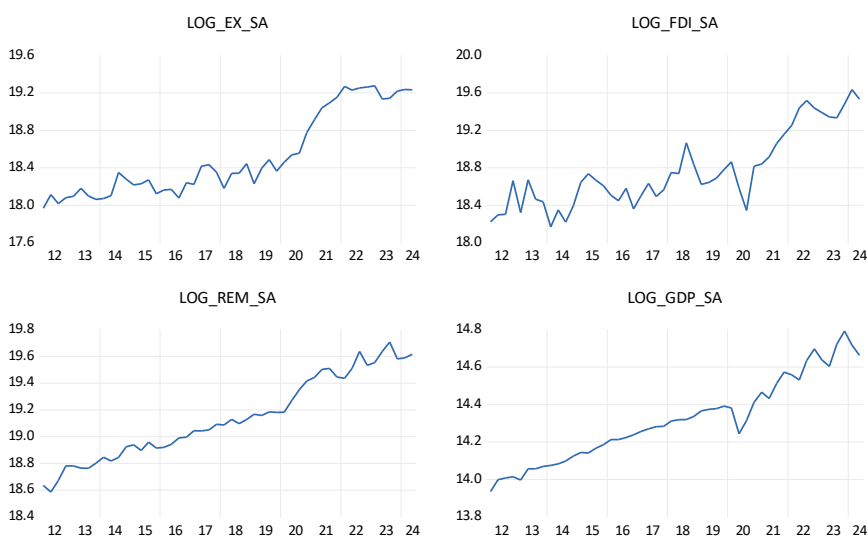


Figure 2: Seasonally Adjusted Series Graphs



Then, to test the stationarity of the series, ADF (Augmented Dickey-Fuller Test), PP (Phillips-Perron Test) and KPSS (Kwiatkowski-Phillips-Schmidt-Shin Test) tests were applied to the series. Table 2 shows the unit root test results of the level and first differences of the series.

Table 2: Unit Root Tests

| | ADF | | PP | | KPSS | |
|-----------|--------------|--------------------|--------------|--------------------|-------------|--------------------|
| | Constant | Constant and Trend | Constant | Constant and Trend | Constant | Constant and Trend |
| Log_gdp | 0.634128 | -1.460949 | -0.724043 | -3.373921* | 452.3980 | 29.63206 |
| Log_fdi | -1.275290 | -3.107890 | -1.005002 | -3.020113 | 329.3810 | 11.48156 |
| Log_ex | -0.467565 | -2.012148 | -0.354814 | -1.906952 | 295.2887 | 15.21041 |
| Log_rem | -0.659761 | -3.360066* | -0.597017 | -3.257828* | 437.6662 | 37.66069 |
| Log_d_gdp | -3.715132 | -3.815162** | -9.970580*** | -9.697539*** | 2.281563** | -0.191218*** |
| Log_d_fdi | -5.482714*** | -3.904140** | -9.770801*** | -9.985826*** | 1.050783*** | 0.313849*** |
| Log_d_ex | -8.375182*** | -8.382981*** | -8.375182*** | -8.382981*** | 1.762644** | 0.401640*** |
| Log_d_rem | -7.526928*** | -7.454131*** | -11.47324*** | -9.962787*** | 2.766638 | -0.158452*** |

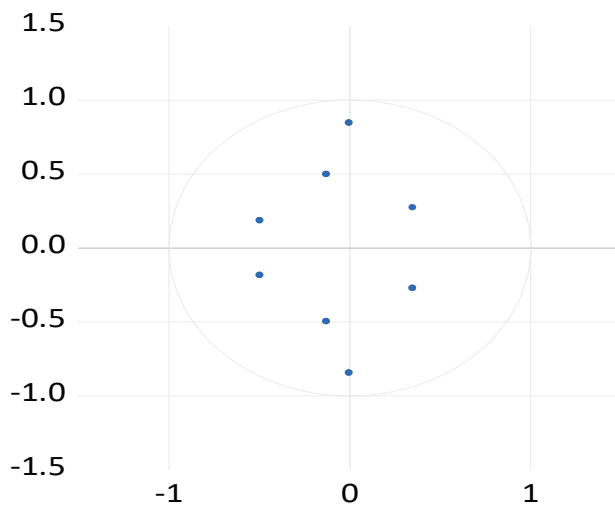
* 1% significance ** 5% significance *** 10% significance

