Linkages between Financial Factors and Financial Development: A Panel Data Approach for Comesa Region

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Abstract: **- The concept of financial development has been a topical issue of research among scholars and policymakers in developing and developed countries in the world because it affects economic growth. However, there has been no consensus on the relationship between economic growth and financial development. Therefore this paper sought to determine the linkage between financial factors and financial development in 19 COMESA Countries. The specific objectives were to establish the effect of international remittances, financial access, inflation and foreign direct investment on financial development in COMESA Countries. The paper was guided by the finance-growth nexus theory. Data was collected from the IMF and World Bank database for analysis for the period. Fixed effect regression was used as established by use of the General Method of Moments. The results indicated that financial access, foreign direct investment and GDP had a significant effect on financial development in COMESA countries (p-values < 0.05). Therefore, results are expected to provide a basis for policy reference and also stimulate debate on financial development in developing countries under regional integration. The study is expected to generate new knowledge by indicating the relationship between financial factors, economic growth, and financial development. In particular, each COMESA Country should streamline policies aimed at encouraging FDI inflows, increasing economic growth, as well as designing Diaspora policies to encourage foreign remittances and foster financial development.**

I. BACKGROUND OF THE STUDY

Financial development has attracted a lot of debate among researchers and scholars. Extant literature available has defined financial development as the improvements in the quantity, quality, and efficiency of financial intermediary services (Akinbuade and Kinfick, 2014; Abu-Bada and Abu-Qarn 2006). In most developing countries, including SSA, the financial services sector is underdeveloped to play its role of intermediation and thus quest to bridge the gap between demand and supply of credit (Wolf, 2003). The financial services sector act as an intermediary between borrowers and savers in emerging economies of the world. The Government needs the financial sector to supplement any budget deficits that arise in any financial year (Adams *et al.*, 2018). Despite the importance of financial sector development, Sub-Saharan Africa is relatively less underdeveloped and diversified as compared to other regions of the World.

The insurance industry in Africa is at its infant stage and relatively underdeveloped as compared to other emerging economies as indicated by Otchere (2011). The result from this study indicates that the insurance market in some African Countries has focused on non-life insurance which represents about 85% of the industry. The proxy to insurance companies is the number of insurance firms in the industry. Further, Otchere (2011) argue that Stock markets which form part of the financial sector in Sub-Saharan Africa are very few and small in size as compared to those in the developed World. The proxy to stock markets is the number of listed companies and market capitalization.

The stock exchange trading systems in Africa are inefficient since they use manual trading and clearing system. The manual system of trading in Africa is an impediment to operational efficiencies as well as liquidity. However, a few African Countries have adopted automated systems such as Johannesburg securities exchange in South Africa, Nigerian Stock Exchange in Nigeria; Namibian stock exchange in Namibia, Stock exchange Mauritius and Nairobi Stock Exchange in Kenya.Bond markets in Africa according to Otchere (2011), are not well developed or at best at its infancy stage or are absent altogether in many African Countries. Most Countries do not have secondary bond market apart from Nigeria. Further, most Countries do not have a wide range of treasury bills and bonds except South Africa which has a developed Government bond market.

The banking sector indicates that African financials are characterized by the small banking system and that banks are poor in channeling deposits to the most efficient uses, signaling low intermediation efficiency (Lavine, (1997). Similarly, Adams *et al*., (2018), share the same view that the financial services sector is underdeveloped to play its role of intermediation. More so, African banks have low outreach with banks enjoying high-interest rate spread and targeting short -term finance at the expense of long-term finance for investment. Sandrine, (2010), argue that the intermediation ratio of SSA banks is small than in other developing countries indicating that in Africa, the bank has difficulty in ensuring that collected deposits are given as loans to the private sector for investment. Further, the study shows that banks in SSA offer loans to clients with good capacity for repayment especially big foreign companies or domestic public ones while local small and medium enterprises are often not taken into consideration. Menyah and Allen (2011), indicate that

financial systems in SSA are not well developed despite its importance in supporting sustainable and balanced growth. Such a developed financial sector enhances the availability of funding by mobilizing idle savings, facilitates the transaction and attracting foreign investment. The extant literature available indicates SSA has variations in financial development.

