IMPACT OF FINANCIAL LIBERALIZATION ON EXPORT: EVIDENCE FROM KOSOVO

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Abstract: The current study observes the link between export levels, GDP growth, gross savings, lending interest rates, and real interest rates. This study's evaluation approach combines an Ordinary Least Squares (OLS), and Arrellano-Bover/Blundell-Bond estimation to observe the connection among export level, GDP growth, gross savings, lending interest rates, and real interest rate as a component of financial liberalization in the case of Kosovo over 12 years from 2009 to 2020. The findings reveal that GDP growth and lending interest rates have a positive impact on the level of export growth. However, as a component of financial liberalization, real interest rates have a negative impact on the level of exports. Whereas econometric analyses revealed that gross savings were insignificant. The negative relationship between the real interest rate and the level of exports represents that real interest rates restricted the financial possibility for businesses to maximize the level of exports throughout the research period. Due to the limited number of observations, this study is limited to analyzing the long-term correlations between the factors that characterize financial liberalization and export progress in the context of Kosovo. To meet the objective of growing exports, policymakers must design policies to enhance the financial system and invest in infrastructure development to encourage the business sector that exports its products or services.

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1. Introduction

There is no empirical evidence for causal connections between financial liberalization (FL) indicators with export in the country. Still, export needs incentives starting from financial liberalization, which allow businesses in better finance access conditions and is a strong direct impact on producers and service providers as the main actor in export. However, this study claims a link between GDP growth, gross savings, loan interest rates, as well as real interest rates as very particular categories of FL and export that is a direct impact on national economic growth.

"Exports mark the core sector, which trades outside its borders, produces cash flows in the country's economy and provides the impetus for continued economic development" (Solow, 2016). This definition describes the "export base" hypothesis that to stimulate economic progress it should be stretched to financial facilities in the domestic market and investment in businesses traders in foreign markets. Export means the transportation of goods or materials from one country to another legitimately according to the rules and standards of states. The exports of goods are done to the consumers in another country by the producer of those goods mediators. For manufacturers of products and service providers, to be able to export they must be competitive in the external target marketplace. In addition to other facilities that the state provides to producers of products and service providers, the key factor is also the financial opportunities provided by financial liberalization. Exporting commodities is not only the foundation of any large and successful firm, but it also helps national economies grow and expand. Every country is endowed with a unique set of resources. Simultaneously time, another country's economy may lack other resources to expand and improve. Certain economies have highly developed banking systems or infrastructure, while others do not have the required level. Kosovo has made many advances in the banking system and its offers are oriented to the demands of businesses, nevertheless, there is still room for improvement. A problem is a high-risk consideration.

Interest rate defines the cost of credit in an economy. More specifically, it is the yearly price charged by a lender to a borrower to obtain a loan. According to economic theory, the base rate was set by the banks to determine the interest rate by the authority of the Central Bank of Kosovo. The interest rate environment is important in the performance and returns of any given investment. The bank rate has a compelling bearing on the performance of any sector. Following interest rate liberalization, interest rates have fluctuated to respond to changes in demand and supply of loanable funds in the financial market. This study, consequently, seeks to fill the knowledge gap that currently exists. It established the effect of lending interest rate on economic growth impacted by export as a direct indicator.

To argue the fact that lending interest rate and real interest rate both from the data provided and processed by the econometric context, divergent movement is found between these two variables and exports. During 2015, lending interest rates decreased to 8.32 percent, and exports amounted to 325 million euros; while in 2020, lending interest rates reduced to 6.35 percent, and exports amounted to 475 million euros. The study comprises organized data known as time series, which covers the years 2009–2020, to recognize and eliminate dilemmas in the econometric aspect. Moreover, the study incorporates specific research questions that differentiate apart from prior researchers and provide uniqueness in the context of Kosovo. As a result, the research questions are as follows:

(RQ1): What are the advantages of financial liberalization, and how does it promote exports?

(RQ2): How essential are GDP growth and gross savings, and how do they affect export promotion? and

(RQ3): Is there a causal link between lending interest rate, real interest rate, and export.

The study contributes in numerous ways, including expanding the literature to explore the interconnections between the components of FL and export for students, researchers, academics, and policymakers. Second, the contribution and presentation of original evidence in econometric terms in the Kosovo scenario, employing time series through the OLS technique and the GMM evaluation. Third, the variables used in the Kosovo context are thought to be unique to the research. Lastly, from a policy standpoint, the assessment will help policymakers modify fiscal and financial industry policies with the sole goal of generating even more favorable conditions for export growth. The article's structure is designed, with the first section bringing the introduction, the second section reviewing the literature and hypotheses, the third section presenting the methodology, data analysis, and specification of the empirical approach, the fourth section discussing the findings, and the fifth section conclusions and policymaking implications.

