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ECONOMIC PERFORMANCE IN POST-DAYTON BOSNIA AND HERZEGOVINA: THE ROLE OF INSTITUTIONAL QUALITY AND FINANCIAL DEEPENING

©*Holicza P.*, ORCID: 0000-0002-7041-698X, Obuda University,
Budapest, Hungary, holicza.peter@rh.uni-obuda.hu

©*Yaroson E. V.*, ORCID: 0000-0003-1780-3566, University of Bradford,
Bradford, United Kingdom, e.v.yaroson@bradford.ac.uk

©*Muminovic Z.*, ORCID: 0000-0001-7262-6879, University of Bologna,
Sarajevo, Bosnia and Herzegovina, zana.muminovic@studio.unibo.it

ЭКОНОМИЧЕСКИЕ ПОКАЗАТЕЛИ В ПОСТ-ДЕЙТОНСКОЙ БОСНИИ И ГЕРЦЕГОВИНЕ: РОЛЬ КАЧЕСТВЕННО ФУНКЦИОНИРУЮЩИХ ИНСТИТУТОВ И НАРАЩИВАНИЯ ФИНАНСОВЫХ АКТИВОВ

©*Холицца П.*, ORCID: 0000-0002-7041-698X, Обудский университет,
г. Будапешт, Венгрия, holicza.peter@rh.uni-obuda.hu

©*Яросон Э. В.*, ORCID: 0000-0003-1780-3566, Брэдфордский университет,
г. Брэдфорд, Великобритания, e.v.yaroson@bradford.ac.uk

©*Муминович З.*, ORCID: 0000-0001-7262-6879, Болонский университет,
г. Сараево, Босния и Герцеговина, zana.muminovic@studio.unibo.it

Abstract. The whole world looked on as the passage of the Dayton Accords resulted in a ceasefire in Bosnia and Herzegovina (BiH), however, the years to follow oversaw protracted conflict fuelled by ethnic tension, government corruption and attempts to create a peaceful economy. Globalization and the potential to build an economy was a significant incentive to motivate actors to work together in the process of rebuilding a stable infrastructure and opening the economy. Although BiH has progressed economically, certain indicators highlight that all is not as it should be. In this paper, therefore we examine the contributions of institutional quality and financial deepening to economic development in a post-conflict area like BiH. Using an endogenous growth model, the evidence suggests that financial deepening and institutional quality are necessary ingredients for economic performance in BiH.

Аннотация. Весь мир стал свидетелем того, как принятие Дейтонских соглашений привело к прекращению огня в Боснии и Герцеговине (БиГ). Однако в последующие годы наблюдается несостыковка между этнической нетерпимостью вкупе с коррупцией в правительстве и попытками создать мирную экономику. Глобализация и существенный потенциал для построения и развития экономики — это стимул для участников экономических отношений скооперироваться для восстановления стабильной инфраструктуры и открытия экономики страны. Хотя в БиГ и наблюдается экономический прогресс, некоторые показатели выявляют, что все не так, как могло бы быть. Вследствие этого, в этой статье мы рассматриваем вклад качественно функционирующих институтов и наращивания финансовых активов в экономическое развитие в постконфликтной ситуации, такой как в БиГ. Исследование с использованием модели эндогенного роста выявляет, что

наращивание финансовых активов и качественно функционирующие институты являются необходимыми составляющими экономической эффективности в БиГ.

Keywords: Economic Development, Bosnia and Herzegovina, Transition Economy, Dayton Accords, Economic Transition.

Ключевые слова: экономическое развитие, Босния и Герцеговина, переходная экономика, Дейтонские соглашения.

Introduction

In post-conflict societies with fewer cross-cutting cleavages, groups are more easily polarised along ethnic, religious, cultural or linguistic gap lines [28]. War-torn states have also been suggested to lack the institutional capacity of successfully managing the economic transition and may, therefore, create conditions for corruption, industrial privatisation on ethical bases and undermine socio-economic growth [35]. Based on the liberal peace theory, the logic of the neoliberal approach to economic development in post-conflict societies in line with economic growth [19, 40]. This implies that neoliberalism is not only necessary for reconstructing an unstable state but broadly speaking, it is associated with peace [19]. Therefore, in seeking to propel economic growth and facilitate national recovery, neoliberal reforms have been suggested as the best formula [2, 6].

In spite of the plausible explanations of institutions and their role in enhancing economic growth, empirical evidence supporting these theoretical assertions remains inconclusive [5]. On one end, some researchers provide empirical evidence that good institutions stimulate economic performance [1, 5, 9], (Kaufman et al.). For instance, M. R. Alam et al. [5] investigates the institutional quality and economic growth on a panel of 81 countries using the GMM technique and find a statistically significant relationship. However, some researchers find empirical evidence that does not support the institutions — growth nexus [43]. D. Acemoglu et al. attempt to explain that the variation in institutional quality on economic growth where the institutional setting varies from country to country and as such, their contribution to economic growth may differ [1]. M. W. Klein supports this argument by explaining that countries with poor institutions may not benefit in terms of development as investors may find these countries to be riskier [31].

More specifically is the contribution of institutions in the development of economies that have suffered various dimensions of conflicts. Although there has been empirical evidence examining this dimension, the evidence remains limited especially in the case of Post-Dayton Bosnia and Herzegovina [16, 44, 45]. The argument for a specific empirical study on the nexus in Bosnia and Herzegovina (BiH) is highlighted by the peculiarities associated with the country as erecting institutions necessary for enhancing growth from a war-torn environment can be herculean. For instance, M. Soberg [38], indicates that the institutions in BiH are weak and have several levels of government with blurred lines, as such official responsibility and accountability may be hampered which militates against economic performance.

