

FINANCIAL DEVELOPMENT, INTEREST SPREAD AND ECONOMIC GROWTH IN WESTERN BALKAN COUNTRIES: A TEST FOR CAUSALITY

Rovena Vangjel, Aleksander Mosiu University of Durrës

ABSTRACT

The objective of this paper is to examine causality between financial development and economic growth for 6 countries of Western Balkan for the period of 2005 – 2019. We employed the vector autoregression VAR approach to conduct Granger causality tests to determine the direction of causality relationship between financial development (FD) and economic growth (EG). First, we performed the following test as: unit root test for data stationarity and due to the result, that variables are stationary at level or stationary at first difference we proceed whether or not with cointegration test for short run or long run relationship between FD and EG. Our results provide evidence of “the supply leading theory” – financial development causes economic growth unidirectional links when FD is represented by Private credit, bi-directional links when FD was represented by Broad Money, meaning that is functional even “demand following” theory. According to the VAR test our findings states a positive relationship of broad money and private credit to GDP only in the first lags, while in the second lags there were a negative effect of broad money and private credit to GDP growth. This result is according to the unit root test where stationarity of the variables determined that there was no long cointegration relationship between variables. Private credit has a wider effect on GDP rather than broad money. Also, interest spread affects economy growth, but is significant only in the second lag, resulting in positive relationship with GDP growth. Because of non-developing financial system and small observations, we cannot conclude for a significant long run cointegration. Important is the fact the financial intermediaries through banking system is important because cause economic growth and vice versa.

Keywords: Financial development, Economic Growth, Granger Causality.

JEL Classifications: G20, O1, O11.

INTRODUCTION

The influence of the financial sector on economic growth is widely debated in economic literature for many years. Early economists such as Schumpeter in 1911 identified banks' role in facilitating technological innovations through their mediation role. He believed that achieving this goal would be achieved through efficient allocation of savings through the identification and financing of entrepreneurs with good opportunities in successfully implementing new products and production processes.

The banking system is the one that prevents information asymmetry between lenders and borrowers, reduces transaction costs, monitors the managers, and provides financial resources in an inherently uncertain economic environment. Meanwhile, in the absence of an adequate institutional framework and/or in a specific economic context, in turn the banking system can develop opportunistic behavior manifested by moral hazard and adverse selection, which is

reflected in non-performing loans and inefficient allocation of resources. The link between financial development and economic growth has attracted wide attention in the last three decades and there have been many studies in this area. It has been claimed that financial development helps identify good investment opportunities, reduce the cost of production, mobilize savings, promote technological innovations, and encourage investors to be more risk-accepting (Levine, 1997). On the other hand, study authors/economists agreed on the role of the financial sector in economic growth, but others like Robinson (1952) have clearly analyzed in his study that "*where the enterprise guide, finance follows*". From this point of view, finance does not cause growth; finance responds to changing demands from the "*real sector*".

A well-functioning financial system is the key to good performing economy. Higher economy growth comes from efficient financial institutions while inefficient ones are associated with crises in economy (Ang & McKibbin, 2007).

The objective of this paper is to investigate the relationship between financial development and economic growth for Western Balkan Countries since the beginning of a financial liberalizations effort to present for most of the former communist system.

Several empirical studies are presented in the following literature. Different studies have used mixed techniques due to variety of proxies of financial development and the samples used. Financial development is measured by indicators related to banking system as banks in transition economies have absolute majority in financial intermediation. Part two summarizes the literature reference underlying this study. Research methodology is explained in the third part of the paper. The fourth part presents the analysis model and its results. The last part is devoted to discussions and conclusions.

LITERATURE REVIEW

The importance of financial institutions in generating economic growth has been widely discussed in literature. Schumpeter (1911) stressed the importance of financial intermediaries and financial markets in the process of economic development. According to Schumpeter (1911), as from Levine (1997) economic growth was a product of interaction between financial and real innovations. Hicks (1969) held the same view, stating that finances played a crucial role in industrializing developing countries.