According to the results, all series are found to have a unit root at level based on the ADF, PP, and KPSS tests. However, the GDP variable is stationary at the 10% level according to the PP test in the case of the constant and trend. Despite this, considering the results of the other tests, all series are accepted as having a unit root at level. In order to apply the VAR model, the series need to be stationary. Therefore, in this study, first differences of all series were taken, and unit root tests were applied, confirming that the series became stationary (Table 3).

In this study, once the series were made stationary, the VAR model was constructed using their first differences. After establishing the VAR model, the appropriate lag length was determined based on the Akaike Information Criterion (AIC), and the lag length was found to be 2. Subsequently, the characteristic polynomial root test, autocorrelation, and heteroscedasticity tests were conducted on the model. The

results of the polynomial root test applied to the model are shown in Figure 3.

Figure 3: Polynomial root test



According to this, all points lie within the circle. Therefore, it can be concluded that the model established is stationary and stable. To test for the presence of autocorrelation in the model, the LM autocorrelation test was conducted. The results of this test are shown in Table 3.

Table 3: LM Autocorrelation Test

| Number of Lags | LM statistics | Prob. |
|----------------|---------------|--------|
| 1 | 16.12795 | 0.4468 |
| 2 | 13.01469 | 0.6738 |
| 3 | 9.698112 | 0.8829 |
| 4 | 18.19451 | 0.3153 |
| 5 | 9.067525 | 0.9113 |

In the LM autocorrelation test, the null hypothesis (H_0) states that there is no autocorrelation in the model. As a result of the test, the p-value for all lags was found to be greater than 0.05. Therefore, the null hypothesis cannot be rejected. This indicates that there is no autocorrelation in the model. To test for Heteroskedastisite in the model, the White test was used. The results of the test are shown in Table 4.

Table 4: White Heteroskedastisite Test

| Chi Square | d.f. | Prob. |
|------------|------|--------|
| 226.4534 | 210 | 0.2075 |

The null hypothesis (H_0) of the White test states that the variance of the error term is constant, while the alternative hypothesis (H_1) suggests that the variance of the error term is not constant. In the result of the test conducted on the model, the p-value was found to be 0.2075, which means the null hypothesis cannot be rejected. Therefore, the variance of the error term in the model is constant, and there is no heteroscedasticity problem.

As a result of the tests conducted, the model is stable. There is no autocorrelation or heteroscedasticity problem in the model. Therefore, the model estimation phase can proceed.

In order to apply the VAR model, the variables must be ordered from exogenous to endogenous. In this study, the variables were ordered from exogenous to endogenous as follows: remittances, foreign direct

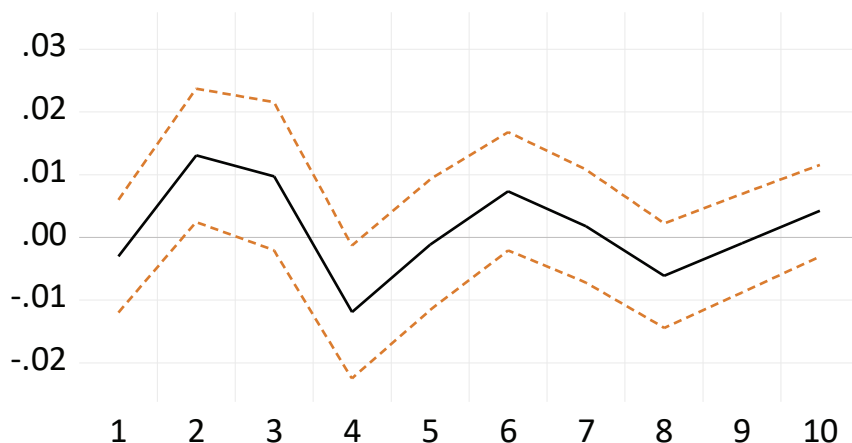
investments, exports, and GDP per capita.