II. SPECIFICATION OF THE ECONOMETRIC MODEL-STATIC AND DYNAMIC STATES

The specification of the econometric model isbased on econometric theory and on any information relating to the phenomenon being stated. In this study, this model explains the independent, dependent and moderating variable.

$$FD_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 RMT_{it} + \beta_3 FINAC_{it} + \beta_4 INFL_{it} + \beta_5 FDI_{it} + c_{it} + \varepsilon_{it} \ldots\ldots (\text{Model } 2)$$

Where: FD_{it} = Financial development which is dependent variable; β_0 = Intercepts and is assumed to remain constant across all the units according to Cameron and Trivedi (2005). RMT_{it} = Remittances; $FINAC_{it}$ = Financial access; $INFL_{it}$ = Inflation; FDI_{it} = Foreign direct investment; $INTR_{it}$ = Interest rate; c_{it} = individual specific effect and GDP_{it-1} = Lagged value of GDP, ε_{it} = Stochastic error term and is assumed to be uncorrelated with all explanatory variables of all past, present and future time periods. This is a strong assumption which rules out lagged dependent variables. It also assumes that the idiosyncratic error term is uncorrelated with the individual specific effect (c_{it}). $\beta_1, \cdots, \beta_5$ = Slope parameters estimated by regression analysis.

III. RESULTS AND DISCUSSIONS

3.1Unit Root Analysis Results

The results of the Im-Pesaran-Shin indicates that INFL,FDI and GDP, were stationary at a 1st level while BCRDP,REMIT, and FINAC were stationary in first difference form with either an interceptor with both intercept and trend, i.e., all variables are integrated of order one I (1). The results are presented in table 4.3.

Table 4.3: Panel Unit Root Tests Results

IM-PESARAN-SHIN PANEL UNIT ROOT TEST									
	INDIVIDUAL INTERCEPT				INDIVIDUAL INTERCEPT $ TREND				
	LEVEL		1ST DIFFERENCE		LEVEL		1ST DIFFERENCE		Remark
Variable	W-Stat	Prob.	W-Stat	Prob.	W-Stat	Prob.	W-Stat	Prob.	
BCRDPS	1.2609	0.8963	-8.1020	0.0000	-1.5394	0.0619	-4.8207	0.0000	*I(1)*
REMIT	-0.9827	0.1629	-9.2328	0.0000	-1.3602	0.0869	-6.2058	0.0000	*I(1)*
FINAC	0.7305	0.7674	-5.2250	0.0000	1.0932	0.8628	-2.5455	0.0055	*I(1)*
INFL	-7.7732	0.0000	-15.1131	0.0000	-5.1610	0.0000	-13.0087	0.0000	*I(0)*
FDI	-2.9069	0.0018	-11.7529	0.0000	-2.9069	0.0018	-9.1262	0.0000	*I(0)*
GDP	-5.2915	0.0000	-14.1631	0.0000	-3.8306	0.0001	-11.7343	0.0000	*I(0)*

3.2 Fixed Regression Results

Results of fixed effects are presented in table 4.7. As indicated the coefficient of international remittance is positive and insignificant (p-value 0.794 > 0.05). The beta coefficient shows that when remittances change by one-unit, bank credit to the private sector is expected to increase by 0.0808 units. However, unlike the case of the random effect model, the relationship between financial access and bank credit to the private sector is not significant. International remittances have a negative effect on financial development because of the level of financial development. Remittances relax individuals' financial constraints and hence lead to lower demand for credit and have a dampening effect on credit market development. Remittances serve as a substitute for credit and family insurance and thus compete with formal financial credit hence reducing growth and development of the financial sector. This finding supports prior studies by Amueda-Dorantes and SPozo (2004a); Amueda-Dorante*set al.,* 2007; Yang and Choi 2007) underlying that a large part of remittances is spent on health and other 'emergency' spending thus deepening financial sector development. The coefficient of GDP is negative and significant (p-value 0.000< 0.05). The coefficient of GDP is -0.7522 showing that when GDP changes by one unit, bank credit to the private sector reduce by 0.7522 units. This finding contradicts existing literature that shows that economic growth has a positive effect on financial development. This is economically true for African economies because in these developing countries the public sector borrows heavily thus "crowding out" the private sector. Result of Ayad (2013) shows that economic growth has a positive and significant effect on financial development. Therefore, the current research refutes the findings of Demetriadis and Luinte (2001); Rousseau (2007); Rioja and Yalev (2003); King and Levine (1993) and Calderon and Lin

