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FINANCIAL DEVELOPMENT, ECONOMIC GROWTH AND WELFARE: EVIDENCE FROM EMERGING COUNTRIES

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ABSTRACT

Purpose- This study investigates how financial development has affected the economic growth and welfare for four emerging economies, namely Brazil, Turkey, Hungary, and, Poland over the period 2000-2013.
Methodology- In this research, we employed a panel dataset for the four countries using five different indicators for financial development separately. Which are (financial development index, domestic credit to the private sector, stock exchange market capitalization, and Lerner Index).
Findings- The results confirmed that financial development has a positive impact on economic growth, and there is a difference between Turkey, Brazil, Poland, and Hungary in terms of the impact size of financial development on economic growth. The highest and most energetic effect was on Turkey then on Poland, then on Hungary, and finally on Brazil
Conclusion- This study found that GDP growth is highly correlated with financial development. Thus, countries may undertake different steps to increase the efficiency of their financial sectors and therefore enhance their economic growth.

Keywords: Financial development, economic growth, economic welfare, panel data, emerging economies.
JEL Codes: F14, F21, F40

1. INTRODUCTION

Both financial development and economic growth have become an important topic in modern economies and received a great deal of attention in previous decades. It also became one of the most critical emerging research topics in the economics and finance fields in developing countries, mainly. According to Schumpeter (1934), accelerating the accumulation of capital is a vital driver to enhance economic growth, and the importance of the relationship between financial development Schumpeter and economic growth lies in the role of financial development in reducing transaction, information and monitoring cost of financial transactions. Moreover, a well-performing financial market has a more exceptional ability to generate higher savings and investment. Based on Beck and Levine (2004), the development in the financial sector includes some procedures such as amelioration in the production of information about investments, putting investments under surveillance. Also, it involved better management of risk and diversification, saving motivation and reciprocity of goods and services. Thus, financial institutions have a significant role in supporting the investment sector by providing the needed credit for the private sector, which in turn has a positive effect on overall investment. So, financial institutions have a significant role to play in economic growth and national income by enhancing investment in general and technological innovations in particular (Arac And Ozcan 2014). In this context, Patrick (1966) suggested that financial firms are crucial to enhance the financial structure and support national income growth. On the other hand, there was always a spirited debate on how active financial development is in promoting economic growth.

Where some economists think that the correlation between financial development and economic growth is not significant, and other economists argue that financial ingredients are vital as they promote economic growth (Hassan et al., 2011).

Based on the above and due to the value of the financial sector. This study examines the effect of financial development on economic growth and welfare. However, what makes this study unique is employing five indicators for financial development which are (financial development index, domestic credit to the private sector, stock exchange market capitalization, Lerner Index,). And applying this study for four different countries from different regions, which are two upper-middle-income countries (Brazil and Turkey) in particular, as they have almost similar economic and demographic characteristics and two high- income countries (Hungary and Poland). This diversification in selected countries, mainly to support our results about the influence of financial development and economic growth.

This study consists of four main sections. The first section contains a short introduction and the potentials of this work. The second section of this paper presents a brief review of the literature for the impact of financial development on economic growth and welfare. The third section analyzes the relationship between financial development and economic growth using a panel data analysis for 14 years (2000-2013). And finally, the fourth section provides results and a conclusion of the study

2. LITERATURE REVIEW

There is a vast body of literature conducted to assess the relationship between financial development and economic growth. Almost all the outcomes indicated that a positive correlation between financial development and Economic growth does exist. For instance, several studies involve Valickova et al., (2015), Kazar and Kazar, (2016), Durusu-Ciftci et al., (2017) examined the impact of financial development in promoting national income growth. Results revealed that financial development has a positive and sound effect on GDP per capita growth in developed countries. Moreover, Nyasha and Odhiambo (2014) examined the empirical and theoretical relationship between financial development and growth within the economy, and findings showed that there is a strong relationship between most indexes of the stock market and the growth in GDP per capita. On the other hand, Choong and Chan, (2011) argue that the connection between financial sector development and growth in GDP per capita is significant in all countries because the evolution of the financial system has an impact on GDP per capita through enhancing efficient allocation of resources which causes economic growth.

Moreover, Calderon and Liu (2003), in their study about the impact of financial development on economic growth, found that financial development has positively affected economic growth in 109 countries between 1960-1994. It is also found that the development of the financial sector can positively affect inward FDI and thus indirectly support growth in 67 countries 37 of them are financially developed in Latin America and Asia (Hermes and Lensink, 2010).