According to this, the variable expected to be most affected by the other variables in the model is GDP per capita, while the variable least affected by the others is remittances.

3.2. Results of the VAR model predictions First bullet;

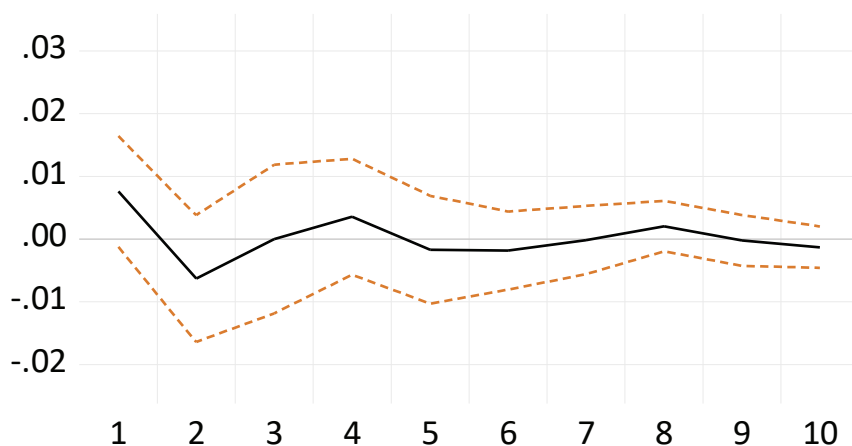
The results of the impulse-response analyses performed on the model are shown in Figures 4, 5 and 6.

Figure 4. Impulse-Response Analyses (Response of GDP to Remittances)



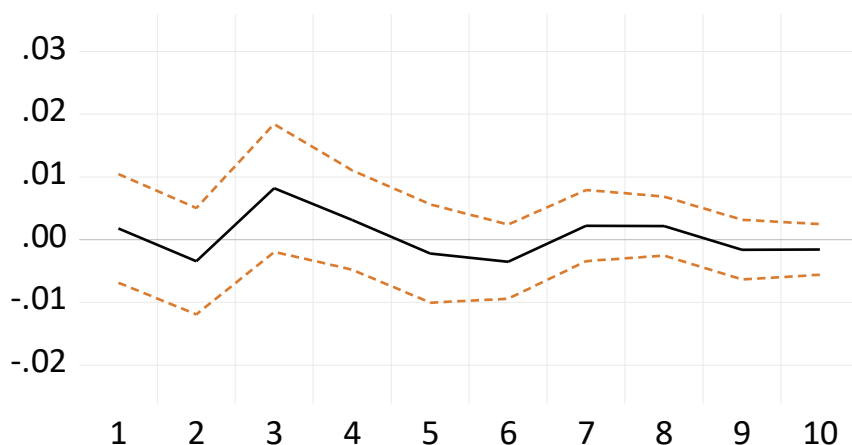
A shock in remittances initially has a negative effect on GDP per capita. However, this negative impact disappears quickly, and the effect remains positive until the third period. In the fourth period, the effect turns negative again, but it becomes positive once more in the fifth period. In the following periods, the direction of the effect alternates between positive and negative over time. However, by the end of the ninth period, the effect shows a positive trend. In this sense, shocks in remittances have a long-term positive impact on GDP per capita.

Figure 5. Impulse-Response Analyses (Response of GDP to Foreign Direct Investments)



Shocks in foreign direct investments have a positive effect on GDP per capita in the first period. However, this effect disappears after the first period and turns negative. In the third period, a positive effect reappears and stabilizes. In this sense, shocks in foreign direct investments only have an impact on GDP per capita in the short term. There is no such effect in the medium and long term.

Figure 6. Impulse-Response Analyses (Response of GDP to Export)



Shocks in the export variable are particularly influential on GDP per capita in the third period. However, this effect disappears in the fourth period and stabilizes, eventually fading in the long term.

In this sense, the impact of these three variables on GDP per capita continues in the long term only for the remittances variable. The effects of export and foreign direct investments on GDP per capita are only observed in the short term.

At this point, it is necessary to evaluate the relationship between the variables by considering the results of variance decomposition. Table 5 shows the responses of GDP per capita to shocks in the variables.