McKinnon and Shaw (1973) examined the impact of government intervention in the development of financial systems by concluding that government restrictions on the banking system (such as the setting of interest rates ceiling and direct interference in the lending process) negatively affect the development of the financial sector and undermine economic growth.

Patrick in 1966 identified two possible lines between financial development and economic growth. The first line called "*demand following*" shows that the increase in demand for financial services depends on economic growth, trading, and the modernization of sectors of the economy. Finance leading to economic growth theory is also referred to "*supply leading*" Patrick (1966), known as positive causality (Robinson, 1952). In the same line with Robinson (1952) was even Lucas (1988), which also argued that financial development follows economic growth. This link itself includes transferring resources from small-growth sectors towards high-growth sectors, promoting and supporting growth. This means that the creation of financial institutions and their services occurs before the demand for them and is precisely their development that stimulates economic growth. Patrick's two lines of thought have also been joined by another line of thought where the link between financial development and economic growth is a two-way link, where factors can also be causing each other.

Evidence from Cross section Data and Panel Data

Various studies have used cross section data and most of the studies support positive relationship between financial development and economic growth (King & Levine, 1993; Demetriades & Hussein, 1996; Levine & Zervos, 1998; Rajan & Zingales, 1996; Khan & Snnhandaji, 2001; Lensink, 2001; Dawson, 2003; Liu & Hsu, 2006). There are other studies that study the relationship between financial developments and foreign direct investment (Hermes and Lensink, 2003) while Alfaro et al. (2004) states that financial markets gain from FDI via factor productivity. Memon et al (2011) study results that financial development through the channel of financial liberalization which affects economic growth in SAARC countries, Law and Demetriades (2005) points out that institutional quality significantly determines financial development. One of the drawbacks in these cross-section studies is they didn't examine the direction of causality between economic growth and financial development.

Most of panel data studies concluded in a positive relationship between financial development and economic growth. Graff (1999) tests on a sample of 93 countries for the period between 1970 to 1990 (divided into subperiods of five years), the hypothesis that financial development is a determinant of economic growth. Financial development is measured by the share of resources that society spends for its financial operation (the share of resources a society devotes to run its financial system).

Levine et al. (2000) use panel study to find the existence of causal relationship from financial development to economic growth. Using a panel of 77 countries for the period 1960-1995, they conclude that the increase of banking sector produces higher rates of economic growth and TFP growth.

Christopoulos and Tsianas (2004) using panel cointegration analysis and confirm unidirectional causality from FD to economic growth for 10 developing countries. Asghar and Hussain (2014) results that human capital and foreign direct investment both exert strong impact on economic growth and the study found a bidirectional relationship between financial development and economic growth for four countries.

Kiran et al. (2009) using a panel data of 10 emerging countries for a period 1968-2007 after a panel unit roots tests and Pedroni's panel cointegration techniques, conclude that a financial development has a positive and significantly impact on economic growth.

Jaffee and Levonian (2001) in their paper assess the state of banking system development in 23 transition economies of Central and Eastern Europe and the former USSR. Koivu (2002) conducted an empirical study on 25 transition economies, including Romania, for the period 1993 to 2000, and showed that there is a strong negative relationship between interest margin, on one side, and the annual GDP growth, on the other hand.

Fink et al. (2005) used the model of the production function to study the relationship between financial development and economic growth on the example of nine transition countries, including Romania, during 1996 to 2000.

Taivana and Nene (2016) in their study of 10 SADC countries indicated that financial development to be developed need to be led by a financial liberalization to improve economic growth. Countries for with demand following exist, there is need to direct resources towards growing financial sector in order to drive economic growth.

Haissam & Kichler (2009) conducted a comprehensive study in which they "*investigated the interdependence of the financial sector - growth*" ("*the finance growth nexus*") in a sample of 10 countries in Central and Eastern Europe, including Romania, along period 1999 to 2006. Cojocaru et al. (2011) demonstrated in 25 CEE and CIS countries for the period 1990 to 2008,

that there is a significant positive relationship between credit to the private sector (as a percentage of GDP) and GDP growth and a negative correlation between interest rate spread and GDP.