2. Theoretical review and development of hypotheses

The financial industry's evolution is essential to the productivity of every economy meanwhile it influences economic progress, exports, and investments. Contemporary debates over the role of finance in economic progress, as well as the improvement of additional variables such as exports and imports, are based on various perspectives. The supply-leading growth school of thought regards financial intermediaries as a strategic economic accelerator that enables the effective transfer of funds from savers to investors via market-based rates without direct government involvement (Levine, 2005), and (Levine and Zervos, 1998). Various research perspectives and analyses on the linkages between financial deepening and growth

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demonstrate that properly performing the financial sector supports faster growth eventually. They emphasize the impetus for monetary services division liberalization to boost prudence, the creation of financial investment potential in the manufacturing progression, an extension in exports, and economic progress as a whole. The preceding arguments directly contradict Keynes, (1936) concept, which proposed that the terms investment opportunities and savings are negatively associated significantly with interest rates, indicating progress in interest rates and expressing an impact on inflation, economic progress, and various parameters like exports, and others.

Actual research on financial liberalization (FL) portrays it as a coin with two sides: one side observes the positive correlation relating to FL besides economic progress and the other economic factors supported by Chang and Mendy, (2012) and, Özdemir, (2014). A group of researchers, on the other hand, investigated whether FL is the reason for financial fragility and the formation of banking crises in most countries. Ahmed (2013), Rachdi et al. (2018), and Bilgili et al., (2021) were some authors who support this point of view. However, achieving financial expansion and integration requires long-term liberalization policies that can mitigate the risks of credit booms and volatile capital flows. Countries with inadequate policies and institutions overcome exposure to the hazards of capital inflows and therefore must prioritize the creation of robust institutions (Prasad and Rajan, 2008). Many findings from earlier revisions claim a nonlinear linkage of finance and growth can be attributed to excessive financialization and financial industry deregulation (Gafeo and Garalova, 2014).

Global commerce possibly represents an essential contribution to economic progress by allowing every economy to concentrate on making commodities where it has a competitive edge and therefore by exporting commodities among economies (Belloumi and Alshehry, 2020). Empirical revisions were performed in several states, which have investigated the effect of global trade on their economic performance and progress. Most of the examinations used accurate or econometric approaches and found that global trade had a positive influence on GDP. Different investigations have reported specified factors for analyzing the consequence of global trade on GDP expansion (Simanova et al., 2021).

2.1 Empirical evidence and research hypotheses

This section will explicitly examine the empirical investigations performed so far, with a special emphasis on the variables used in this revision, as well as creating a bridge crosswise the research questions presented and the responses with the validation or rejecting of hypotheses. Researchers were and still are concerned with the evaluation of macroeconomic indicators. Numerous studies that have explored the association between economic growth and exports were steered, and it has been

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emphasized that there is no agreement among researchers. Generally, three groups dominate that justify their conclusions using various econometric methodologies and techniques. The first group supports and promotes the concept that GDP growth and exports are positively related. Beşer and Kiliç, (2017) used causality analysis to study the association of GDP and exports in five [5] middle eastern economies (Turkey, Israel, Iran, Egypt, and Russia). Their findings using the Fisher Causality test reveal that there is a positive association relating GDP growth and exports. Furthermore, Mora and Olabisi, (2022) research on export and its interconnection with economic growth provides a creative approach that elaborates on the relation between two parameters. They conclude that there is a positive link between these two variables, with the strength of interaction depending on the level of income. And, from the perspective of European Union member states (including 30 of this union's members)?, Nikolaos and Stamatiou (2016) evaluated the interaction with trade opening (exports and imports) using yearly data from 1995 to 2013. Their results employing Ganger Causality with data panel demonstrated a positive association between these two factors. Jannat et al. (2020) reached the same conclusion by using bivariate analysis that there is an important association with gross national revenue, export, import, external investment, and GDP growth. The second group, which advocates that there is no important connection among these variables, has very little research. Authors Bakari and Mabrouki (2018) examine the Turkish economy using the Johansen cointegration test of the Vector Auto Regression Model, concluding that there is no connection with exports, imports, and GDP. And the third group, which defends the concept that there is an adverse connection relating economic growth and exports, was confirmed by Durguti et al., (2020), who suggest that economic growth has a negative association with exports in Western Balkan economies. Similarly, Bakari et al. (2018) obtained the same outcome while examining the Tunisian economy using the modeling approach Vector Error Correction Model and the Granger-Causality tests, claiming that there is a negative link relating GDP and individual exports. As a consequence, our research hypothesizes the following based on these arguments:

H1: There is a significant negative association between GDP growth and export.

Gross savings-to-GDP is seen as an essential parameter and can influence exports, and hence economic growth. There is a deficit of empirical evidence for this measure. Author Misztal (2011) discovered no significant link among these indicators after examining developed countries, emerging countries, and countries in transition. As previously stated, most scholars examined this variable in the context of economic growth, and finally, we have an analysis that evaluates the causal association among savings, economic growth, and the question of reserve funds. Karahan (2018) concludes in his analysis that some data implies a connection between the two parameters, while opinions on their significance are extremely

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controversial. As a consequence, our hypothesis is presented based on this perspective.