Table 5. Variance Decomposition (GDP)

| Period | GDP | Export | FDI | Remittance |
|--------|----------|----------|----------|------------|
| 1 | 92.66183 | 0.330111 | 6.065004 | 0.943058 |
| 2 | 75.35383 | 1.274276 | 8.206172 | 15.16572 |
| 3 | 71.77525 | 5.131955 | 6.043722 | 17.04907 |
| 4 | 65.60645 | 5.144240 | 6.119394 | 23.12991 |
| 5 | 67.31177 | 5.075661 | 5.883772 | 21.72880 |
| 6 | 65.05536 | 5.501106 | 5.829605 | 23.61393 |
| 7 | 65.62630 | 5.590308 | 5.668731 | 23.11466 |
| 8 | 64.25164 | 5.676403 | 5.732587 | 24.33937 |
| 9 | 64.57967 | 5.719318 | 5.655868 | 24.04514 |
| 10 | 63.95273 | 5.767627 | 5.671604 | 24.60804 |

In the first period, 92.66% of the changes in GDP per capita come from changes in GDP itself. Of these changes, 6.06% originate from foreign direct investments, 0.33% from exports, and 0.94% from remittances. In the second period, the share of remittances in the change of GDP reaches 15.16%, the share of foreign direct investments is 8.20%, and the share of exports is 1.27%. In the following periods, the effects of exports and foreign direct investments on GDP per capita change disappear. The effect of remittances continues until the fourth period, reaching 23.12% in the fourth period. By the tenth period, it is concluded that 63.95% of the changes in GDP come from GDP itself, 24.6% from remittances,

5.67% from foreign direct investments, and 5.76% from exports. In this sense, it can be understood that remittances are the most significant factor determining GDP per capita in the long term.

Table 6. Variance Decomposition (Export)

| Period | Export | GDP | FDI | Remittance |
|--------|----------|----------|----------|------------|
| 1 | 91.53955 | 0.000000 | 0.091815 | 8.368633 |
| 2 | 89.20035 | 0.083358 | 1.985581 | 8.730713 |
| 3 | 61.35524 | 0.694206 | 7.951648 | 29.99890 |
| 4 | 58.62710 | 4.276593 | 7.897312 | 29.19899 |
| 5 | 58.00401 | 4.311688 | 7.770898 | 29.91340 |
| 6 | 57.33331 | 5.492727 | 7.673830 | 29.50013 |
| 7 | 56.70129 | 5.509714 | 7.730471 | 30.05852 |
| 8 | 56.34821 | 6.147982 | 7.679197 | 29.82462 |
| 9 | 56.05741 | 6.142184 | 7.679132 | 30.12127 |
| 10 | 55.87211 | 6.475617 | 7.650426 | 30.00185 |

In the first period, 91.53% of the changes in exports are due to changes within exports themselves. During this period, there is no effect from GDP or foreign direct investments. The effect of remittances is 8.36%. In the second period, the effect of foreign direct investments begins to emerge. However, GDP is still insufficient to explain changes in exports during this period. In the third period, the explanatory power of remittances for changes in exports reaches 29.99%. During this period, the share of foreign direct investments is 7.95%, and the share of GDP is 0.69%. The explanatory power of GDP for changes in exports only starts to emerge in the fourth period, with a share of 4.27%. By the tenth period, it is concluded that 55.87% of the changes in exports come from exports themselves, 6.47% from GDP, 7.65% from foreign direct investments, and 30% from remittances.

In this sense, it can be said that remittances increase exports in the long run in Kosovo. This situation can be interpreted as a result of some of the remittances being used as a resource in production, which in turn increases exports. The effect of foreign direct investments on exports remains low. This is due to the fact that foreign direct investments in Kosovo are not export-oriented.