As an instance for high income and upper-middle-income countries, many studies have been carried out in the European Union EU about the connection between financial development and national income growth. Dudian and Popa (2013), searched the link between financial development and economic growth. Outcomes showed that there was a robust connection between financial development and economic growth. Also, Athanasios and Antonios (2010) investigated the relationship between economic growth and financial development. Results confirmed the causality relationship between economic growth and the efficiency of the banking sector. Studies have been carried out in developing countries as well, and this time from Asia, many studies have been conducted to check the connection between financial development and economic growth. Lenka (2015), Xiang and Dongye (2016), and Lenka and Sharma (2017) studied the relationship between financial inclusion and growth. Results showed that financial inclusion and growth have a co-integration connection between growth and financial development. Several studies include Bittencourt (2012), Rosalia (2013) inspected the relation between financial development and economic growth in Latin America, the result indicated that financial development indeed has an essential part in procreating economic growth. A study by Stefani (2007) investigated the causal relationship between financial development and economic growth in Brazil, and results confirmed that there is a strong relationship between financial development and economic growth. Yucel (2009), Arca and Ozcan (2014), in Turkey have investigated the connection between the development of the financial sector and the growth of the economy in Turkey over different periods. Findings indicated that there is a strong relationship between financial development and economic growth in Turkey. Furthermore, Mercan and Göçer (2013) investigated the influence of financial development on GDP per capita growth; the findings indicated that the GDP per capita growth would increase if financial institutions can offer credit demands to market, which means that financial development affects economic growth.

However, unlike the most of current literature, few studies in the late of 20th century have rejected the causality hypothesis between financial development and economic growth, but rather they either found weak statistical evidence between financial

development and growth such as Demitriades and Hussien (1996) as evidence vary from country to another. Or found that quantity or volume of financial development doesn't matter while efficiency matters more in Latin America (De Gregorio And Guidotti, 1995), this view is attributed to the poor financial systems in the past and the small size and the weak role played by financial system previously compared with financial sector currently.

3. Data and Methodology

To achieve the aim of this study, panel data analysis for 14 years (2000-2013) for a sample of four countries of emerging countries, namely Turkey, Brazil, Hungary, is used. These four countries are relatively comparable as they share many characteristics, such as financial measures, level of income, and size of geographical area (see World Bank World Development Indicators). For example, the Turkish economy has recently become successful due to adopting a sound financial policy. After the crisis in 2001 and with IMF financial assistance (Yeldan and Ünüvar, 2016), a new economic structure was built and made a remarkable change in the economy. On the other hand, Brazil has adopted a sound financial system, which in turn contributed positively to the financial sector's performance. In general, this study will analyze the relationship between economic growth and five financial development indicators separately, besides employing several control variables in the model.

3.1. Variables Discerption and Selection

In this section, we give a summary of the variables used in our analysis. Our dependent variable is GDP per capita as an indicator of economic growth and welfare, while independent variables are divided into two main categories, financial development indicators and control variables, as shown below.

Dependent variable

Economic growth and welfare: There is no consensus on one indicator to measure both economic growth and welfare. On the one hand, welfare represents the quality of living standards and consumption of a variety of items such as education, health, and leisure. On the other hand, GDP per capita is the main indicator of economic growth, which in turn represents better living standards and higher purchasing power. We believe that there is no better indicator than GDP per capita growth to capture welfare and economic growth together as they are strongly correlated to income level. Thus, we will employ GDP per capita as a proxy for economic growth and welfare.

Independent variables

Financial Development: There is no clear-cut definition of financial development, but many sources defined it as improvements that occur in financial procedures, information, and volume of financial services. This development is measured by enhancements in services provided by the financial system regardless if they occur by institutions or financial markets. These indicators which have been used previously to measure financial development are defined below:

Table 1: List of Financial Development Variables

Variable	Description	Source
Overall financial development index	This index summarizes how developed financial institutions and financial markets are in terms of their depth, access, and efficiency.	IMF
Domestic credit to the private sector (% of GDP):	Indicate to financial resources provided to the private sector by financial institutions, such as purchases of nonequity securities, through loans, and trade credits.	World Bank
Stock exchange market capitalization to GDP (%):	The overall value of listed shares in a stock exchange market illustrated as a ratio of country GDP.	World Bank
Credit to Government (%):	Refer to the ratio of credit by domestic money banks to government.	World bank
Lerner Index	It is a measure of market power in the banking market and correlates output pricing and marginal costs, in which the prices are calculated as overall bank revenue over assets.	World Bank

However, to ensure the reliability of our analysis, we have considered a variety of control variables to capture the effect of other macroeconomic factors. Table 2. shows the Lists of other independent control variables that have been employed in our estimation and presents their definition and source.