H2: There is an insignificant association between gross savings-to-GDP growth and export.

Many researchers around the world had already treated the explanatory variables lending interest rate as one of the two components of financial liberalization in the investigation that used different approaches and models, and it is worth noting that there is no agreement in this part on what impact lending interest rate has on exports. As a result, Peitrovito and Pozzolo (2021) investigated the connection between interest rate constraints and exports using a large and heterogeneous sample of small and medium-sized enterprises from 65 developing and emerging economies. This study's findings provide solid evidence for a substantial negative relationship between the two variables. Nevertheless, an opposing perspective was been highlighted by Pu et al., (2015), who argue that countries that have perfectly developed the financial sector lending interest rate have a beneficial influence on exports. Valentinka et al. (2020) came to the same conclusion using the dynamic technique via VECM and Granger Causality, and a positive relationship among these parameters is argued at a level of significance of 5%. In this scenario, the hypothesis is as follows:

H3: There is a significant positive association between lending interest rate and export.

Another important indicator of financial liberalization is the real interest rate, on which many studies have been undertaken to determine the degree of influence on economic growth, exports, and other macroeconomic factors. Yarmukhamedov (2007) used the EGARCH model to examine the impact of the real exchange rate on exports of the Swedish economy from 1993 to 2006. According to the study's findings, there is a negative interaction between these two factors in the short term. To support these findings, recent research by Pu et al., (2015) found that in countries with sophisticated financial markets, lending interest rates have a beneficial influence on exports, whereas real interest rates harm exports as firms have obligations to repay to financial institutions. These results were confirmed by the scholars Valentinka et al., (2020), who found a substantial correlation between the two parameters in both the short and long term. Our hypothesis for this factor is as follows:

H3: There is a significant negative association between real interest rate and export.

3. Data and empirical model
3.1 Data source
To perform this research, we used secondary data provided by official statistics from the World Bank and IMF. The sample in this study includes exports, GDP growth,

gross savings-to-GDP, lending interest rate, and real interest rates realized by the state of Kosovo with European countries and worldwide, including the period 2009 to 2020 with 12 observations. The used data are time series strongly balanced, categorized into two groups: an indicator of trade openness (export) as a dependent variable, whereas the second group of control variables is GDP growth, savings gross, lending interest rate, and real interest rate (recognized as financial liberalization). The reason for including this period in the research lies in the fact that the data are defined according to the format of the IMF and, as such, have been used in many relevant studies. Table 1 presents the classification of variables, description, and expected results of each parameter in particular.

Table 1 Variable descriptions and expected sign

Variable	Denominations	Acronyms	Sign
Dependent variable	Natural logarithm of total export	*NLTE*	
Explanatory variables	GDP annual growth	*G_GDP*	+/-
	Gross savings-to-GDP	*GS_GDP*	+/-
	Lending interest rate	*LIR*	+
	Real interest rate	*RIR*	-

Source: Author's selection

The decision on variable selection is derived from research performed by various authors over the years, and the study is based on studies conducted by Akinsola and Odhiambo, (2017) and Durguti et al., (2021). This evaluation covers not only common variables such as GDP, exports, and gross savings to GDP but also other variables deemed important in this area. Lending interest rate and real interest rate are two new variables that differ from previous reviews and are considered financial liberalization variables.

Figure 1 exhibits the trajectory of the parameters used in the evaluation for export, GDP growth, gross savings-to-GDP, lending interest rate, and real interest rate, as well as the periods observed in the context of Kosovo's economy. While we investigate the export parameter, we do not find significant fluctuations, where the lowest value achieved during the observed period of 5.22 was in 2009 while the highest value reached is 5.68 in 2020. GDP growth has been favorable with some slight variations pronounced in 2014, then continuing with stable growth, and finally, during the COVID-19 pandemic, there was a downturn to -6.88 percent. The gross savings variable follows a consistent pattern, with few fluctuations across observed periods. And the two parameters which are considered crucial for financing businesses lending interest rate and real interest rate from graph 1 expression that after 2014, has reached their one-digit value and that value is lower 6.35 percent, respectively, the real interest rate at 6.03 percent.
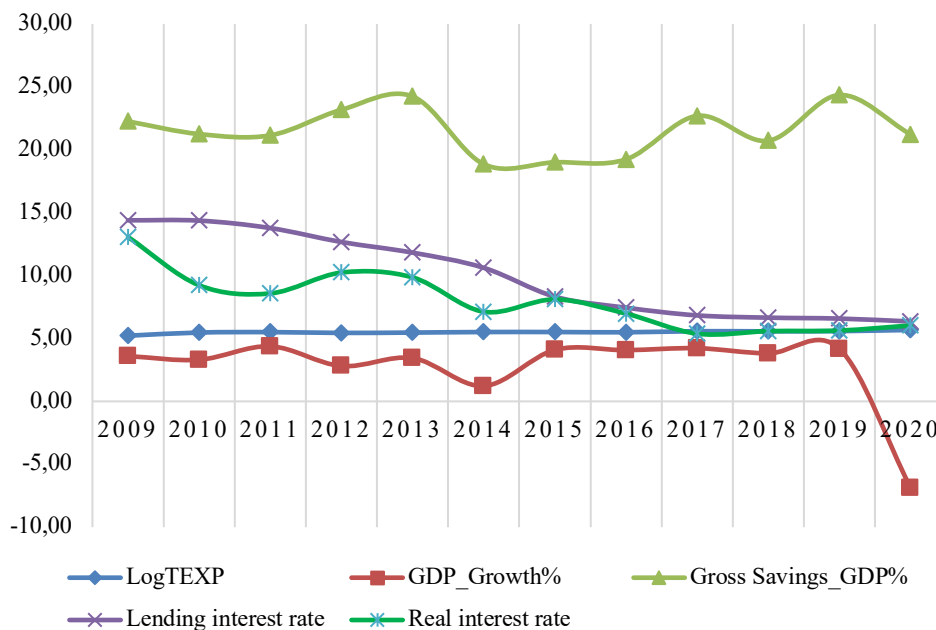
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Figure 1 The trend of determinants applied in the analysis
Source: Authors' calculations based on the data