(2002). These findings are true based on the fact that the previous studies used different methodologies and each country or region has different institutional, social-cultural political and different economic stages of development. Therefore, following the work by Samargandi*et al.*, 2013 it can be inferred that economic growth has a negative effect on commercial bank credit to the private sector.

Table 4.7: Fixed Effects Model Results

Method: Panel Least Squares				
Sample: 1994 2016				
Periods included: 23				
Cross-sections included: 19				
Total panel (balanced) observations: 437				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
REMIT	0.0808	0.3090	0.26	0.794
FINAC	0.3196	0.0549	5.83	0.000
INFL	-0.0631	0.0410	-1.54	0.125
FDI	-0.6298	0.1861	-3.38	0.012
GDP	-0.7522	0.1678	-4.48	0.000
C	22.78659	15.10	12.50365	0.0000
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.684983	Mean dependent variable		20.62678
Adjusted R-squared	0.666632	S.D. dependent variable		19.99374
S.E. of regression	11.54399	Akaike info criterion		7.785713
Sum squared resid	54904.63	Schwarz criterion		8.019119
Log likelihood	-1676.178	Hannan-Quinn criteria.		7.877818
F-statistic	37.32770	Durbin-Watson stat		0.750343
Prob(F-statistic)	0.000000			

Source: Author, 2019

These findings support results of prior empirical studies, that, offer contradictory evidence (see for instance Kaminsky and Reinhart, 1999; Deidda and Fattouh, 2002; Wachtel, 2003; Favara, 2003; Rousseau and Wachtel, 2011; Arcand *et al.*, 2011 and Demetriades and Rousseau, 2011). Therefore, financial repression that exists in COMESA countries results in a poorly functioning financial system that in turn depresses economic growth: this can happen as a result of excessive government interference in the financial system with measures such as interest rate ceilings, higher bank reserve requirements, and direct credit programs to preferential sectors. Furthermore, a recent study by Loayza & Ranciere (2006) establishes a negative and significant effect of economic growth on financial development. They attributed this to negative short-run effect may be a result of cross-country heterogeneity in general, and higher volatility of business cycles in particular. The effect of inflation on bank credit to the private sector was negative and insignificant at $p < 0.1$. The coefficient is -0.0631 showing that whining inflation increase by a unit bank credit to private sector lowers by 0.0631 percent. This implies that the presence of financial repression or the tendency for inflation to dampen or reverse financial development exists among COMESA countries.

The main results of the study suggest that the inflationary environment is an important determinant of the degree to which finance affects growth. An interesting related issue is whether inflation itself affects financial sector development. The two tests are not the same. The former addresses whether inflation inhibits the smooth operation of the financial sector regardless of its size. The latter can shed light on the presence of financial repression, or the tendency for inflation to dampen or reverse financial development. Several previous studies have addressed the second issue by inverting the baseline growth equation to make the financial variable the dependent variable (Boyd *et al.*, 200; Haslag and Koo, 1999). There are several channels for the effect of inflation on financial depth. The effect of inflation on bank credit to the private sector is that financial repression that comes when inflation inhibits the development of financial intermediation

and reduces credit that is available to the private sector. In a similar study, empirical results by Almalki & Batayneh (2015) showed that there was a long run relationship between inflation and financial development in Saudi Arabia. The results of Almalki & Batayneh (2015) also indicated that there was a negative statistically significant relationship between inflation and financial development in the long-and-short run.