Similarly, there has been a vast array of literature trying to examine factors that determine economic development aside from the standard economic models in war-torn countries. Studies have suggested financial development as a determining factor [34]. This stems from the notion that an efficient financial sector moves resources from places of excess to places of shortage through appropriate channels and consequently acts as a major conduit in boosting economic development [3, 17, 46]. In spite of the efforts geared by governments and world bodies to boost efficient financial sectors performance, financial markets and institutions are still failing particularly in conflict-ridden economies (WFI, 2016). The reasons for these failures have been attributed to corporate and securities law institutions, a country's legal origin, its trade openness, and its legacy of colonial endowments [36].

For instance, in a politically stable environment with stringent regulatory requirements, the banks will be able to efficiently take deposits and make loans by removing asymmetric information and reduce transaction costs. Also, investors in a financial market can confidently invest in the market with minimum fear of uncertainty. But a politically unstable environment breeds uncertainty both in the economy and the regulatory policies guiding the financial sector. Hence banks will find it hard to screen good creditors from the bad ones and investors may also find it difficult to decide viable portfolios. More so, constant change in government officials as a result of political instability can deter financial deepening through constant changes in policies that may not see the light of the day. Similarly, R. Aidis et al. highlight that heavily regulated economies have lower rates of market entry which distorts economic performance [4, 21]. For instance, when there are complex tax processes outside advisors may be employed to comply with tax regulations, thereby raising their costs and prohibiting economic enhancement.

Examining the link between financial development as well as institutional quality on economic development particularly in BiH is essential as the country has suffered a series of conflicts [41]. Although the country witnessed average annual private credit growth of about 20% prior to the financial crises, these positive events experienced a downturn by the end of 2009. Since then, domestic credit growth has averaged between 2% and 3% annual where access to finance remains a restriction for the development of businesses as well as economic growth (World Bank, 2017). The financial system in BiH has been rated as generally sound (World Bank, 2017). However, considerable patches of vulnerability still exist, calling for a strengthened institutional, regulatory, and supervisory framework. Also, given a current population of about 3.8 million based on the latest United Nations estimates (2017) and approximately 1.7 million Bosnians who live abroad (mostly in Croatia, Serbia, Germany, Austria, the US and Slovenia) the migrant remittance inflows to BiH account for about 1870 million US\$ — the 11.3% of the country's GDP (World Bank, 2016). As the following table shows, emigrated Bosnians have an extreme contribution to the homeland (and its economy) from every part of the world, not even comparable to the remittance outflow of the country that sums up to 52 million US\$ according to the World Bank (in 2015). In case of the remittance flows, Croatia and Serbia are the most important regional 'donor' countries, and at the same time leading the Bosnian outflow statistics as well.

Table 1.

REMITTANCE FLOW TO/FROM BOSNIA AND HERZEGOVINA IN 2015

<i>Countries</i>	<i>Remittance inflow to BiH (millions of US\$)</i>	<i>Remittance outflow from BiH (millions of US\$)</i>
Croatia	557,3	16,9
Serbia	311,8	13,4
Germany	212,5	1,2
Austria	192,7	1
United States	175,6	0
Slovenia	144,5	4,9
Switzerland	76,3	0
Sweden	72,7	0
Australia	50,5	0
Canada	41,6	0

Source: World Bank, 2016.

G. Krstić and P. Sanfey suggest that uncertainty may stem from the unavailability of records by the office of statistics as a result of the turbulent recent past and from the pre-war years when BiH was part of former Socialist Federal Republic of Yugoslavia (SFRY) [33]. Under Tito, who

ruled the SFRY from the end of World War II until his death in 1980, BiH was a centre of military production and a place where many heavy industries were located. The result was a rather distorted economy that, even in the absence of conflict, would have been ill-equipped to cope with the twin challenges of independence and transition. The outbreak of the war in spring 1992 and the subsequent conflict over the following three-and-a-half years left the economy in ruins and necessitated a massive reconstruction effort following the signing of the Dayton Peace Accord in late — 1995 [20, 33, 38].

Since 1996, the BiH economy has been undergoing a transition to a market economy. A relatively robust recovery has taken place [26]. Real GDP is now estimated at 70% of the 1989 level, inflation has been at low single-digit levels for several years, the currency board is functioning smoothly, and government spending has been brought under much greater control than before [33]. However, the inheritance of an industrialized and militarized economy, allied to the difficulties of post-war adjustment in a heavily aid-dependent environment. As a result, the pace of privatization, especially of large enterprises, was extremely slow. Even now, BiH lags behind the rest of the region in terms of privatization, and new opportunities for private sector activity are still limited. Both agriculture and industry have declined as a share of GDP in the post-war period, with heavy deindustrialization occurring in the Republika Srpska (RS) (World Bank, 2017).

To the best of our knowledge, this is the first paper that examines this nexus in post-Dayton Bosnia and Herzegovina. This section provides an overview of the research while incorporating a relevant review of the literature. The next section presents the methodologies used in examining the research hypothesis, and the discussions follow. The study is concluded in section four with necessary recommendations and implications.

Institutional Quality and Economic Growth in Post-Dayton Bosnia and Herzegovina: Hypothesis and Literature

The role of institutional quality in accounting for economic growth has received increased attention in the last decade [12, 24, 31]. The debate focuses on elements that are appropriate in erecting sustainable institutions necessary for propelling growth. For instance, J. L. Butkiewicz and H. Yanikkaya highlight the importance of the rule of law in developing institutional quality [12]. The argument here is that if a country adheres to its rule of law through eliminating corruption as well as maintaining the property rights of its citizens then there will be institutional reforms capable of facilitating growth [47]. More so, the enforcement of property rights portrays a step towards a free market economy [48].