3.2 Specification of the econometric model

Different researchers have used various models and methodologies to quantify the influence of independent variables on exports to achieve more consistent results. Therefore, the given study relates to time series data, and the approach used is OLS regression and Arrellano-Bover/Blundell-Bond estimation. So, based on this context, the OLS model is presented as follows:

$$NLTE_{it} = \alpha + \beta_1(G\_GDP_{it}) + \beta_2(GS\_GDP_{it}) + \beta_3(LIR_{it}) + \beta_4(RIR_{it}) + \varepsilon_{it} \quad \text{...(1)}$$

Whereby represents$NLTE_{it}$ the dependent variable (natural logarithm of total export), G_GDP_{it}, GS_GDP_{it}, LIR_{it}, and areRIR_{it} independent variables (GDP growth, gross savings to GDP, lending interest rate, and real interest rate). The error term $\varepsilon_{it}$and the regression parameter is β. The model restricts the coefficient of the explanatory variables to be common across the units (i) and the period (t). Unlike the basic model, the component of OLS error,ε_{it} which is specific for individual

observation units, is added to random error, ε_{it} referring to the combination of time series and comparative data.

To overcome a problem of endogeneity that results in biased and unobserved heterogeneity between parameters that cannot be measured accurately, Arellano and Bond (1991) proposed a new generalized moment estimator (GMM) method for the panel model dynamic (Difference GMM). They proposed the inclusion of additional instruments in the dynamic model and the use of various transformations. Later, Arellano and Bover (1995) and Blundell and Bond (1998) proposed an improvement of the Arellano and Bond estimator by imposing additional constraints on initial conditions, which allow the introduction of more instruments to improve efficiency. It combines the first change in equations with equations at the level at which the variables were instrumentalized by their first differences. It builds a system with two equations (System GMM), the original and the transformed one. Therefore, in addition to OLS regression, the study also applies the GMM assessment, to note if we have any significant differences between these two approaches. The algorithm for the dynamic-GMM approach, through using variables stated in the first difference, is as follows:

$$\text{NLTE}_{it} = +\alpha + \beta_1(\text{G\_GDP}_{it}) + \beta_2(\text{GS\_GDP}_{it}) + \beta_3(\text{LIR}_{it}) + \beta_4(\text{RIR}_{it}) + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(2)$$

The first difference will be used in the research to eliminate the occurrence of endogeneity, and the transformation of the formula into the first difference, will be as follows:

$$\Delta\text{NLTE}_{it} = \alpha + \mu(\text{NLTE})_{t-1} + \alpha + \beta_1(\text{G\_GDP}_{it}) + \beta_2(\text{GS\_GDP}_{it}) + \beta_3(\text{LIR}_{it}) + \beta_4(\text{RIR}_{it}) + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

3.3 Descriptive statistical analysis

Through the observation of descriptive statistical analysis (Table 2), we can conclude that the natural logarithm of total export does not have any significant movement between the maximum value and the minimum value 5.7, respectively 5.2 with a coefficient of variance of 0.012. The macroeconomic indicators GDP growth and gross savings-to-GDP have a greater variation between the maximum and minimum value, with a variation of 9.8 and 3.6, respectively. Whereas the mean result of the components lending interest rate and real interest rate is 9.9, respectively 7.9, with a standard deviation of 10.8 for lending interest rate and 5.5 for real interest rate.