Table 7. Variance Decomposition (FDI)

| Period | FDI | GDP | Export | Remittance |
|--------|----------|----------|----------|------------|
| 1 | 99.86284 | 0.000000 | 0.000000 | 0.137162 |
| 2 | 90.90878 | 7.714362 | 0.375114 | 1.001742 |
| 3 | 85.81244 | 7.496885 | 3.845138 | 2.845539 |
| 4 | 83.88639 | 9.468857 | 3.784813 | 2.859937 |
| 5 | 83.62499 | 9.456175 | 3.968223 | 2.950607 |
| 6 | 83.23707 | 9.520374 | 4.031203 | 3.211355 |
| 7 | 83.05550 | 9.499582 | 4.023723 | 3.421192 |
| 8 | 82.98085 | 9.579147 | 4.021219 | 3.418786 |
| 9 | 82.93379 | 9.574344 | 4.025736 | 3.466134 |
| 10 | 82.89680 | 9.609197 | 4.028318 | 3.465681 |

In the first period, 99.86% of the changes in foreign direct investments are due to changes within foreign direct investments themselves. During this period, there is no effect from other variables. In the second period, only the effect of GDP begins to emerge, accounting for 7.71%. By the third period, the share of GDP is 7.49%, exports account for 3.84%, and remittances contribute 2.84%. By the tenth period, it is concluded that 82.89% of the changes in foreign direct investments are due to changes within foreign direct investments themselves. During this period, the explanatory power for GDP is 9.6%, for exports is 4.02%, and for remittances is 3.46%. In this sense, foreign direct investments in Kosovo are influenced by GDP in the long run. Exports and remittances do not have an effect on foreign direct investments.

Table 8. Variance Decomposition (Remittance)

| Period | Remittance | GDP | Export | FDI |
|--------|------------|----------|----------|----------|
| 1 | 100.0000 | 0.000000 | 0.000000 | 0.000000 |
| 2 | 91.66756 | 6.666147 | 0.671883 | 0.994413 |
| 3 | 88.66732 | 6.277344 | 3.887297 | 1.168037 |
| 4 | 84.40602 | 9.202642 | 5.205077 | 1.186259 |
| 5 | 84.03214 | 8.881235 | 5.117971 | 1.968652 |
| 6 | 81.61511 | 11.14114 | 5.259497 | 1.984254 |
| 7 | 81.63541 | 10.97848 | 5.316723 | 2.069386 |
| 8 | 80.46147 | 12.07269 | 5.421277 | 2.044563 |
| 9 | 80.48000 | 11.97293 | 5.438436 | 2.108628 |
| 10 | 79.89085 | 12.52043 | 5.488961 | 2.099764 |

In the first period, all changes in remittances are due to changes within remittances themselves. The effect of GDP emerges in the second period at 6.66%. The effect of exports balances out in the fourth period, reaching 5.20%. The effect of foreign direct investments remains low throughout all periods. As a result, remittances are influenced by changes in GDP. This suggests that when the economy is doing well in Kosovo, remittances tend to change. It can be concluded that as income increases in Kosovo, the rate of increase in remittances decreases.

4. Conclusion

In this study, the impact of external financial resources on Kosovo's GDP was analyzed, based on the premise that Kosovo lacks sufficient capital accumulation. The first section of the analysis assessed the changes over time in Kosovo's GDP per capita, exports, foreign direct investments (FDI), and remittances, highlighting that although exports and GDP have shown considerable growth over the years, they remain below desired levels. Additionally, FDI in Kosovo was noted to be relatively low.

In the second part of the study, a literature review was conducted. In the third section, a VAR autoregressive model was constructed to examine the relationship between GDP per capita, exports, foreign direct investment, and remittances in Kosovo over the period from the first quarter of 2012 to the second quarter of 2024.

The findings of this study reveal that remittances are the most influential factor affecting GDP in Kosovo. Unlike previous studies, this research concludes that foreign direct investment and exports have limited impact on Kosovo's GDP. This result may be attributed to the relatively low volume of exports and foreign direct investment, which do not generate significant added value.

Another key finding is that remittances have a positive effect on Kosovo's exports, possibly due to a portion of remittances being directed toward production, thus boosting exports. Additionally, the study indicates a negative relationship between remittances and GDP in Kosovo, suggesting that as Kosovo's GDP increases, the need for remittances among its citizens declines. The study also concludes that GDP is a significant determinant of foreign direct investment.

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