Table 2: List of Control Variables

Variable	Description	Source
Trade openness	The openness of trade is the aggregation of imports, exports, services, and goods measured as a share of gross domestic product.	World bank
Financial openness	The financial openness refers to the state approach for investments by foreign corporations within its authority.	(Chinn – Ito KAOpen Index):
Terms of Trade	It is calculated as a ratio of the export unit value indicates to the import unit value indicates, weighted relative to the base year.	World bank
VIX (global volatility)	The Volatility Index (VIX Index) is a gauge of market anticipations of near-term fluctuation conveyed by S&P 500 stock index option prices.	CBOE Dataset
Human capital	it is a measure of the yearly average of schooling, and supposed rate of return to education	PWT9
Real Broad Effective Exchange Rate	It is determined as weighted averages of exchange rates fixed by relative consumer prices, which is estimated to the country's currency.	FRED
z-SCORE[1]	It captures the probability of default of a country's banking system.	Central Banks
Inflation Rate	a ratio of the customer price index	World bank
Regulatory Quality	Regulatory Quality shows an image of the capacity of the government to modulate and implement sound policy rules that promote and permit private sector development.	World Governance Indicators

3.2. Model

our analysis is based on a multiple regression model using GDP per capita as a dependent variable; on the other hand, a set of independent variables have been utilized to conduct the analysis. Moreover, to ensure the quality and minimize the bias, we have employed five different indicators for financial development in five separate analyses. Our model is indicated by Equation(1).

$$Y = b_0 + b_1x_1 + b_2x_2 + \dots + b_ix_i + e \quad (1)$$

Where:

Y: represents GDP per Capita as a dependent variable.
b_0 : is the intercept/ Constant
b : independent variable's vector
x : predictor variable

And to ensure the validity of the results, Table 3. shows that there is no multicollinearity among the independent variables, and for a test of stationarity, the Levin-Lin-Chu unit-root test indicates that p-value for all variables (in the level) is less than 0.05, which means no unit root problem see table 4.

[1] It is estimated as (ROA+(equity/assets))/sd(ROA); sd(ROA) is the standard deviation of ROA. ROA, equity, and assets are country-level aggregate figures Calculated from underlying bank-by-bank unconsolidated

Table 3: The Correlation Matrix between Variables

	Trade openness	Financial openness	Exchange rate	Term of trade	HC	VIX	Inflation	Zscore
Trade openness	1.0000							
Financial openness	0.6058	1.0000						
Exchange rate	0.4121	0.3648	1.0000					
Term of trade	-0.2968	-0.1845	-0.1650	1.0000				
HC	0.4655	0.6380	0.4116	-0.1644	1.0000			
VIX	-0.0196	-0.0159	0.0395	0.0243	-0.0322	1.0000		
Inflation	-0.2166	-0.3937	-0.3948	0.0347	-0.5042	0.1624	1.0000	
Zscore	-0.6688	-0.4366	-0.4122	0.1253	-0.5595	-0.1035	-0.1660	1.0000

Table 4: Panel Unit Root Tests (Levels)

Levin-Lin-Chu unit-root test	P-Value
GDP per capita	0.0019
Trade openness	0.0017
Financial openness	0.0307
Exchange rate	0.0047
Term of trade	0.0053
HC	0.0501
inflation	0.0003
VIX	0.0000
Zscor	0.0099
Overall DF	0.0363
Lenrer Index	0.0020
Domestic credit	0.0264
Market capitalization	0.0501
Credit to Government	0.0105

3.3. Empirical Results

According to the correlation matrix, which is used to examine the correlation between variables. Table 3. displays that none of the variables are highly correlated, regarding Unit root test of stationarity of the variables used in the model. Table 4. shows that based on the LLC test all variables are stationary at level. Our analysis results for the impact of financial development on growth and welfare are listed in the Appendix, table 5. shows the effect of financial development index within the four countries on their economic growth, results reveal that financial development has a positive impact on economic growth in the four countries. Thus, the enhancement in the financial system was reflected positively on national welfare. Table 6. shows that easy access to credit (domestic credit) has a significant positive effect on growth in GDP per capita for the four countries over the given period. However, Table 7. presents the estimation for the stock market capitalization variable and GDP per capita, and the results show that the stock market capitalization indicator has a decisive role in economic growth and national welfare. However, Table 9. shows estimation about the effect of the credit to the government on the economic growth, and the results show that credit volume to the government has a significant negative impact upon the economic growth and welfare in the four countries, as the government increases its borrowing this might lead to increases in the interest rate, and consequently crowd investments out which will negatively affect the economy.About the impact of control variables, the study confirmed that there is a significant positive correlation between human capital, financial openness, and economic growth and welfare. However, the results indicated