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Table 2 Summary of descriptive statistics

Variables	NLTE	GDP_G	GS_GDP	LIR	RIR
Minimal	5.218	-6.881	18.853	6.350	5.379
Maximal	5.677	4.375	24.350	14.389	13.065
Mean	5.502	2.688	21.510	9.985	7.982
Std.Dev	0.110	3.134	1.899	3.288	2.335
Variance	0.012	9.824	3.606	10.815	5.453
Skewness	-0.167	-0.648	0.041	0.195	0.729
Kurtosis	5.047	4.645	1.883	1.352	2.781
Obs	12	12	12	12	12

Source: Author's calculation

Through the standard deviation observation, we can notice that certain variables have higher values than others within certain influencing factors. Within the subgroup of macroeconomic factors, the "GDP growth" has the greatest value of 3.1 percent, also within the factors of financial liberalization (FL), the variable "lending interest rate" has the highest value of 3.3 percent. The dispersion of data from Table 2, is observed to be approximately close to the value of zero (0), which proves that the data are symmetrically perfectly (Bulmer, 2003). Kurtosis outcomes, on the other hand, reveal that we have positive values due to differences in variables such as GDP growth, gross savings, lending interest rate, and real interest rate relative to their mean values. According to authors Balanda and MacGillivray (1988), a rise in kurtosis is connected with the movement of the likelihood mass from the dispersion sides to the centers with its axis.

3.4 Diagnostic tests for multicollinearity

The association exploration is performed to control the degree and pattern of the factors observed. The significance level was determined at a baseline of the significance of α = 0.05. Values till 0.3 suggest a weak interaction; values from 0.3 and 0.5 indicate a substantial interaction; while values more than 0.5 show a significant connection among factors (Pallant, 2017). The association tendency denotes whether the association constant is positive or negative. A positive value means that even though one-factor increases, the additional increases as well, and vice versa. Negative values, on the other hand, represent an opposite movement of factors; when one increases, the other decreases, and vice versa. Table 3 evaluates the correlation analysis for the entire variable.

Table 3 Correlation analysis and VIF

	NLTE	GDP	GS GDP	LIR	RIR	VIF	1/VIF
NLTE	1.0000						
GDP	-0.4432	1.0000				1.08	0.925755
GS GDP	-0.0873	0.1112	1.0000			1.05	0.954200
LIR	-0.4396	0.2573	0.1275	1.0000		3.99	0.250894
RIR	-0.5036	0.2061	0.1855	0.6608	1.0000	3.96	0.252748
					Mean value	**2.52**	

Source: Author's calculation

Regarding the information from the correlation analysis, it is stated that the NTLE, as a predictor determinant, has a weak adverse association with gross savings-to-GDP, a moderate adverse association is noticed that exists among GDP growth, and lending interest rate. There is a considerable adverse association between the NTLE and the real interest rate. Table 2 displays the associations among the independent variables. Furthermore, we performed the variance inflation factor (VIF) analysis for multicollinearity, and based on the data, their mean value is 2.52, which is less than the significant value of estimated $\alpha \leq 0.05$.

4. Results and discussion

A regression examination was executed to control the relationship between the explanatory and predicted variables. The OLS and Arrellano-Bover/Blundell-Bond estimates had been used to evaluate the study hypothesis. Table 4 displays the obtained results. The alpha constant R^2 is 0.561, which indicates that the OLS model explains 56.1 percent of the variability of NLTE, while the remaining portion was described by other parameters. The Adjusted R^2 is 0.491 or 49.1 percent. The F statistic value is 18.13 (ρ -*value* = 0.0008), which at the consequence level of 5% implies that the premise of the existence of an important direct association among predicted and explanatory factors is accepted. The values of the Durbin-Watson test of 2.1745 imply that there is no autocorrelation.

Additionally, the Breusch-Pagan test for heteroscedasticity is being used to determine whether the data have concerns with heteroscedasticity, and if the p-value is less than $\rho \leq 0.05$, the null hypothesis should be rejected. In our scenario, it is noticed that $\rho \geq 0.05$, respectively $\chi = 0.1569$, and based on this we can conclude that the data do not have a problem with heteroskedasticity. For the second evaluation using the GMM technique, $AR_{(2)}$ for autocorrelation was used to evaluate the model's appropriateness, and the result is Wald $chi2_{(5)} = 65.60$ with $\rho = 0.000$. This demonstrates that data has no issues with autocorrelation. The Sargan *J* test has been used to examine over-identifying constraints in a statistical model. Thus, based

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on the results of this test, $\rho = 0.9907$ demonstrates that there is no concern with the model's fitness (Sargan, 1958), and (Kitamura, 2006).