From the other side, Singh (1997); Andersen and Tarp (2003); Ayadi et al. (2015) provided some arguments and evidence for an inverse relationship between financial development and the economic growth.

METHODOLOGY

This paper empirically investigates the causal relationship between financial development and economic growth using time series data for 6 countries (of Western Balkan countries classified by the World Bank as upper-middle income economies¹) for 2005-2019. Western Balkan countries are Albania, Montenegro, North Macedonia, Kosovo, Bosnia Herzegovina, Serbia. The data used is quantitative data in the form of time series as they are defined in the World Bank statistics and “*Financial Development and Structure Dataset*”². Secondary data collection is used at macroeconomic level. They will be divided into two types of main variables:

1. Economic growth as dependent variable (as annual %) and
2. Financial development measurements and other control variables as independent variables.
3. Financial development is intended to be measured through financial assets of as
4. Broad money growth (M2 growth annual %),
5. Domestic credit to private sector (Private credit %GDP)
6. Other explanatory variables is:
7. Interest rate spread quantitative indicators (lending rate minus deposit rate, %)

For the testing of the casual relation, the highly variable model will be written in the form of a general vector model, a dependent variable, and other independent variables:

$$Y_{it} = \alpha_0 + \alpha_1 BM_{i,t} + b_1 IntSpr_{i,t} + \varepsilon_{i,t}$$

$$Y_{it} = \alpha_0 + \alpha_1 PC_{i,t} + b_1 IntSpr_{i,t} + \varepsilon_{i,t}$$

where Y_{it} is a real GDP growth in country i and year t , $BM_{i,t}$ is the ratio of Broad Money to GDP or private credit to GDP $PC_{i,t}$ are used as measures of financial development respectively, $IntSpr_{i,t}$ is the interest spread as %, error term $\varepsilon_{i,t}$ and $\gamma_{i,t}$ are the values of cross-section or period specific effects (random or fixed); i indicates country on which to make regression³ t indicates the year (2005 - 2019).

Given that the focus of this work is to find the connection between financial development and economic growth, then are recommended co integrating analysis and error correction procedures (technique favored even in similar literature of modelling these relations). Authors will use panel data from six countries of Western Balkan. The data have been extracted from the “*Financial Development and Structure Dataset*” and from World Development Indicators of the World Bank for some missing years from 2005 to 2019 (Dudian & Popa, 2013); Hagmayr et al. (2007); Mehl et al. (2006). The used method of analysis is that of econometric modelling with EViews software. This software allows the analysis of data into a panel type system, involving a mix of periods of time and series of data for different entities.

The paper will present a brief introduction related to the Panel unit root test, Panel Cointegration tests, Panel Causality tests, which have been used for empirical analysis. Several unit root tests are based in econometric literature.

First, we tested the stationary test of the data via unit root test at level and if we needed will try stationarity of variables even at first difference, via summary tests:

1. Levin, Lin & Chu t^* ,
2. Im, Pesaran and Shin W-stat (IPS, 2003)
3. ADF - Fisher chi square (Maddala and Wu, 1999)
4. PP - Fisher chi square, Hadri Z-stat

IPS⁴ is considered more advanced unit root test because it rejects the assumption of homogeneity of autoregressive coefficient and is based on ADF test computed for each country in the panel by assuming that error term is serially correlated. ADF – Fisher test presented by Maddala and Wu (1999) like IPS unit root test assumes heterogeneous autoregressive coefficient and is based on p-values of unit root computed for each cross-sectional unit through ADF regression

Where the hypotheses of unit root are:

H_0 : *There is a Unit Root between variables*

H_1 : *There is no Unit root Between Variables*

Then, for the cointegration of long run relationship between variables, author used

1. Pedroni Panel Test
2. KAO Panel Test
3. FMOLS cointegration test
4. Likelihood-based panel test – Larsson (2001)

Where the hypotheses of cointegration are:

H_0 : *There is no cointegration among variables*

H_1 : *There is cointegration among variables*

If the variables are stationary at level, we can say there is no long run relationship between variables, and we go to a simple VAR for coefficient identification. Brookes (2010) emphasize that all the variables in VAR process must be stationary. Sims (1980); Sims et al. (1990) as cited in Enders (2010) do not recommend differencing of the variables if they contain unit roots. With a VAR model we can identify various equations and then we can test for the significance of variables examining the p-values. This model means “*Everything causes everything*”, however, the number of estimated parameters makes the model difficult to interpret. The multi-equation model is represented as below:

$$Y_{it} = \mu + \sum_{i,t=1}^{i,t=n} \beta_{i,t} Y_{i,t-1} + \varepsilon_{it}$$

Y_{it} is a $(m \times 1)$ vector of $I(0)$ variables

μ is a $(m \times 1)$ vector of constants, and

$\beta_{1,1} \dots \beta_{i,t}$ are $(m \times m)$ matrices of parameters,

εt is a $(m \times 1)$ vector of normally distributed error terms.

For a jointly cause of the variables we test for a Wald Test when coefficient of first and second lags of financial development can jointly cause economic growth.

$$H_0: C=C=0$$

$$H_1: C \neq C=0$$

Accepting the null hypotheses, we conclude that there is a jointly causations of variables of lag 1 and 2 to the depended variable. The last step is to study the causality relationship between financial development and economic growth, in order to identify which theory fits better for Western Balkan. For this, Granger Causality test is run, a theory developed by Hurlin & Venet (2001); D'Alfonso and Moretti (2012) and Kao Residual Cointegration Test.

RESULTS

For applying the panel, unit root test, authors have run Summary and Hadri test at level for individual intercept and intercept+trend, with automatic selection of Schwarz Info Criterion by the software. The results of both Unit Root tests show that all the selected series GDP, Broad Money, Int spread, Private Credit are stationary at level only with intercept, because after the test of intercept+trends, the results shows no significance of the trends, because trends tends to make the variables not stationary. The result of all the test are presented below on Table 1.

Table 1 RESULTS OF UNIT ROOT TEST AT LEVEL/ INDIVIDUAL INTERCEPT/ INDIVIDUAL INTERCEPT+TRENDS					
At level/ Individual Intercept	Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF- Fisher chi square	PP - Fisher chi square	Hadri Z-stat Null Hypotheses: Stationarity
GDP Growth	0.000*	0.002*	0.006*	0.007*	0.19
Broad Money	0.000*	0.000*	0.000*	0.002*	0.001*
Private Credit	0.009*	0.001*	0.000*	0.000*	0.003*
Interest Spread	0.000*	0.000*	0.000*	0.000*	0.000*
At level/ Individual Intercept+trends	Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF - Fisher chi square	PP- Fisher chi square	Hadri Z-stat Null Hypotheses: Stationarity
GDP Growth	0.000*	0.001	0.138	0.210	0.233
Broad Money	0.000*	0.682	0.000	0.000	0.002
Private Credit	0.000*	0.426	0.000	0.000	0.000
Interest Spread	0.000*	0.0096	0.000	0.000	0.003

*reject of null hypothesis at 1%

Having confirmed by applying panel unit root test that our variable are stationary at level $I(0)$, just for the individual intercept, we don't need cointegration test because this test is useful for long term, meaning that a short run relationship may exist. When no trend, no long-run exists, nothing to explore. Furthermore, when there is no need for cointegration estimation, it is because cointegration would be not useful since the linear combination would hardly emphasize the stationary series⁵. So, VAR can be directly applied. Cointegration and Error Correction models

have not to be applied and not relevant here with Stationary level form data. We make use to test for Autoregression VAR analyses and then test for Granger causality.

From VAR result, represented in appendix A and in (Tables 1-4), can say that most of expected results from the literature are suitable from variable at first lag. Also, after that we need to get the coefficient generated from each of the possible regression. As we can see from the system model, there are 36 coefficients and respectively 36 p-values.