that there is a negative and significant relationship between inflation rate and economic growth in the studied sample. While,regarding the impact of regulatory quality on economic growth, findings show the positive impact of regulatory quality on economic growth and welfare. On the other hand, the terms to trade impact upon the growth in the economy is not clear as strong statistical evidence was not found, while the openness to trade and z-score indicators are not significant, as we notice from the information set of the estimations above. Concerning differences among the four countries, Tables 10. and 11. show the effect of Financial development on GDP per capita, the difference in the impact of financial development on GDP per capita growth between the four countries is illustrated, where the highest effect is in Turkey, then in Poland, Hungary, and Brazil respectively.

4. CONCLUSION

This paper examined the impact of financial development on economic growth and welfare. The study constructed a panel dataset from reliable resources, while results have shown that financial development has a good and positive impact on economic growth. Also, the results have shown that there is a difference between Turkey, Brazil, Poland, and Hungary in terms of the impact size of financial development on economic growth. The highest and strongest effect was in Turkey then in Poland, then Hungary, and finally in Brazil. The causes of the difference between these countries is attributed for the financial sector; the more efficient and modern the financial system, the more economic growth, and welfare are. According to results, it has been noticed that developing countries may gain more significant benefit from improving their financial sector. And in the light of our findings as a policy suggestion, this study found that there is a high correlation between GDP growth and financial development. Thus, countries may undertake different steps to increase the efficiency of their financial sectors and, therefore, contribute to economic growth. These steps include; firstly, strengthen information exchanging network between financial institutions as it reduces potential risks and provides to higher credit flows, a second recommendation is a commitment to international financial bodies rules. We also recommend enhancing financial inclusion as it helps increase the financial base and credit circulation as well. To sum up, a well-developed financial sector is expected to promote economic growth where governments should focus on developing their financial sector to increase their economic growth and welfare.

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Table 5: The Estimation of the Effect of the Financial Development Overall on the Growth in GDPP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
Financial Development overall	2.165***	2.460***	0.807**	0.799**	0.635**	0.580**	0.629**	0.429*
	(0.387)	(0.418)	(0.382)	(0.363)	(0.246)	(0.262)	(0.250)	(0.243)
Financial openness	0.563***	0.564***	0.0613	0.0686	0.229**	0.221**	0.225**	0.144
	(0.166)	(0.163)	(0.137)	(0.130)	(0.0918)	(0.0933)	(0.0946)	(0.0926)
Trade openness	0.00537**	-0.0141	-0.0124	-0.00924	-0.0181***	-0.0173***	-0.0181***	-0.0226***
	(0.00193)	(0.0117)	(0.00829)	(0.00800)	(0.00537)	(0.00555)	(0.00544)	(0.00530)
Term of trade	0.000860	-0.00604	-0.0177***	-0.0142***	-0.0131***	-0.0127***	-0.0132***	-0.0176***
	(0.00278)	(0.00491)	(0.00387)	(0.00396)	(0.00253)	(0.00263)	(0.00258)	(0.00289)
c.tradeopen#c.termoftred		0.000199*	0.000127	0.000109	0.000216**	0.000206**	0.000216**	0.000262**
		(0.000118)	(8.43e-05)	(8.06e-05)	(5.54e-05)	(5.78e-05)	(5.61e-05)	(5.47e-05)
HC			1.718***	1.494***	1.415***	1.453***	1.421***	1.435***
			(0.250)	(0.255)	(0.173)	(0.184)	(0.177)	(0.164)
Inflation				-0.00360**	-0.00326***	-0.00303**	-0.00330***	-0.00224*
				(0.00150)	(0.00111)	(0.00117)	(0.00114)	(0.00113)
Regulation quality					0.576***	0.574***	0.574***	0.591***
					(0.0732)	(0.0739)	(0.0750)	(0.0699)
z_score						0.00413		
						(0.00639)		
Democracy index							0.000273	-0.000453
							(0.00121)	(0.00115)
Exchange rate								0.00375**
								(0.00138)
Constant	7.797***	8.335***	6.316***	6.507***	6.140***	6.000***	6.131***	6.332***
	(0.301)	(0.434)	(0.425)	(0.413)	(0.275)	(0.351)	(0.281)	(0.271)
Observations	56	56	56	56	52	52	52	52
R-squared	0.791	0.803	0.903	0.914	0.964	0.964	0.964	0.970
Number of country	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.