Tejerina and Westley (2007) show that the share of the population with access to credit in other developing regions does not differ much from the LAC figures, with a maximum of 8.4% in Asia and a minimum of 4.1% in Africa. The result supports the earlier findings of other scholars. The research done by Fayad*et al.,(*2013),indicates that international remittances have a negative effect on financial development in some economies. Gupta *et al*., (2009), and Kumar (2013), argue, that international remittances do not have an effect on financial development. It is perceived that differences in remittances across different countries are due to the level of financial development.

The results of this study show that financial access had a weak and positive relationship with financial development. This, therefore, supports the findings of earlier researchers who argue that financial access had a positive and significant effect on financial development in the developed countries because individuals and firms borrow from formal sources (World Bank Report, 2008; Jonathan and Camilo, 2008; Demombyness and Thegeya, 2012; Mas and Radcliffe, 2011). World Bank Report (2008), indicate that there are large differences in the use of credit services across countries. In the developed countries, individuals are likely to borrow from formal sources while on the other hand in the Developing Countries, individuals and firms rely more on informal sources such as friends, family, and informal lenders. World Bank report further indicates that, in the developing Countries, minimum loan amounts and loan fees are very high when compared to per capita income hence restricting access to bank credit to the high-income household. Claessens (2006), argue that lack of access to financial services occur when barriers to access the formal financial system are too high or costs are unreasonably high or because they do not have a credit record. Further, individuals will not access to financing because there is no distribution point s of financial institutions in their area.

Torre *et al*., (2017), indicate that there is sheer lack of access to the use of financial services in the Developing Countries. Firms and households may not be using those services, even when available, because they do not need them. Torre, (2017), further argue that in the developed countries, the use of bank accounts to save and make payments is almost universal while in the Developing Countries, it is much lower. Data from the World Bank's Global financial inclusion show that more than 90% of adults in high-income Countries had an account at financial institutions in 2014 compared to about 29 and 51% adults in Sub-Saharan Africa and Latin America.Jonathan & Camilo,2008;Demombyness and Thegeya, 2012 share the same view that mobile phones accelerate financial access in the form of phone-based money transfer and storage. Ondege, (2010), is of the view that Mobile transactions in developing enable users to store value in an account and cover cash into and out of the bank accounts and transfer stored value between accounts. The users of mobile phones can transfer funds between accounts linked to mobile phones by using a set of SMS messages and PIN Codes. This enables users to move money from the place and provide an alternative to the payment system offered by banking Pawn shops.The results of this study indicate that inflation does not have a significant effect on financial development (BCRDPS).This study is in support of earlier researchers who found similar results. Naccur and Ghazouani (2005) investigated the relationship between inflation and financial development using time series data from MENA region countries using GMM method and the result showed that inflation had a negative and significant impact on financial sector development.

IV. CONCLUSION AND POLICY RECOMMENDATIONS

There are some recommendations for the stakeholders which are formulated in this study,

i. Each COMESA Country should advance private sector financial access and capability, in an effort to improve individuals' future economic options, especially in low-income countries such as COMESA countries. Many projects should be designed to offer individuals financial services integrated with non-financial services, such as financial and business education
ii. Each COMESA Country shouldempower microfinance sector of the economy to the small entrepreneurs so that they have easy access to credit
iii. Policy makers in each COMESA Country should encourage monetary economists like the central bank to reduce interest rates in the economy so that investors may raise their investments and country production capacity
iv. The commercial banks which are intermediaries in each COMESA Country should ensure that there are formal remittanceschannelled in each country and also develop customized products for the migrants in order to expand financial intermediation and extend investment opportunities to the diaspora.

National Governments such as Kenya whose remittances now play a critical role in supporting foreign exchange reserves should develop Diaspora Policy in a bid to streamline the diaspora into national development agendas and stimulate financial growth and development.

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