VAR Results

From the Table 1 of estimation method only C3, C4, C5, C6, C8 and C9 are significant.

Equation nr.1⁶

$$\text{GDP_GROWTH_} = \text{C}(3)*\text{BROAD_MONEY}(-1) + \text{C}(4)*\text{BROAD_MONEY}(-2) + \text{C}(5)*\text{PRIVATE_CREDIT}(-1) + \text{C}(6)*\text{PRIVATE_CREDIT}(-2) + \text{C}(8)*\text{INT_SPREAD}(-2) + \text{C}(9)$$

Table 2 ESTIMATION OF COEFFICIENTS OF EQUATIONS 1		
	Coefficient	P-value
C3	0.05	0.0034
C4	-0.067	0.0001
C5	0.12	0.0037
C6	-0.18	0.0001
C8	0.09	0.0178
C9	5.7	0.0001
Prob (F-statistic)		0.000
R - squared	0.59	
Durbin Watson	1.8	

Variables of DM and PC that represents Financial Development (FD) are positively connected with GDP growth, in the first lag respectively by broad money (BM) and private credit (PC). The coefficient shows that when 1 unit increase in private credit (-1), GDP increase with 0.12 units. While 1 unit increase in broad money (-1) affects GDP to increase with 0.05 units. This shows that financial development has a low impact on economic growth in these countries due to the fact of not having a developed functional financial system. Interest spread in first lag is more suitable with results but is insignificant (see Table 1), while interest spread (-2) affect positively GDP with a coefficient 0.09.

Also, BM, at second lag has a negative effect on GDP growth (-0.067). While PC in lag 2 affects in negative way GDP (-0.18). We can conclude that in short term, especially in lag 1, the results are as expected. Model is significant with a probability of F-statistics of 0.000 and with a low R-squared of 59% and Durbin Watson of 1.8 reveals there is no autocorrelations between variables in the equation.

Equation nr. 2

From the Table 2 of estimation method only C12, C13, C14, C15, C18 are significant.

$$\text{BROAD_MONEY} = C(12)*\text{BROAD_MONEY}(-1) + C(13)*\text{BROAD_MONEY}(-2) + C(14)*\text{PRIVATE_CREDIT}(-1) + C(15)*\text{PRIVATE_CREDIT}(-2) + C(18)$$

Table 3 ESTIMATION OF COEFFICIENTS OF EQUATIONS 2		
	COEFFICIENT	P-VALUE
<i>C12</i>		
<i>C13</i>	-	0.0001
<i>C14</i>	0.12	0.0037
<i>C15</i>	-0.18	0.0001
<i>C18</i>	0.09	0.0178
<i>PROB (F-STATISTIC)</i>		0.0000
<i>R - SQUARED</i>	0.94	
<i>DURBIN WATSON</i>	1.857	

Private credit affects positively BM in first lag (0.12) and negatively in second lag (-0.18). Model is significant with probability of F-statistics of 0.000 and with a high R-squared of 94% and Durbin Watson of 1.86 reveals there is no autocorrelations between variables in the equation.

Equation nr.3

From the Table 3 of estimation method only C19, C21, C22, C23, C24 are significant.

$$\text{PRIVATE_CREDIT} = C(19)*\text{GDP_GROWTH_}(-1) + C(21)*\text{BROAD_MONEY}(-1) + C(22)*\text{BROAD_MONEY}(-2) + C(23)*\text{PRIVATE_CREDIT}(-1) + C(24)*\text{PRIVATE_CREDIT}(-2)$$

Broad Money affects positively Private Credit in first lag with a significant coefficient 0.207 while in second lag the impact is negative with -0.19. GDP (-1) affects positively Private Credit with a significant coefficient of 0.63. Model is significant with probability of F-statistics of 0.000 and with a high R-squared of 88% and Durbin Watson of 2.01 reveals there is no autocorrelations between variables in the equation.