Table 6: The Estimation of the Effect of the Domestic Credit on the Growth in GDPP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
Domestic Cr	0.0113***	0.0126***	0.00961***	0.00931***	0.00466***	0.00461***	0.00480***	0.00409***
	(0.000880)	(0.000835)	(0.00142)	(0.00129)	(0.00137)	(0.00137)	(0.00143)	(0.00135)
Financial openness	0.459***	0.484***	0.310***	0.283***	0.311***	0.306***	0.319***	0.236***
	(0.102)	(0.0904)	(0.104)	(0.0946)	(0.0829)	(0.0833)	(0.0860)	(0.0855)
Trade openness	0.00724***	-0.0182***	-0.0157**	-0.0121**	-0.0168***	-0.0165***	-0.0167***	-0.0228***
	(0.00115)	(0.00629)	(0.00606)	(0.00557)	(0.00470)	(0.00472)	(0.00475)	(0.00494)
Term of trade	0.00272	-0.00602**	-0.0111***	-0.00782***	-0.00984***	-0.00949***	-0.00963***	-0.0149***
	(0.00177)	(0.00265)	(0.00296)	(0.00283)	(0.00234)	(0.00238)	(0.00242)	(0.00294)
c.tradeopen#c.termoftred		0.000253***	0.000196***	0.000169***	0.000218***	0.000215***	0.000218***	0.000279***
		(6.19e-05)	(6.14e-05)	(5.60e-05)	(4.76e-05)	(4.80e-05)	(4.81e-05)	(4.99e-05)
HC			0.682***	0.528***	1.004***	1.027***	0.979***	1.028***
			(0.210)	(0.194)	(0.184)	(0.187)	(0.196)	(0.183)
Inflation				-0.00396***	-0.00387***	-0.00360***	-0.00380***	-0.00268**
				(0.00113)	(0.00108)	(0.00112)	(0.00110)	(0.00110)
Regulation quality					0.441***	0.436***	0.439***	0.475***
					(0.0834)	(0.0837)	(0.0842)	(0.0795)
z_score						0.00508		
						(0.00585)		
Democracy index							-0.000474	-0.00121
							(0.00120)	(0.00115)
Exchange rate								0.00359***
								(0.00130)
Constant	8.128***	8.973***	8.075***	8.149***	6.967***	6.840***	7.010***	7.150***
	(0.206)	(0.275)	(0.381)	(0.345)	(0.364)	(0.393)	(0.384)	(0.361)
Observations	64	64	60	60	56	56	56	56
R-squared	0.907	0.928	0.941	0.953	0.967	0.968	0.967	0.972
Number of country	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 7: The Estimation of the Effect of the Stock Market Capitalization on the Growth in GDP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
Stock M	0.00259	0.00229	0.00406***	0.00364***	0.00329***	0.00349***	0.00342***	0.00281***
	(0.00258)	(0.00268)	(0.00138)	(0.00131)	(0.000777)	(0.000849)	(0.000783)	(0.000927)
Financial openness	0.958***	0.946***	0.102	0.0883	0.240***	0.240***	0.217**	0.189**
	(0.195)	(0.198)	(0.136)	(0.128)	(0.0795)	(0.0801)	(0.0815)	(0.0843)
Trade openness	0.0112***	0.0169	-0.00768	-0.00390	-0.0188***	-0.0192***	-0.0193***	-0.0218***
	(0.00220)	(0.0133)	(0.00752)	(0.00726)	(0.00452)	(0.00460)	(0.00453)	(0.00495)
Term of trade	0.00810***	0.0100*	-0.0171***	-0.0135***	-0.0138***	-0.0142***	-0.0143***	-0.0164***
	(0.00340)	(0.00558)	(0.00380)	(0.00385)	(0.00223)	(0.00234)	(0.00227)	(0.00282)
c.tradeopen#c.termoftred		-5.79e-05	9.26e-05	6.53e-05	0.000232***	0.000237***	0.000237***	0.000263***