Table 4 Estimation results

	Model 1		Model 2	
	Coefficient	**P>|z|**	**Coefficient**	**P>|z|**
constant	5.709767***	0.000	5.49243***	0.000
GDP_G	-.0104813***	0.001	-.010360***	0.000
GS_GDP	.0066278	0.320	.0059392	0.154
LIR	.0184951***	0.007	.0108541***	0.007
RIR	-.0510241***	0.000	-.0286354***	0.002
Observation number	12	-"-	12	-"-
Diagnostic tests				
R^2- squared	0.5617	-"-	-"-	-"-
Adj R^2- squared	0.4912	-"-	-"-	-"-
F-test	F(4,7) 18.13	$\rho = 0.0008$	-"-	-"-
χ-heteroscedasticity	Chi2 (1)	$\rho = 0.1569$	-"-	-"-
Durbin-Watson	d-stat (5,12)	2.17448	-"-	-"-
AR (2) test	-"-	-"-	Wald chi2 (5) 65.60	$\rho = 0.0000$
Sargan *J* test	-"-	-"-	Chi2 (5) 5.156556	$\rho = 0.9907$

Note. (***), (**), (*) significant, respectively, at 1, 5, and 10 percent. Model 1 is an OLS, and Model 2 is Arellano-Bover/Blundell-Bond estimation.
Source: Author's calculation

By observing the values (coefficient β, and statistical significance ρ) given in Table 4 on the GDP growth of the independent variable, has a negative impact (β =-0.0104813 according to OLS), and (β =-0.010360 according to GMM) with a statistically significant impact on the dependent variable can be set ($\rho = 0.001$ and $\rho = 0.000$). On this basis, hypothesis H_1 is verified. The findings are consistent with the findings of Durguti et al. (2020), who explored the link between GDP growth and export levels for Western Balkan economies. Similar findings were obtained by Andrews, (2015), who found an inverse association between these two parameters. As previously stated, gross savings-to-GDP is positive, as it is about the value that has no statistically significant influence on exports. The two applied models confirm it since the coefficient (β = .0066278, with $\rho = 0.320$ according to OLS and β = .0059392, with $\rho = 0.154$ according to GMM). Hypothesis H_2 is also easily rejected. The finding of this research is entirely consistent with the findings of Misztal, (2011), who stated that there is no causal relationship between gross

savings, GDP, and exports including developed economies, emerging and transition economies.

Nevertheless, the observations obtained for the variables lending interest rate and real interest rate on their influence on exports were empirically important, according to OLS and Arellano-Bover/Blundell-Bond estimates. This is argued in that (β = .0184951; β = .0108541 for LIR with $\rho = 0.007$ including both models, and β = .0510241; β = .0286354 for RIR with $\rho = 0.000$ according to OLS, and $\rho = 0.002$ according to Arellano-Bover/Blundell-Bond). As a consequence, the hypothesis H_3 and H_4 are confirmed because they have a strong influence on exports. Furthermore, the study's findings follow research conducted by Pu et al., (2015) who argued that in a well-developed economy with a developed financial market and potential, lending has a positive influence on exports, but real interest rates harm exports. The study's results are compatible with the hypotheses presented by Valentinka et al., (2020), who developed a pattern of the interaction across export, import, inflation, and interest rates via a dynamic method to examine the short and long-term impact. The Vector Error Correction Model was used to check and verify hypotheses. Based on the Granger Causality examination results, there is a one-way interaction across the interest rate, real interest rate, and export at a 5% level of significance.

5. Conclusion and policy implication

The study's overarching goal was to examine the association across GDP growth, gross savings-to-GDP of financial liberalization elements (lending interest and real interest rate), and exports in the context of the Kosovo economy. The primary objective was to discover the correlations among them and to assess the degree to which these factors influenced each other. The study employed secondary data from 2009 to 2020, combining static and dynamic techniques via OLS regression and the Arellano-Bover/Blundell-Bond methodology. The research also used various diagnostic tests in terms of achieving more coherent and systematic results. For the observed sample, the results reveal that GDP growth is significant and harms exports. The research also examined the effect of gross savings on GDP on exports. Even before proposing the hypothesis, the core premise was that this factor has no statistically significant influence on exports, and so this hypothesis was validated based on the research findings of models 1 and 2 (β = .0066278, with $\rho = 0.320$ according to OLS and β = .0059392, with $\rho = 0.154$ according to GMM). The evaluation coefficients from the two models support the argument that boosting the level of financial support through lending has a statistically significant positive influence on export growth. This conclusion is based on the analysis's assumptions based on the coefficient and ρ-value. This section of the research concludes that an economy with a real financial market and the financial capability to support enterprises, particularly those who designate a portion of their products for export,

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has a significant influence on raising the proportion of export to other economies. In contrast, the outcomes on the real interest rate have a negative influence on exports since the interest rate paid limits the financial potential of businesses and therefore has a negative effect.

In conclusion, all stated hypotheses based on econometric evidence through both models have already been validated with an accuracy level of $\alpha \leq 0.01$. The research performed for their verification derived from the use of several diagnostic tests on the suitability of the used models. The primary limitation of our study can be attributed to the restricted number of time series and the set of indicators employed. We developed models featuring exports as dependent variables and certain fundamental macroeconomic drivers, as well as factors identified as drivers of financial liberalization. For future research, various additional approaches are expected to be used, such as dynamic data analysis via 2SLS (Two-Step Least Square), which can be engaged to discover basic regularities on the degree and importance of interdependence between export and defined variables. This study is constrained to the Kosovo perspective; nevertheless, the investigation can include other states with nearly equivalent features, mostly those in the Western Balkans, to generalize the view of the conclusions to other states with such characteristics.