Table 4 ESTIMATION OF COEFFICIENTS OF EQUATIONS 3		
	COEFFICIENT	P-VALUE
<i>C19</i>	0.63	0.012
<i>C21</i>	0.207	0.000
<i>C22</i>	-0.19	0.000
<i>C23</i>	1.28	0.004
<i>C24</i>	-0.32	
<i>PROB (F-STATISTIC)</i>		0.000
<i>R-SQUARED</i>	0.88	
<i>DURBIN WATSON</i>	2.01	

Joint Significance Test Through Wald Test

Below are some of the results from Wald test about the fact if the independent variables in their first or second lags from the above equations jointly can cause the dependent variable.

If Broad Money of lag (-1) and (-2) can jointly cause GDP, we must determine the Hypotheses as below Table 5:

$$H_0: C3 = C4 = 0$$

$$H_1: C3 \neq C4 \neq 0$$

Table 5 WALD TEST RESULT 1			
Test Statistic	Value	df	Prob
Chi - square	17.2	2	0.0002

The Wald test results with a p-value=0.0002, meaning that we reject H_0 , accepting that BM jointly influence on GDP Growth.

If Private Credit of lag (-1) and (-2) can jointly cause GDP, we must determine the Hypotheses as below Table 6:

$$H_0: C5 = C6 = 0$$

$$H_1: C5 \neq C6 \neq 0$$

Table 6 WALD TEST RESULT 2			
Test Statistic	Value	df	Prob
Chi - square	17.34	2	0.0002

The Wald test results with a p-value=0.0002, meaning that we reject H_0 , accepting that PC jointly influence on GDP Growth.

If GDP Growth lag (-1) and (-2) can jointly because Broad Money, we must determine the Hypotheses as below Table 7:

$$H_0: C(10) = C(11) = 0$$

$$H_1: C(10) \neq C(11) \neq 0$$

Table 7 WALD TEST RESULT 3			
Test Statistic	Value	df	Prob
Chi - square	1.38	2	0.5

The Wald test results with P-value=0.5 greater than 0.05, we do not reject H_0 , meaning that GDP jointly doesn't not affect BM.

If GDP Growth lag (-1) and (-2) can jointly cause Private Credit, we must determine the Hypotheses as below Table 8:

$$H_0: C(19) = C(20) = 0$$

$$H_1: C(19) \neq C(20) \neq 0$$

Table 8 WALD TEST RESULT 4			
Test Statistic	Value	df	Prob
Chi - square	8.6	2	0.0135

The Wald test results with P-value=0.0135, we do reject H_0 , meaning that GDP jointly does affect Private Credits.

Granger Casuality

Granger causality test can be directly done at level form data without any transformation. According to Granger (1969) method, financial development as an independent variable, Granger Cause the dependent variable economic growth, if past and present values help to predict economic growth (Eita, 2007). The Granger causality test investigates the following hypothesis:

$$H_0: \text{FD Granger does not Granger cause EG}$$

$$H_1: \text{FD Granger does Granger cause EG}$$

Rejection of the null hypothesis implies that current and past lagged values of financial development help predict the current values of economic growth. Also, the opposite is used to test if economic growth causes financial development. Table 9 presents Granger causality results. Running Dumitrescu Hurlin Panel Causality Test we conclude as below:

Table 9 GRANGER CAUSALITY TEST RESULTS <i>Y=F (int, financial proxy)</i>		
Causation		P-value
Bi-directional	Broad Money to GDP	0.000
	GDP to Broad Money	0.002
Un-idirectional	Private credit to GDP	0.000
Bi-directional	Private credit to Broad Money	0.000
	Broad Money to Private credit	0.000
Un-idirectional	Interest Spread to GDP	0.000
	Interest spread to Private Credit	0.000

As we can see from the Table 9, when financial development is represented as broad money (BM), there is a bidirectional causation with GDP growth. While, when financial development is represented as private credit (PC), there is a unidirectional causation to GDP, stating that both BM and PC can affect GDP, but only BM is caused by GDP, no private credit. So, financial development can fully cause GDP, while GDP partially can cause financial development.