More specifically is the case for a post-conflict economy like BiH. Although the economy has experienced significant growth with regards to economic reforms and institutions, it still suffers from pockets of poor institutional infrastructure. For instance, M. Soberg, highlights the level of corruption in BiH, which is propelled by poverty, power-sharing arrangements and high continued unemployment [38]. Transparency International report ranks BiH out of 180 countries, 80 in 2016 and 91 in 2017 respectively (Transparency, International, 2017). GAN (2015) identifies corruption as a serious obstacle in almost all facets of BiH economy with emphasis on public procurement, nepotism and patronage networks. Arguing that even though the criminal code is set up to penalize various forms of corruption, these laws are however rarely enforced.

Corruption has been documented to hinder social services, diverts investments in infrastructure. The argument is that institutions perform better if they are under pressure from a watchful public and corruption hampers economic performance (Mauro, 1995). However, for the country to have a sustainable economy, its institutions must be reformed to a state capable of meeting the nations' domestic obligation [38]. This is imperative, as studies suggest that countries

that lack strong institutions have higher chances of being prone to conflicts and crises which invariably lower economic performance. In this study, institutional quality in post-conflict BiH lays emphasis on the absence of corruption, political stability, and control of corruption and the quality of regulations.

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The relationship between financial development and economic growth has been well documented in literature using either time series data, panel or cross-sectional data [8, 11, 24, 30, 34, 37]. The underlying notion here is that the financial sector aids in moving money from areas of excess to areas of scarcity through appropriate channels and thus facilitates growth. Therefore, by developing and providing a better assortment of financial tools, optimistic results are bred on the saving-investment procedure which has a great impact on economic growth [34].

The positive outlook of finance and growth has however been highlighted as restrictive in the presence of financial repression [25, 34]. Financial repression here implies the existence of factors that militate against the expansion of financial systems. These factors include; interest rate controls, the degree of trade openness, high reserve requirements, inflationary measures and directed credit programs. These are classed as governments' interventions and are common in developing countries, as the government of these economies seek ways to finance fiscal deficits without increasing tax [25]. However, these actions decrease the incentives to hold money and other financial assets, thereby reducing the number of credit investors have access to.

Therefore, financial repression inhibits the size of the banking system and the financial system as a whole (Keynes, 1936). In line with the financial repressions' ideology, R. Levine theorizes that nations with well-developed financial system experience faster growth, explaining that improvement of the financial institution's and services such as financial innovation, expanding the level of the banking segment as well as making financial infrastructures available provides prolific avenue for efficient allocation of resources, reduces asymmetric information and significantly increases growth. This invariably means that the limiting measures to financial deepening have been taken care of [34].

McKinnon (1973) on the other hand assumes that most investments in developing economies stem from the accumulation of savings in form of bank deposits rather than from credits granted by financial institutions. This is however contrary to BiH as most of its bank's deposits between 1996 and 2007, were from foreign borrowings and supranational institutions funding a source which fuelled and sustained the credit boom in the region [49]. The financial crisis in 2008, however, reduced the global liquidity as well as cross-border banking, thereby exposing the financial sector vulnerabilities inherent in BiH and a call for more sustainable financial structures [49]. Although BiH is still dealing with the aftermath of a global crisis, about 83% of its banks are still owned by foreign firm's and the CBBH does not have the Lender of Last Resort function. The World Bank approved a €56.60 million loan, to aid in strengthening the institutions in the financial sector.

Empirical literature exploring the contribution of the financial sector in propelling economic performance in BiH is however limited, as existing studies have sought to focus on finance and growth in transition economies as a whole. For instance, L. Cojocaru et al. (2016) examined the relationship between financial development and growth in transition economies for the first two decades after the transition, the study finds financial market efficiency as necessary in promoting growth [18]. Similarly, I. Hasan et al. (2009) use panel data from Chinese provinces in exploring the link between legal institutions, financial deepening and growth rates [24]. The study finds that institutional development, financial sector development and the liberalization of political

institutions are essential in contributing to growth. Other studies that have provided empirical evidence linking political institutions, financial development and economic performance [11, 13, 32].

Given the peculiarities of BiH which includes its conflict, it is therefore imperative to examine if its steps towards erecting institutions may have an impact on its economic performance. We, therefore, propose that erecting good institutions, which include financial institutions as well as a good governance mechanism, are pertinent in fostering economic prosperity in Post-Dayton Bosnia and Herzegovina. If this assertion stands correct, then this paper contributes to existing literature, by assessing financial development from a war-torn economy.

Methods

Econometric estimation

Two hypotheses are constructed in this study. The first is that institutional quality promotes economic growth even in post-conflict states. We are not seeking to establish a spurious correlation but to confirm existing assertions of the role of institutions in accounting for growth. In investigating the contributions of the institutional quality and financial deepening to economic development in BiH, the study adopts the endogenous growth model [9]. The model is however augmented to achieve the research objectives [24]. The model formulated is presented below:

$$y_t = \alpha_t + \beta FD_t + \gamma X_t + \delta Z_t + \varepsilon_t \quad (1)$$

Where y_t denotes economic development, FD_t represents financial deepening indicators, X is a vector of controls variables which account for growth (population, human capital, trade and investment) δ denotes institutional quality and ε is the error term. The variables are presented in their natural logarithm form. Equation (2) is presented to test the underlying hypothesis proposed in this study [25].

$$LN GDPPC_t = \alpha_1 + \beta_2 LN POP + \beta_3 LN GFCF + \beta_4 LN HC + \beta_5 LN BM + \beta_6 LN INSTQ + \beta_7 LN DCP \quad (2)$$

GDP per capita (GDPPC) is employed as a measure for economic performance [9, 10, 15]. Data for GDPPC, Trade, and Gross Fixed Capital Formation are gathered from the World Bank Development Indicators (World Bank, 2017). Institutional quality dataset as assembled from the World Governance Indicators (WGIs) by Kauffman et al. The sample period was from 1996 through to 2016. Kauffman et al. developed these indices using information gathered from a wide array of cross country surveys as well as polls expert. By employing the unobserved component model, authors were able to determine coverage of over 200 countries for each governance indicator. Six governance indicators were constructed through their data collection each indicator (rule of (RL) estimates, control of (CC), political stability (PS) and government regulatory requirements (RQ), representing different dimensions of institutional quality. In this study, however, we develop a single proxy for institutional quality by calculating the weighted average of the rank percentile of all indicators (Law et al., 2013). The sample time frame from 1996–2016 was based on data availability, however the time frame cover periods of the global financial crises and the beginning of the Dayton peace treaty agreements signed on the 21st of November 1995 [20].