		(0.000134)	(7.48e-05)	(7.15e-05)	(4.56e-05)	(4.66e-05)	(4.56e-05)	(5.00e-05)
HC			1.801***	1.610***	1.541***	1.529***	1.566***	1.542***
			(0.167)	(0.173)	(0.103)	(0.105)	(0.105)	(0.106)
Inflation				-0.00399**	-0.00331***	-0.00347***	-0.00347***	-0.00297**
				(0.00151)	(0.00103)	(0.00107)	(0.00104)	(0.00111)
Regulation quality					0.599***	0.602***	0.587***	0.597***
					(0.0623)	(0.0630)	(0.0629)	(0.0631)
z_score						-0.00376		
						(0.00604)		
Democracy index							0.00127	0.000684
							(0.00110)	(0.00120)
Exchange rate								0.00184
								(0.00151)
Constant	7.425***	7.250***	6.179***	6.304***	5.980***	6.070***	5.953***	6.098***
	(0.392)	(0.565)	(0.304)	(0.291)	(0.175)	(0.228)	(0.176)	(0.211)
Observations	64	64	60	60	56	56	56	56
R-squared	0.637	0.639	0.904	0.916	0.971	0.971	0.971	0.972
Number of country	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8: The Estimation of the Effect of the Lerner Index on the Growth in GDP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
Lerner index	0.256	0.240	0.463***	0.349**	0.109	0.0758	0.117	0.0569
	(0.255)	(0.258)	(0.148)	(0.158)	(0.113)	(0.136)	(0.114)	(0.107)
Financial openness	0.960***	0.939***	0.143	0.138	0.286***	0.286***	0.275***	0.189**
	(0.194)	(0.199)	(0.132)	(0.129)	(0.0926)	(0.0934)	(0.0958)	(0.0929)
Trade openness	0.0108***	0.0182	-0.00654	-0.00322	-0.0155***	-0.0151***	-0.0158***	-0.0228***
	(0.00220)	(0.0130)	(0.00739)	(0.00746)	(0.00524)	(0.00536)	(0.00530)	(0.00544)
Term of trade	0.00865***	0.0110**	-0.0147***	-0.0121***	-0.0119***	-0.0115***	-0.0121***	-0.0177***
	(0.00337)	(0.00536)	(0.00368)	(0.00387)	(0.00257)	(0.00271)	(0.00263)	(0.00307)
c.tradeopen#c.termoftred		-7.41e-05	8.40e-05	5.78e-05	0.000200***	0.000195***	0.000202***	0.000273***
		(0.000130)	(7.36e-05)	(7.34e-05)	(5.28e-05)	(5.42e-05)	(5.34e-05)	(5.49e-05)
HC			1.709***	1.586***	1.516***	1.527***	1.529***	1.489***
			(0.167)	(0.178)	(0.120)	(0.124)	(0.124)	(0.115)
Inflation				-0.00303*	-0.00357***	-0.00349***	-0.00364***	-0.00249*
				(0.00168)	(0.00125)	(0.00128)	(0.00127)	(0.00124)
Regulation quality					0.597***	0.598***	0.589***	0.613***
					(0.0757)	(0.0765)	(0.0775)	(0.0719)
z_score						0.00348		
						(0.00785)		
Democracy index							0.000707	-0.000417
							(0.00131)	(0.00126)
Exchange rate								0.00419***
								(0.00143)
Constant	7.419***	7.195***	6.169***	6.244***	5.914***	5.829***	5.899***	6.248***
	(0.392)	(0.557)	(0.301)	(0.297)	(0.205)	(0.283)	(0.209)	(0.226)
Observations	64	64	60	60	56	56	56	56
R-squared	0.637	0.640	0.905	0.911	0.959	0.960	0.960	0.967
Number of country	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Table 9: The Estimation of the Effect of the Credit to the Government on the Growth in GDP-PC