What about other variables, we can state that there is bidirectional causation between PC and BM, and interest spread can cause GDP and PC. So, it is important to take in consideration that the level of interest spread cause the level of private credit and causing the economy

CONCLUSION

The objective of this paper is to examines causality between financial development and economic growth for 6 countries of western Balkan for the period of 2005-2019. We employed the vector autoregression VAR approach to conduct Granger causality tests to determine the direction of causality relationship between economic growth and financial development. First, we performed the following test as unit root test for data stationarity and since variables are stationary at level or first difference, we proceed whether with cointegration test for short run or long run relationship between FD and EG. Our results provide evidence of “the supply leading theory” – financial development causes economic growth unidirectional links but there were bi-directional links when financial development was represented by BM and Uni-directional link when financial development is represented by Private credit variable. Also, interest spread effects economy growth. According to the VAR test our findings states a positive relationship of broad money and private credit to GDP only in the first lag, while in the second lag there were a negative effect of broad money and private credit to GDP growth. This result is according to the unit root tests where stationarity of the variables result that were no long cointegration relationship between variables. Private credit has a big effect on GDP rather than broad money. Better policy in lending process (private credit), cause positive and better impact on economy together with broad money. But most importantly, that an increase in economic growth also helps for a better financial intermediation, this only for broad money, savings accounts but not yet for lending, where GDP growth does not cause private credit. An increase in GDP for this region means a response only to investors, who take care of their savings, but we don't see yet a response to borrowing process.

Also, the interest spread variable is significant only in the second lag, resulting in positive relationship with GDP growth. This means that a good profit of banks from interest spread means more contributions of banks on economy even though consumers are penalized. As we can state from the empirical results clients tend to invest more that's why banks apply a low interest in savings accounts or deposits. In the other hand, borrowers have a lower profile to banks, so banks tend to apply a higher interest for the lending process. Important is the fact the that higher interest spread create better possibilities for banks to impact on economy.

In lune with Cojocar, this study highlights the fact that financial development represented by credit growth (0.05) and private credit (0.12) in first lag, positively affect economic growth. This result is in line with Kichler and Haiss, who have found that there is a positive influence of private credit to GDP if it is introduced in regression with two-year lag. From the other side, this shows that financial development has a low impact on economic growth in these countries due to the fact of not having a developed functional financial system.

A first explanation may come from the potential endogenous nature of private credit, especially since the data were correlated for the same year without any delay. Mehl identifies also a significant negative effect of private credit easier for the countries of South-Eastern Europe explaining it that the influence of the financial sector depends on the quality of the economic environment. Western Balkan is part of Southeastern Europe Countries (SEEC) and that is a reason why there are similarities in conclusions, only in second lags.

Another explanation for the negative effect may be low level of financial intermediation in the countries analyzed. D'Alfonso and Moretti show in their paper that the ratio private credit/GDP significantly influence negatively on economic growth in those countries in which this independent variable is low (below 40%). Most of the countries (despite Bosnia Hercegovina and Montenegro) and most of the year taken in study show a low percentage of ratio private credit/GDP.

Also, the negative relationship may lie in the prudent politics applied by banks in allocation of loans to private credit after the financial crisis of 2008. This means, that it is important to focus more on the financial structure to increase the flow of credit to the private sector and increase the financial depth of these countries.

For a sustainable economic growth, government must deepen the financial sector and undertake essential steps for a strong significant long run relationship between financial development and economic growth. These measures with require more financial integration and better financial institutions. Also, in a further study we will include other variables that helps boost the economy as FDI and trade openness. FDI introduce technological innovations and new product help building a better financial intermediation.

Because of non-developing financial system and short time series we cannot conclude for a significant long run cointegration and for solids result in short run for a clear relationship between variables that represent financial development and economic growth.

ENDNOTES

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6. The real results of EViews estimation are on appendix A.

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