For financial development indicators, the study employed two banking development indicators which are aimed at measuring the depth and breadth: Private sector credit as a share of GDP as it measures the amount of credit the private sector accounts for in channelling for investments as well as the activities of the banking sector. it measures the quality and quantity of investment. This index isolates credit provided by the government and other development banks and this can also be seen as a shortfall [3, 13, 14, 16, 22, 23, 34, 36]. The second is broad money which

attempts to calculate the total amount of money supplied to the economy. The data for measuring stock market development was insufficient as so was dropped from the equation. Data for financial development is gathered from the World Bank Development Index Database (WDI, 2017).

Trade openness is employed in measuring the volume of trade in the economy. This study employs trade as a proportion of GDP. The underlying notion here is that an increase in the volume of trading activities would promote economic growth as it increases the variety of goods and services, which in turn increases consumer spending habit and propels economic advancement [29]. Removing trade barriers, which would give rise to a higher degree of trade openness, is likely to have a positive influence on economic performance as it entails opening up the economy to global activities [7]. This is a policy controlling variable, as such the higher the level of trade openness the higher the economic growth (Ulasan, 2015).

Econometric Techniques

In this study, we estimate equation (2) using a two-step approach. We do not take the average for GDPPC in measuring growth to preserve the information of the sample. We begin the analysis by examining the unit roots tests. Here, the Augmented Dickey-Fuller (ADF) and the Philip Peron (PP) test are employed to test the stationary properties of the data. Next, the OLS method is used where the first model measures only growth given the sample frame, then the financial development variables are introduced and finally the institutional quality variables.

In controlling for endogeneity that may arise in the analysis as some studies find a positive link between institutional quality and financial development (Law and Azman-Saini, 2012), the Vector Auto Regression (VAR) model introduced by Sim (1980) is employed. The VAR process has also been suggested to be efficient when the sample time frame is small as in this study (1996–2016).

VAR models elucidate endogenous variables based solely on their own history, apart from deterministic regressors (Pfaff, 2008). In its basic form, a VAR is made up of K endogenous variables.

$$\gamma_t = (\gamma_{1t}, \dots, \gamma_{kt}, \dots, \gamma_{Kt}) \text{ for } k=1 \dots K.$$

The VAR (p)-process is therefore defined as:

$$\gamma_t = A_1 \gamma_{t-1} + \dots + A_p \gamma_{t-p} + \dots + u_t \tag{3}$$

Here A_i are vector ($K \times K$) coefficients for the matrices for $i= 1 \dots p$ and u_t is a K-dimensional process with $E(u_t) = 0$ and time-invariant positive definite covariance matrix $E(u_t u_t^T) = \sum u_t$ (white noise).

An essential feature of the VAR — process is its stability. This implies that the VAR process produces stationary time series data through time-invariant ways, variances as well as covariance structure is given sufficient initial values. This can be checked through the evaluation of its polynomials. In practice, the stability of an empirical VAR (p)-process can be analysed by considering the companion form and calculating the Eigenvalues of the coefficient matrix. The estimation of a VAR (p) model opens up an avenue for further analysis such as the impulse response function and the forecast error variance decomposition. In this study, the impulse response function (IRF) which is based on the Wold's moving average decomposition for a stable VAR process is used. This is defined below:

$$\gamma_t = \varphi_0 u_t + \varphi_1 u_{t-1} + \varphi_2 u_{t-2}$$

The Akaike selection criterion was used to determine the appropriate lag length. The findings of the data analysis are presented in the next section.

Results and Discussion

Table 2 below, presents the summary of statistics we have used and defined previously, while Table 3 presents the results of the tests we applied.

Table 2.

SUMMARY STATISTICS

<i>Variables</i>	<i>Obs.</i>	<i>Mean</i>	<i>S. Deviation</i>	<i>Min.</i>	<i>Max.</i>
LNGDPPC	21	8.2281	0.03061	7.4179	8.5765
LNPOP	21	15.128	0.02390	15.07307	15.14564
LNLAB	21	14.165	0.02973	14.1201	14.2149
LNTRADE	21	4.5696	0.13625	4.301397	4.8336
LNGFCF	21	2.3060	0.22664	2.8309	3.5327
LNDCP	21	3.848	0.23317	3.2639	4.0982
LNBM	21	3.761	0.37135	3.0910	4.2338
LNINSTQ	21	3.622	0.13386	5.18867	5.617

Source: Stata 14.

Table 3 below presents the OLS regression for the estimated model. Column one is the model for the endogenous growth model, whilst column two and three present model two where institutional quality is introduced into the model as well as financial development as intervening variables. The analysis shows that trade (LNTRADE) and investment (LNGFCF) do not contribute to growth in all three models. Possible explanation may be attributed to the poor institutional infrastructures where investors may consider the investment in the country highly risky [5]. The study finds financial development indicator (LNBM) broad money statistically significant and hence highlights its role in accounting for economic growth. This implies that the total money in supply from the various foreign banks is a tool in accounting for growth. Model three, however, depicts a negative relationship between the amount of money available to the private sector and economic growth. This is in line with McKinnon (1973) theory on financial repression where money available in the bank are highly regulated as a result of financial repression.