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	loggdppc	loggdppc	loggdppc	loggdppc	loggdppc	loggdppc	loggdppc	loggdppc
Credit gov	-0.0208***	-0.0206***	-0.0111***	-0.0106***	-0.00468*	-0.00467	-0.00501*	-0.00398*
	(0.00574)	(0.00582)	(0.00365)	(0.00341)	(0.00244)	(0.00282)	(0.00249)	(0.00233)
Financial openness	1.086***	1.072***	0.361**	0.328**	0.357***	0.357***	0.346***	0.247**
	(0.165)	(0.172)	(0.142)	(0.133)	(0.0950)	(0.0993)	(0.0964)	(0.0955)
Trade openness	0.0124***	0.0162	-0.00246	0.00105	-0.0136**	-0.0136**	-0.0138***	-0.0211***
	(0.00203)	(0.0118)	(0.00734)	(0.00697)	(0.00508)	(0.00514)	(0.00511)	(0.00535)
Term of trade	0.0106***	0.0118**	-0.0115***	-0.00802**	-0.0102***	-0.0102***	-0.0104***	-0.0162***
	(0.00310)	(0.00486)	(0.00385)	(0.00379)	(0.00257)	(0.00260)	(0.00259)	(0.00311)
c.tradeopen#c.termoftred		-3.94e-05	5.35e-05	2.91e-05	0.000185***	0.000185***	0.000187***	0.000260***
		(0.000118)	(7.29e-05)	(6.86e-05)	(5.10e-05)	(5.16e-05)	(5.13e-05)	(5.37e-05)
HC			1.602***	1.408***	1.440***	1.441***	1.453***	1.432***
			(0.177)	(0.179)	(0.123)	(0.133)	(0.124)	(0.115)
Inflation				-0.00427***	-0.00397***	-0.00397***	-0.00411***	-0.00282**
				(0.00148)	(0.00116)	(0.00124)	(0.00118)	(0.00118)
Regulation quality					0.574***	0.574***	0.563***	0.584***
					(0.0742)	(0.0752)	(0.0760)	(0.0706)
z_score						6.90e-05		
						(0.00727)		
Democracy index							0.000978	-9.55e-05
							(0.00127)	(0.00123)
Exchange rate								0.00398***
								(0.00137)
Constant	7.566***	7.445***	6.294***	6.430***	6.020***	6.018***	6.006***	6.320***
	(0.358)	(0.511)	(0.310)	(0.293)	(0.209)	(0.292)	(0.210)	(0.223)
Observations	64	64	60	60	56	56	56	56
R-squared	0.701	0.702	0.904	0.918	0.962	0.962	0.962	0.969
Number of country	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 10: Compared to Turkey, the Difference between Brazil, Hungary, Poland in terms of the Impact of Financial Development on Growth in GDP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
BRAZIL.FD	-3.709***	-3.722***	-3.169***	-2.836***	-1.376**	-1.367**	-1.483**	-1.485***
	(0.700)	(0.699)	(0.443)	(0.507)	(0.614)	(0.621)	(0.619)	(0.540)
HUNGARY.FD	-4.757***	-4.990***	-2.893***	-2.593***	-1.816***	-1.822***	-1.898***	-1.681***
	(0.591)	(0.633)	(0.470)	(0.518)	(0.601)	(0.608)	(0.604)	(0.529)
POLAND.FD	-2.296***	-2.240***	-0.535	-0.212	0.165	0.210	0.152	0.228
	(0.601)	(0.603)	(0.430)	(0.491)	(0.454)	(0.469)	(0.452)	(0.399)
Overall Financial Development	5.026***	4.935***	2.496***	2.184***	1.453***	1.466***	1.487***	1.208**
	(0.498)	(0.505)	(0.431)	(0.489)	(0.508)	(0.514)	(0.507)	(0.452)
Financial openness	0.466***	0.463***	0.165**	0.163**	0.258***	0.264***	0.242***	0.167**
	(0.111)	(0.111)	(0.0784)	(0.0778)	(0.0753)	(0.0773)	(0.0763)	(0.0712)
Trade openness	0.00795***	0.0171*	0.00861	0.00930	0.000544	0.000444	0.00127	-0.00460
	(0.00141)	(0.00899)	(0.00572)	(0.00570)	(0.00600)	(0.00607)	(0.00602)	(0.00548)
Term of trade	0.00605**	0.00910**	-0.00146	-0.00112	-0.00460	-0.00471	-0.00441	-0.00901***
	(0.00259)	(0.00393)	(0.00277)	(0.00276)	(0.00285)	(0.00289)	(0.00285)	(0.00281)
c.tradeopen#c.termoftred		-9.25e-05	-7.70e-05	-8.29e-05	2.38e-05	2.54e-05	1.56e-05	7.25e-05
		(8.95e-05)	(5.61e-05)	(5.58e-05)	(6.06e-05)	(6.13e-05)	(6.08e-05)	(5.51e-05)
HC			1.450***	1.421***	1.288***	1.265***	1.311***	1.357***
			(0.174)	(0.174)	(0.163)	(0.173)	(0.164)	(0.145)
Inflation				-0.00140	-0.00236**	-0.00253**	-0.00245**	-0.00147
				(0.00106)	(0.00111)	(0.00118)	(0.00111)	(0.00101)
Regulation quality					0.308***	0.305***	0.283***	0.310***
					(0.0904)	(0.0916)	(0.0929)	(0.0795)
z_score						-0.00248		
						(0.00549)		
Democracy index							0.00109	
							(0.000985)	
Exchange rate								0.00359***
								(0.00104)
Constant	7.113***	6.873***	5.346***	5.427***	5.791***	5.869***	5.728***	5.902***
	(0.258)	(0.347)	(0.285)	(0.289)	(0.268)	(0.322)	(0.273)	(0.238)
Observations	56	56	56	56	52	52	52	52
R-squared	0.922	0.924	0.971	0.972	0.978	0.978	0.979	0.983
Number of COUNTRY_NEW	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Table 11: Compered to Turkey, the Difference between Brazil, Hungary, Poland in terms of the Impact of Private Credit on Growth in GDP-PC