Policy-making mechanisms can considerably benefit from research through macroeconomic policy redesign, particularly the monetary policies that oversee financial organizations and the business division that exports its products. Policymakers ought to design development policies that boost and support the activity of export-oriented industries. Long-term reforms in the financial sector, with such developing infrastructure for financial institutions to enter the Kosovo banking market, will contribute more to increasing the financial potential for businesses and, in particular, enhancing exports. Sustainable economic progress, a robust financial system, and rationing of infrastructure development funds for the export business are critical to diversifying exports to the Kosovo scenario.

Authors Contributions
MS and ED conceived the study and were responsible for the design and development of the data analysis. MS and ED were responsible for data collection and analysis, while

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ED was responsible for data interpretation. MS was responsible for the literature review section.

Disclosure Statement

The authors have not any competing financial, professional, or personal interests from other parties.

References

1. Ahmed, A. D. (2013), Effects of financial liberalization on financial market development and economic performance of the SSA region: an empirical assessment, Economic Modelling, 30, 261-273. https://doi.org/10.1016/j.econmod.2012.09.019.

2. Andrews, A. P. (2015), Exports, Imports, and Economic Growth in Liberia: Evidence from Causality and Cointegration Analysis, Journal of Management Policy and Practice, 16(3), 95.

3. Arellano, M., Bond, S. (1991), Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations, The Review of Economic Studies, 58(2), 277–297, https://doi.org/10.2307/2297968.

4. Arellano, M., Bover, O. (1995), Another look at the instrumental variable estimation of error components models, Journal of Econometrics, 68(1), 29–51. https://doi.org/10.1016/0304-4076(94)01642-D.

5. Bakari, S., Mabrouki, M. (2016), The Relationship among Exports, Imports and Economic Growth in Turkey, Munich Personal RePEc Archive, MPRA Paper No: 76044.

6. Balanda, K.P., MacGillivray, H.L. (1988), Kurtosis: A Critical Review, The American Statistician, 42:2 [May 1988], 111–119.

7. Belloumi, M., Alshehry, A. (2020), The Impact of International Trade on Sustainable Development in Saudi Arabia, Sustainability, 12 (13): 5421. https://doi.org/10.3390/su12135421.

8. Bilgili F., Doğan İ., Koçak E., Kuşkaya S. (2021), Financial Liberalization, Capital Movements, and Economic Growth in Asia: A Panel Structural VAR Approach. In: Shahbaz M., Soliman A., Ullah S. (eds) Economic Growth and Financial Development. Springer, Cham. https://doi.org/10.1007/978-3-030-79003-5_8.

9. Blundell, R., Bond, S. (1998), Initial conditions and moment restrictions in dynamic panel data models, Journal of Econometrics, 87(1), 115–143. https://doi.org/10.1016/S0304-4076(98)00009-8.

10. Bulmer, M.G. (2003), Principles of Statistics. Dover Publications Inc. (17 March 2003). New York, United States. New Edition.

11. Chang, C. C., Mendy, M. (2012), Economic growth and openness in Africa: What is the empirical relationship?, Applied Economics Letters, 19, 1903–1907. https://doi.org/10.1080/13504851.2012.676728.

12. Durguti, E. A., Gashi, E., Kunoviku, F. D., Mehmeti, M. (2020), DAF Determinants Affecting Economic Growth – Evidence for Western Balkans Countries, International Journal of Finance & Banking Studies, (2147-4486), 9(1), 36–46. https://doi.org/10.20525/ijfbs.v9i1.652.

Studia Universitatis "Vasile Goldis" Arad. Economics Series Vol 33 Issue 2/2023
ISSN: 1584-2339; (online) ISSN: 2285 – 3065
Web: publicatii.uvvg.ro/index.php/studiaeconomia. Pages 95–111

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13. Durguti, E., Tmava, Q., Demiri-Kunoviku, F., Krasniqi, E. (2021), Panel estimating effects of macroeconomic determinants on inflation: Evidence of Western Balkan, Cogent Economics & Finance, 9:1. https://doi.org/10.1080/23322039.2021.1942601.

14. Jannat, F., Miah, M.R., Faruk, M.O., Alam, S. (2020), Empirical Analysis of Factors Influencing Economic Growth Rate in Bangladesh, International Journal of Business and Economics Research, 9(2), 78–82. https://doi.org/10.11648/j.ijber.20200902.14.

15. Akinsola, F.A., Odhiambo, N. (2017), The impact of financial liberalization on economic growth in sub-Saharan Africa, Cogent Economics & Finance, 5:1. https://doi.org/10.1080/23322039.2017.1338851.

16. Gaffeo, E., Garalova, P. (2014), On the finance-growth nexus: additional evidence from Central and Eastern Europe countries, Econ Change Restruct 47, 89–115. https://doi.org/10.1007/s10644-013-9143-x.