The inverse relationship between institutional quality and economic growth may be attributed to the fact that the country has emerged from political turmoil's as its institutions may be poorly erected and may not necessarily contribute to the performance of the economy. These findings are however not statistically significant and therefore calls for a more robust analysis. The analysis also shows that financial development is positive and statistically significant in its effect on economic performance. Therefore a 1% increase in financial development leads to a 12% increase in economic output. The result also reveals that governance indicators as measured by rule of law and regulatory requirements have the statistically positive significant impact on economic growth. Hence an increase in institutional governance of promotes growth in BiH. This finding is in consonance with the study by J. L. Butkiewicz and H. Yanikkaya [12], who provide empirical evidence that suggests that the rule of law as a necessary ingredient in promoting growth. G. M. Hodgson opines that while it is suitable for all economies to embrace the neo-liberal policies, its effect on developing economies may be a lot slower [27]. However, the use of OLS presents estimation bias, therefore a robustness check is carried out using the VAR process.

Table 3.

OLS output

<i>Variables</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
LNPOP	-5.4384 (0.001) ***	-5.9465 (-0.050)	-5.8300 (0.059) *
LNLAB	7.203 (0.000) ***	6.694 (0.014) **	6.819067 (0.015) **
LNTRADE	0.41729 (0.256)	0.3606 (0.232)	0.3879 (0.212)
LNGFCF	-0.0036 (-0.017)	0.04001 (0.864)	0.01142 (0.962)
LNDCP		-0.313011 (0.199)	-0.28587 (-1.20)
LNBM		0.27084	0.3425 (0.094) *
LNINSTQ			-0.258842 (-0.74)
C	-12.32702 (0.622)	1.77076 (-47.15)	-1.076 (0.964)
R ²	0.8880	0.9372	0.9073
F	31.71	34.79	28.95
Prob. (F)	0.000	0.000	0.000
Durbin Watson	1.987		1.981

Source: own data, STATA 14, The values in parenthesis are the p values ***, **, * denotes 1%, 5% and 10% significance level.

Vector Auto Regression

Table 4 below presents the results of the VAR process for equation (2) estimated above. The analysis shows that broad money (LNBM) and institutional quality account for growth in BiH. Although these are statistically significant, their impact is regarded as relatively low. The IRF shows the contribution of each variable to GDP.

Table 4.

VAR		
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>
LNGDPPC (-1)	0.625129	(0.06179) ***

		[10.1169]
LNPOP	0.56892	(0.74429) [0.76438]
LNLAB	-0.748098	(0.71704) [-1.04331]
LNINSTQ	0.1606	(0.0808) * [1.98834]
LNGFCF	-0.023424	(0.05397) [-0.43404]
LNDCP	0.091935	(0.05815) [1.58087]
LNBM	0.156826	(0.04813) ** [3.25852]
LNTRADE	-0.074502	(0.07117) [-1.04679]
C	4.016630	(5.84100) [0.68766]
R-squared	0.995803	
Adj. R-squared	0.992751	
Sum sq. resids	0.004967	
S.E. equation	0.021249	
F-statistic	326.2346	
Log likelihood	54.62848	
Akaike AIC	-4.562848	
Schwarz SC	-4.114769	
Mean dependent	8.269313	
S.D. dependent	0.249566	

Source: Stata 14 (*, **, *** denotes significance at 10%, 5% and 1% respectively), ([]) represents the t statistics.

The analysis shows that there is at least one co-integrating relationship at 5%. The causality tests confirm a single direction relationship running from broad money to economic performance. This means that financial performance is a propellant of economic growth [30]. As a post-structuralist and a post socialist's state, BiH has not only had to contend with democratizing its economy but also liberalizing it. The findings suggest that these policies in place have made an impact on the country's economy. However, the impact is seen minimal as more efforts are needed if a neoliberal state is expected. For instance, the analysis finds political stability as insignificant in

contributing to economic growth, in examining the institutional quality of the country. This may imply issues of intertwining economic reforms with ethnic conflict.

Conclusions

The aim of this study was to assess the impact of financial development on economic performance. The need for this was called upon as Bosnia and Herzegovina has a heavy reliance on external aid for economic and political stabilization. Similarly, BiH has the highest unemployment rate in Europe which has been attributed to corruption, government instability, tax burden, organized crime and theft [42]. This study thus seeks to assess the role institutional quality plays in accounting for economic performance in BiH.

Our findings clearly demonstrate the contribution of institutional quality and financial deepening in accounting for economic performance in BiH. This is measured when broad money is employed in assessing the extent of development of the financial sector as well as a regulatory requirement which is used in measuring institutional quality. This implies that BiH needs to adopt strategies to boost economic growth so that it can facilitate financial development

Similarly, although BiH had made significant (peace) economic progress, its policy should not simply be concerned with general economic growth and poverty reduction, but with a specific type of growth which addresses imbalances [2]. By taking the social side into account, several studies show minimal or no relationship between economic growth and peace. As A. Suhkre and J. Buckmaster state, high and steady economic growth was not sufficient, neither a necessary precondition for peace, based on their case study on seven different post-conflict societies [39]. The latest steps and efforts taken by the Government might show a different direction, the way out of the actual situation, as the country formally requested to join the European Union in February 2016. Beside institutional and governance reforms, most analysts see it as a tool to introduce the society into a new identity. Thus, considering the two separate autonomous entities; a Federation of Bosnia and Herzegovina, and Republika Srpska, it is difficult to believe in such thing as common Bosnian identity. Therefore, a broader perception, a European identity could be an option, a unifying force in the future.