VARIABLES	(1) loggdppc	(2) loggdppc	(3) loggdppc	(4) loggdppc	(5) loggdppc	(6) loggdppc	(7) loggdppc	(8) loggdppc
BRAZIL.	-0.00159	-0.000839	-0.0120***	-0.00800***	-0.00656**	-0.00620**	-0.00628**	-0.00930***
	(0.00234)	(0.00224)	(0.00308)	(0.00269)	(0.00260)	(0.00263)	(0.00285)	(0.00204)
HUNGARY	-0.0124***	-0.00860***	-0.00808***	-0.00604***	-0.00530***	-0.00547***	-0.00521***	-0.00706***
	(0.00191)	(0.00233)	(0.00194)	(0.00166)	(0.00175)	(0.00176)	(0.00181)	(0.00137)
POLAND.	0.00387*	0.00501**	0.00549***	0.00765***	0.00615***	0.00586***	0.00629***	0.00444***
	(0.00207)	(0.00201)	(0.00170)	(0.00148)	(0.00153)	(0.00156)	(0.00165)	(0.00121)
Privet cr	0.0129***	0.0135***	0.00837***	0.00789***	0.00526***	0.00567***	0.00541***	0.00464***
	(0.00115)	(0.00111)	(0.00133)	(0.00111)	(0.00138)	(0.00144)	(0.00151)	(0.00106)
Financial openness	0.488***	0.476***	0.238**	0.256***	0.308***	0.306***	0.315***	0.165**
	(0.0886)	(0.0842)	(0.0900)	(0.0747)	(0.0782)	(0.0783)	(0.0842)	(0.0650)
Trade openness	0.00857***	-0.0106	0.00283	0.000984	-0.00269	-0.00292	-0.00305	-0.00625
	(0.00105)	(0.00741)	(0.00654)	(0.00544)	(0.00534)	(0.00535)	(0.00559)	(0.00412)
Term of trade	0.000175	-0.00655*	0.000731	0.000245	-0.00162	-0.00161	-0.00176	-0.00583**
	(0.00239)	(0.00343)	(0.00361)	(0.00300)	(0.00289)	(0.00289)	(0.00298)	(0.00233)
c.tradeopen#c.termoftred		0.000183**	-4.49e-06	2.46e-05	6.51e-05	6.87e-05	6.93e-05	9.89e-05**
		(7.01e-05)	(6.63e-05)	(5.52e-05)	(5.45e-05)	(5.47e-05)	(5.78e-05)	(4.20e-05)
HC			1.187***	0.868***	1.086***	1.049***	1.052***	1.279***
			(0.222)	(0.196)	(0.216)	(0.220)	(0.260)	(0.168)
Inflation				-0.00403***	-0.00382***	-0.00354***	-0.00382***	-0.00198**
				(0.000851)	(0.000915)	(0.000963)	(0.000926)	(0.000773)
Regulation quality					0.236***	0.224***	0.233***	0.263***
					(0.0794)	(0.0805)	(0.0810)	(0.0608)
z_score						0.00475		
						(0.00504)		
Democracy index							-0.000275	
							(0.00112)	
Exchange rate								0.00465***
								(0.000844)
Constant	8.331***	9.008***	5.876***	6.668***	6.169***	6.208***	6.265***	5.807***
Privet cr	(0.238)	(0.344)	(0.650)	(0.564)	(0.584)	(0.586)	(0.707)	(0.450)
Observations	64	64	60	60	56	56	56	56
R-squared	0.946	0.952	0.968	0.979	0.981	0.981	0.981	0.989
Number of COUNTRY_NEW	4	4	4	4	4	4	4	4
country FE	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	NO	NO	NO	NO	NO	NO	NO	NO

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.