17. Rachdi, H., Hakimi, A., Hamdi, H. (2018), Liberalization, crisis, and growth in MENA region: Do institutions matter?, Journal of Policy Modeling, 40(4), 810–826. https://doi.org/10.1016/j.jpolmod.2018.05.001.

18. Karahan, Ö. (2018), The Causal Relation Between Savings and Economic Growth in Turkey. In: Roukanas S., Polychronidou P., Karasavvoglou A. (eds) The Political Economy of Development in Southeastern Europe. Contributions to Economics. Springer, Cham. https://doi.org/10.1007/978-3-319-93452-5_8

19. Keynes, J. M. (1936), The General Theory of Employment, Money, and Interest. The Collected Writings, 7. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-70344-2.

20. Kitamura, Y. (2006), Specification Tests with Instrumental Variable and Rank Deficiency. Econometric Theory and Practice: Frontiers of Analysis and Applied Research. New York: Cambridge University Press. pp. 59–124.

21. Levine, R. (2005), Finance and Growth: Theory and Evidence. Handbook of Economic Growth, 1, 865-934. https://doi.org/10.1016/S1574-0684(05)01012-9.

22. Levine, R., Zervos, S. (1998), Stock markets, banks, and economic growth, American Economic Review, 88, 537–558.

23. Mora, J., Olabisi, M. (2022), Export growth drivers and economic development, Empir Econ (2022). https://doi.org/10.1007/s00181-022-02204-w.

24. Beşer, M., Kiliç, N.O. (2017), Analysis about Export and Economical Growth of Countries that Give Economic and Political Direction to Middle East Geography, Microeconomics and Macroeconomics, 5(1), 1–5. https://doi.org/10.5923/j.m2economics.20170501.01.

25. Dritsakis, N., Stamatiou, P. (2016), Trade Openness and Economic Growth: A Panel Cointegration and Causality Analysis for the Newest EU Countries, Romanian Economic Journal, Department of International Business and Economics from the Academy of Economic Studies Bucharest, 18(59), 45–60.

26. Valentika, N., Nursyirwan, V.I., Ilmadi, I. (2020), Modeling the Relationships Between Export, Import, Inflation, Interest Rate, and Rupiah Exchange, Desimal: Jurnal Matematika, 3(3). https://doi.org/10.24042/djm.v3i3.6942.

27. Özdemir, D. (2014), Economic growth and financial liberalization in the EU accession countries, Applied Economics Letters, 21, 1036–1044. https://doi.org/10.1080/13504851.2014.907470.

28. Pallant, J. (2017), SPSS priručnik za preživljavanje. Beograd: Mikro knjiga.

29. Pietrovito, F., Pozzolo, A.F. (2021), Credit constraints and exports of SMEs in emerging and developing countries, Small Bus Econ 56, 311–332. https://doi.org/10.1007/s11187-019-00225-x.

30. Misztal, P. (2011), The Relationship Between Savings and Economic Growth In Countries With Different Level Of Economic Development, e-Finanse, University of Information Technology and Management, Institute of Financial Research and Analysis, 7(2), RePEc:rze:efinan:v:7:y:2011:i:2:p:17–29.

31. Prasad, E.S., Raghuram, G. R. (2008), A Pragmatic Approach to Capital Account Liberalization, Journal of Economic Perspectives, 22 (3), 149–72. https://doi.org/10.1257/jep.22.3.149.

32. Chen, P., Xu, N., Wang, C. (2015), An empirical analysis of interest rates and exports under imperfect credit markets, Applied Economics Letters, 22(13), 1078–1082. https://doi.org/10.1080/13504851.2014.1002882.

33. Sargan, J. D. (1958), The Estimation of Economic Relationships Using Instrumental Variables, Econometrica, 26(3), 393–415. https://doi.org/10.2307/1907619.

34. Bakari, S., Mabrouki, M., Elmakki, A. (2018), The Nexus Between Industrial Exports And Economic Growth In Tunisia: Empirical Analysis, Journal of Smart Economic Growth, 3(2), 31–53, December.

35. Solow, R. M. (2016), Resources and Economic Growth, The American Economist, 61(1), 52–60. https://www.jstor.org/stable/26725761.

36. Sujová, A., Simanová, Ľ., Kupčák, V., Schmidtová, J., Lukáčiková, A. (2021), Effects of Foreign Trade on the Economic Performance of Industries—Evidence from Wood Processing Industry of Czechia and Slovakia, Economics, 9 (4): 180. https://doi.org/10.3390/economies9040180.

37. Yarmukhamedov, S. (2007), Trade Effects of Exchange Rate Fluctuations: Evidence from Sweden. Masters degree thesis.

Studia Universitatis "Vasile Goldis" Arad. Economics Series Vol 33 Issue 2/2023
ISSN: 1584-2339; (online) ISSN: 2285 – 3065
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