Sources:

1. Central Intelligence Agency (2017), The World Factbook, Bosnia and Herzegovina: <https://clck.ru/FLYoB>. Accessed: 15.08.2018.
2. GAN, (2016). Bosnia & Herzegovina Corruption Report: <https://clck.ru/FLYnh>. Accessed: 15.12.2018.
3. Kaufmann, D. Kraay, A. and Mastruzzi, M., (2017). Governance Matters VII: Aggregate and Individual Governance Indicators, 1996–2014: <https://clck.ru/FLYoT>. Accessed: 15.09.2018.
4. World Bank, (2016). Migration and Remittances Data: <https://clck.ru/FLYpS>. Accessed: 01.09.2018.
5. World Bank, (2017). World Development Indicators (WDI) 2017, International Bank for Reconstruction and Development. The World Bank: <https://clck.ru/FLYoT>. Accessed: 15.09.2018.
6. Arcotrass-Consortium. (2006). Study on the state of agriculture in five applicant countries. Country Report: Serbia Country Report.

References:

1. Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, 1, 385-472.
2. Ahearne, J. (2009). Neoliberal Economic Policies and Post-Conflict Peace-Building: a Help or Hindrance to Durable peace?. *Polis journal*, 2, 1-44.

3. Ahuja, S. (2016). Economic Growth, Financial Development & Financial Determinants: A Relationship. *International Journal of Research in Finance and Marketing*, 6(9), pp.55-59.
4. Aidis, R., Estrin, S., & Mickiewicz, T. M. (2012). Size matters: entrepreneurial entry and government. *Small Business Economics*, 39(1), 119-139.
5. Alam, M. R., Kiterage, E. & Bizuayehu, B., (2017). Government effectiveness and economic growth. *Economic Bulletin*, 37(1), 222-227.
6. Andrieu, K. (2010). Civilizing peacebuilding: Transitional justice, civil society and the liberal paradigm. *Security Dialogue*, 41(5), 537-558.
7. Ang, J. B. (2008). Economic development, pollutant emissions and energy consumption in Malaysia. *Journal of Policy Modeling*, 30(2), 271-278.
8. Asteriou, D., & Spanos, K. (2018). The relationship between financial development and economic growth during the recent crisis: Evidence from the EU. *Finance Research Letters*.
9. Barro, R. J. (1991). Economic growth in a cross section of countries. *The quarterly journal of economics*, 106(2), 407-443.
10. Barro, R. J. (2001). Human capital and growth. *American economic review*, 91(2), 12-17.
11. Beck, T. & Laeven, L. (2006). Institution building and growth in transition economies. *Journal of Economic Growth*, 11(2), 157-186.
12. Butkiewicz, J. L., & Yanikkaya, H. (2006). Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both?. *Economic Modelling*, 23(4), 648-661.
13. Caporale, G. M., Rault, C., Sova, A. D., & Sova, R. (2015). Financial development and economic growth: Evidence from 10 new European Union members. *International Journal of Finance & Economics*, 20(1), 48-60.
14. Caporale, G. M., Rault, C., Sova, R., & Sova, A. (2009). Financial development and economic growth: Evidence from ten new EU members.
15. Cecchetti, S. G., & Kharroubi, E. (2015). Why does financial sector growth crowd out real economic growth?.
16. Cherif, M. and Dreger, C., (2016). Institutional determinants of financial development in MENA countries. *Review of Development Economics*, 20(3), 670-680.
17. Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of development economics*, 81(1), 163-192.
18. Cojocaru, L., Falaris, E. M., Hoffman, S. D., & Miller, J. B. (2016). Financial system development and economic growth in transition economies: New empirical evidence from the CEE and CIS countries. *Emerging Markets Finance and Trade*, 52(1), 223-236.
19. Collier, P. (2003). *Breaking the conflict trap: Civil war and development policy*. World Bank Publications.
20. Daalder, I. H. (2014). *Getting to Dayton: the making of America's Bosnia policy*. Brookings Institution Press.
21. Estrin, S., Korosteleva, J., & Mickiewicz, T. (2013). Which institutions encourage entrepreneurial growth aspirations? *Journal of business venturing*, 28(4), 564-580.
22. Ghirmay, T., 2004. Financial Development and Economic Growth in Sub-Saharan African Countries: Evidence from Time Series Analysis. *African Development Review*, 16(3), pp.415-432.
23. Greenwood, J., Sanchez, J. M., & Wang, C. (2013). Quantifying the impact of financial development on economic development. *Review of Economic Dynamics*, 16(1), 194-215.
24. Hasan, I., Wachtel, P., & Zhou, M. (2009). Institutional development, financial deepening and economic growth: Evidence from China. *Journal of Banking & Finance*, 33(1), 157-170.

25. Hermes, N., & Lensink, R. (2013). *Financial development and economic growth: theory and experiences from developing countries*. Routledge.
26. Hoare, M. A. (2007). *The history of Bosnia: from the Middle Ages to the present day*. Saqi Books.
27. Hodgson, G. M. (2017). Institutions, Democracy and Economic Development: On Not Throwing out the Liberal Baby with the Neoliberal Bathwater. In *Democracy and an Open-Economy World Order*. 51-63.
28. Holicza, P. (2016). Convergence of Ideas?: Analysing Fukuyama's and Huntington's Concepts of the Future. *Economics*, 5, 6th. 663-669.
29. Igan, M. D. O., Kutan, A. M., & Mirzae, A. (2017). *Real effects of capital inflows in emerging markets*. International Monetary Fund.
30. King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The quarterly journal of economics*, 108(3), 717-737.
31. Klein, M. W. (2005). Capital account liberalization, institutional quality and economic growth: theory and evidence. *National Bureau of Economic Research*, (w11112).
32. Krasniqi, B. A., & Desai, S. (2016). Institutional drivers of high-growth firms: country-level evidence from 26 transition economies. *Small Business Economics*, 47(4), 1075-1094.
33. Krstić, G., & Sanfey, P. (2007). Mobility, poverty and well-being among the informally employed in Bosnia and Herzegovina. *Economic Systems*, 31(3), 311-335.
34. Levine, R., & Zervos, S. J. (1993). What we have learned about policy and growth from cross-country regressions?. *The American Economic Review*, 83(2), 426-430.
35. Pugh, M. (2005). The political economy of peacebuilding: a critical theory perspective. *International journal of peace studies*, 10(2). 23-42.
36. Roe, M., & Siegel, J. (2008). Political instability's impact on financial development. *Harvard Law and Economics Discussion Paper*, (570).
37. Škare, M., Sinković, D., & Porada-Rochoń, M. (2019). Financial development and economic growth in Poland 1990-2018. *Technological and Economic Development of Economy*, 25(2), 103-133.
38. Søbørg, M. (2008) The quest for institutional reform in Bosnia and Herzegovina. *East European Politics and Societies*, 22(4). 714-737.
39. Suhrke, A., & Buckmaster, J. (2006). Aid, growth and peace: a comparative analysis. *Conflict, Security & Development*, 6(3), 337-363.
40. Uvalić, M. (2019). Economic Integration of the Western Balkans into the European Union: The Role of EU Policies. In: *The Europeanisation of the Western Balkans (pp. 207-235)*. Palgrave Macmillan, Cham.
41. Weller, M., & Wolff, S. (2006). Bosnia and Herzegovina ten years after Dayton: Lessons for internationalized state building. *Ethnopolitics*, 5(1), 1-13.
42. Zupcevic, M., & Causevic, F. (2009). Case Study: Bosnia and Herzegovina. *Philip Oxhorn Part 1: Case Studies*, 10.
43. Quibria, M.G., (2006), Does Governance Matter? Yes, No or Maybe - Some Evidence from Developing Asia, No 02-2006, Working Papers, Singapore Management University, School of Economics, <https://EconPapers.repec.org/RePEc:siu:wpaper:02-2006>.
44. Huang, Yongfu and Temple, Jonathan R.W., Does External Trade Promote Financial Development? (July 2005). CEPR Discussion Paper No. 5150. Available at SSRN: <https://ssrn.com/abstract=785244>.
45. Huang Yongfu, 2012. "Is Economic Volatility Detrimental to Global Sustainability?," World Bank Economic Review, World Bank Group, vol. 26(1), pages 128-146.

46. Mishkin F. S. (2006). The Next Great Globalization How Disadvantaged Nations Can Harness Their Financial Systems to Get Rich. 320.

47. Haggard, Stephan and Tiede, Lydia, (2011), The Rule of Law and Economic Growth: Where are We?, World Development, 39, issue 5, p. 673-685, <https://EconPapers.repec.org/RePEc:eee:wdevel:v:39:y:2011:i:5:p:673-685>.

48. North, D., & Weingast, B. (1989). Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England. The Journal of Economic History, 49(4), 803-832. Retrieved from <http://www.jstor.org/stable/2122739>.

49. Hasanovic E. & Latic T., 2017. "The Determinants of Excess Liquidity in the Banking Sector of Bosnia and Herzegovina," IHEID Working Papers 11-2017, Economics Section, The Graduate Institute of International Studies.

Список литературы:

1. Acemoglu D., Johnson S., Robinson J. A. Institutions as a fundamental cause of long-run growth // Handbook of economic growth. 2005. V. 1. P. 385-472.

2. Ahearne J. Neoliberal Economic Policies and Post-Conflict Peace-Building: a Help or Hindrance to Durable peace? // Polis journal. 2009. V. 2. P. 1-44.

3. Ahuja S. Economic Growth, Financial Development & Financial Determinants: A Relationship // International Journal of Research in Finance and Marketing. 2016. V. 6. №9. P. 55-59.

4. Aidis R., Estrin S., Mickiewicz T. M. Size matters: entrepreneurial entry and government // Small Business Economics. 2012. V. 39. №. 1. P. 119-139.

5. Alam M. R., Kiterage E., Bizuayehu B. Government effectiveness and economic growth // Economic Bulletin. 2017. V. 37. №1. P. 222-227.

6. Andrieu K. Civilizing peacebuilding: Transitional justice, civil society and the liberal paradigm // Security Dialogue. 2010. V. 41. №. 5. P. 537-558.

7. Ang J. B. Economic development, pollutant emissions and energy consumption in Malaysia // Journal of Policy Modeling. 2008. V. 30. №. 2. P. 271-278.

8. Asteriou D., Spanos K. The relationship between financial development and economic growth during the recent crisis: Evidence from the EU // Finance Research Letters. 2018.

9. Barro R. J. Economic growth in a cross section of countries // The quarterly journal of economics. 1991. V. 106. №. 2. P. 407-443.

10. Barro R. J. Human capital and growth // American economic review. 2001. V. 91. №. 2. P. 12-17.

11. Beck T., Laeven L. Institution building and growth in transition economies // Journal of Economic Growth. 2006. V. 11. №. 2. P. 157-186.

12. Butkiewicz J. L., Yanikkaya H. Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? // Economic Modelling. 2006. V. 23. №. 4. P. 648-661.

13. Caporale G. M., Rault C., Sova A. D., Sova R. Financial development and economic growth: Evidence from 10 new European Union members // International Journal of Finance & Economics. 2015. V. 20. №. 1. P. 48-60.

14. Caporale G. M., Rault C., Sova R., Sova A. Financial development and economic growth: Evidence from ten new EU members. 2009.

15. Cecchetti S. G., Kharroubi E. Why does financial sector growth crowd out real economic growth?. 2015.

16. Cherif M., Dreger C. Institutional determinants of financial development in MENA countries // *Review of Development Economics*, 2016. V. 20. №. 3. P. 670-680.
17. Chinn M. D., Ito H. What matters for financial development? Capital controls, institutions, and interactions // *Journal of development economics*. 2006. V. 81. №. 1. P. 163-192.
18. Cojocaru L., Falaris E. M., Hoffman S. D., Miller J. B. Financial system development and economic growth in transition economies: New empirical evidence from the CEE and CIS countries // *Emerging Markets Finance and Trade*. 2016. V. 52. №. 1. P. 223-236.
19. Collier P. *Breaking the conflict trap: Civil war and development policy*. World Bank Publications, 2003.
20. Daalder I. H. *Getting to Dayton: the making of America's Bosnia policy*. Brookings Institution Press, 2014.
21. Estrin S., Korosteleva J., Mickiewicz T. Which institutions encourage entrepreneurial growth aspirations? // *Journal of business venturing*. 2013. V. 28. №. 4. P. 564-580.
22. Greenwood J., Sanchez J. M., Wang C. Quantifying the impact of financial development on economic development // *Review of Economic Dynamics*. 2013. V. 16. №. 1. P. 194-215.
23. Ghirmay, T., 2004. Financial Development and Economic Growth in Sub-Saharan African Countries: Evidence from Time Series Analysis. *African Development Review*, 16(3), pp.415-432.
24. Hasan I., Wachtel P., Zhou M. Institutional development, financial deepening and economic growth: Evidence from China // *Journal of Banking & Finance*. 2009. V. 33. №. 1. P. 157-170.
25. Hermes N., Lensink R. *Financial development and economic growth: theory and experiences from developing countries*. Routledge, 2013.
26. Hoare M. A. *The history of Bosnia: from the Middle Ages to the present day*. Saqi Books, 2007.
27. Hodgson G. M. *Institutions, Democracy and Economic Development: On Not Throwing out the Liberal Baby with the Neoliberal Bathwater* // *Democracy and an Open-Economy World Order*. Springer, Cham, 2017. P. 51-63.
28. Holicza P. Convergence of Ideas?: Analysing Fukuyama's and Huntington's Concepts of the Future // *Economics*. 2016. V. 5. P. 663-669.
29. Igan M. D. O., Kutan A. M., Mirzae A. *Real effects of capital inflows in emerging markets*. International Monetary Fund, 2017.
30. King R. G., Levine R. Finance and growth: Schumpeter might be right // *The quarterly journal of economics*. 1993. V. 108. №. 3. P. 717-737.
31. Klein M. W. Capital account liberalization, institutional quality and economic growth: theory and evidence. National Bureau of Economic Research. 2005. №. w11112.
32. Krasniqi B. A., Desai S. Institutional drivers of high-growth firms: country-level evidence from 26 transition economies // *Small Business Economics*. 2016. V. 47. №. 4. P. 1075-1094.
33. Krstić G., Sanfey P. Mobility, poverty and well-being among the informally employed in Bosnia and Herzegovina // *Economic Systems*. 2007. V. 31. №. 3. P. 311-335.
34. Levine R., Zervos S. J. What we have learned about policy and growth from cross-country regressions? // *The American Economic Review*. 1993. V. 83. №. 2. P. 426-430.
34. Pugh M. The political economy of peacebuilding: a critical theory perspective // *International journal of peace studies*. 2005. V. 10. №. 2. P. 23-42.
36. Roe M., Siegel J. Political instability's impact on financial development // *Harvard Law and Economics Discussion Paper*. 2008. №. 570.

37. Škare M., Sinković D., Porada-Rochoń M. Financial development and economic growth in Poland 1990–2018 // *Technological and Economic Development of Economy*. 2019. V. 25. №. 2. P. 103-133.
38. Sørberg Marius. The quest for institutional reform in Bosnia and Herzegovina // *East European Politics and Societies*. 2008. V. 22. №. 4. P. 714-737.
39. Suhrke A., Buckmaster J. Aid, growth and peace: a comparative analysis // *Conflict, Security & Development*. 2006. V. 6. №. 3. P. 337-363.
40. Uvalić M. Economic Integration of the Western Balkans into the European Union: The Role of EU Policies // *The Europeanisation of the Western Balkans*. Palgrave Macmillan, Cham, 2019. P. 207-235.
41. Weller M., Wolff S. Bosnia and Herzegovina ten years after Dayton: Lessons for internationalized state building // *Ethnopolitics*. 2006. V. 5. №. 1. P. 1-13.
42. Zupcevic M., Causevic F. Case Study: Bosnia and Herzegovina // *Philip Oxhorn Part 1: Case Studies*. 2009. P. 10.
43. Quibria, M.G., (2006), Does Governance Matter? Yes, No or Maybe - Some Evidence from Developing Asia, No 02-2006, Working Papers, Singapore Management University, School of Economics, <https://EconPapers.repec.org/RePEc:siu:wpaper:02-2006>.
44. Huang, Yongfu and Temple, Jonathan R.W., Does External Trade Promote Financial Development? (July 2005). CEPR Discussion Paper No. 5150. Available at SSRN: <https://ssrn.com/abstract=785244>.
45. Huang Yongfu, 2012. "Is Economic Volatility Detrimental to Global Sustainability?," *World Bank Economic Review*, World Bank Group, vol. 26(1), pages 128-146.
46. Mishkin F. S. (2006). *The Next Great Globalization How Disadvantaged Nations Can Harness Their Financial Systems to Get Rich*. 320 p.
47. Haggard, Stephan and Tiede, Lydia, (2011), The Rule of Law and Economic Growth: Where are We?, *World Development*, 39, issue 5, p. 673-685, <https://EconPapers.repec.org/RePEc:eee:wdevel:v:39:y:2011:i:5:p:673-685>.
48. North, D., & Weingast, B. (1989). *Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England*. *The Journal of Economic History*, 49(4), 803-832. Retrieved from <http://www.jstor.org/stable/2122739>.
49. Hasanovic E. & Latic T., 2017. "The Determinants of Excess Liquidity in the Banking Sector of Bosnia and Herzegovina," IHEID Working Papers 11-2017, Economics Section, The Graduate Institute of International Studies.

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