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Financial Markets Development and Economic Competitiveness Growth in ECOWAS

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Abstract:
Purpose - The study aimed at investigating the effects of financial markets development on economic competitiveness growth in the Economic Community of West African States (ECOWAS) through both aggregated and a disaggregated approach of financial markets development variables.
Design/methodology/approach: The study adopted Random Effect regression models after conducting the Hausman test to analyze the panel data of seven West African countries over the period of 10 years (2008–2017). Annual data from the Global Competitiveness Reports issued by the World Economic Forum was usedfor the study.
Findings-The results of the regression analysis disclosed that of the major variables of the study; Financial Market Development Growth (FMDG), Venture Capital Availability Growth (VCAG) and Soundness of Banks Growth (SBG) were observed to have a significant positive effect on economic competitiveness growth. This is an indication of the existence of a relationship between these variables and economic competitiveness. Yet, one of the major variables of interest – Ease of Access to Loans Growth (EALG) had an insignificant negative effect on economic competitiveness growth.

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Research limitations/implications -The study recommends conscious efforts by financial authorities and marketregulators to building resilient financial markets through the promotion of venture capital availability and sound banking systems.

Originality/value–The study investigates the transmission mechanism of Financial Markets Development on Economic Competitiveness in promoting Economic growth using both aggregated and disaggregated approaches. The paper recognizes the fact that financial markets development plays a critical role in the tenets of economic growth, but such a role is exerted through economic competitiveness.

Keywords: Economic Competitiveness Growth, Financial Markets Development, ECOWAS.

1. Introduction

The competitiveness of economies in meeting growth targets that provide a solid base for economic resource mobilization is crucial in modern economic advancement and progression. In fact, Kordalska and Olczyk (2016) observed that global competitiveness is a good predictor of economic growth for the majority of low income and OECD high income counties that were studied, but among the middle-income countries this relationship exists only for large economies such as China and India. Amar and Hamdi (2012) in examining global competitiveness and economic growth for 23 African countries observed that global competitiveness had a positive and statistically significant effect on economic growth. However, despite these revealing findings, some studies expressed some misgivings about the ability of global competitiveness to induce economic growth. Xia, Liang, Zhang and Wu (2012) analyzed data from 40 countries and observed that individualism and power distance dimensions of national culture have better prediction power on economic growth than global competitiveness. Xia et al. (2012) graciously sought to conclude that the World Economic Forum (WEF) should refine the Global Competitiveness Index (GCI) to include national culture in order to give it a much better prediction of economic growth. In settling such doubts about the predictive power of the global competitiveness index on economic growth however, Schwab (2015) postulated that, the authors of the latest Global Competitiveness Report stated that "the concept of competitiveness thus involves static and dynamic competitiveness and can explain an economy's growth potential".

A concise definition of a country's competitiveness has been given by the World Economic Forum (WEF), as the "set of institutions, policies and factors that determine the level of productivity of a country"(Schwab, 2015). The WEF in measuring the competitiveness of countries constructed the Global Competitiveness Index (GCI), which includes a weighted average of about 112 different components. These components are grouped into 12 pillars of competitiveness and each measures a critical aspect of it. These 12 pillars are further classified into three major groups. Thus, basic requirements pillars (pillar 1-4), efficiency enhancers pillars (pillars 5-10) and innovation and sophistication factors (pillars 11-12). The WEF assigned different weights on each of the three groups and further classified countries according to their stage of development. This is because developing and emerging countries are competitive in the field of basic requirements and efficiency enhancers, while most developed countries compete thanks to their innovations and sophistications. The thrust of this study was therefore on the efficiency enhancers (pillar 5-10) since the study is seeking to examine West African countries most of which are developing and emerging economies.

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Financial systems play an important role in stimulating economic activities across the real sectors of economies, thus ensuring that the nonfinancial sectors of every economy are well resourced to engage in productive endeavors (Levine, 2001). Alomari, Marashdeh and Bashayreh (2019) espoused that a well-developed financial system improves the competence of the financial markets to perform efficiently and effectively as intermediaries to stimulate economic growth and reduce poverty. In acknowledging this important role, the WEF made the financial system an efficiency enhancer pillar, giving credence to the fact that a good financial system should seek to enhance economic efficiency by mobilizing resources from surplus economic spending agents to deficit spending economic agents (Levine, 1997). This study believes that when this role of efficiently allocating economic resources is well executed, economic competitiveness growth will be enhanced; the reason why the WEF recognized financial systems in the computation of the GCI.

However, in studying financial market development, most studies sought to examine the effect of financial market development on economic growth. The implication however in effect for such studies is that they fail to acknowledge the transmission mechanism or role that financial market development plays in enhancing the global competitiveness of countries, as observed in Kordalska and Olczyk (2016) and Amar and Hamdi (2012).

Levine, Loayza and Beck (2000) in studying financial market development and economic growth observed the financial market development variables had a positive significant effect on economic growth. Leitao (2010) in establishing such a relationship between financial market development and economic growth in European Union Countries and BRIC (Brazil, Russia, India and China) equally observed that financial market development had a positive significant effect on economic growth. In fact, economic literature is inundated with such similar findings (Agbloyora, Abora, AdjasibandYawson, 2014; Kendal, 2012; Hassan, Sanchez and Yu, 2011 and ChristopoulosandTsionas, 2004). What these and such studies have failed to do is investigate the transmission role that financial market development may have on economic competitiveness of counties, which subsequently impacts on economic growth as observed by Kordalska and Olczyk (2016); Amar and Hamdi (2012) and Schwab (2015).

Also, in these studies that examined the relationship between financial market development and economic growth, most of these studies considered a limited view of variables that define financial market development. Most of these studies seem to adopt the definition of financial market development given by Levine (1997), that financial market development could be explained by the access to credit and financial services. However, according to the WEF, financial market development can be seen from two main perspectives – the depth of financial services and the stability of financial markets, which these studies failed to consider. Therefore, the current study aside looking at financial market development and economic competitiveness, the study is also seeking to consider a broader definition of the variables that define financial market development (depth of financial services and the stability of financial markets).

One edge cutting study that examined the relationship between financial market development and economic competitiveness growth is the one conducted by Alomari, et al (2019), where in examining this relationship in 21 high income counties, Alomari, et al

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(2019) observed that financial market development had a positive significant effect on competitiveness growth. This relationship however, was observed among developed economies (the 21 high income economies). But according to the WEF, such economies compete based on innovations and sophistications and not necessarily on efficiency enhancers, a role which according to the WEF is performed by financial systems and other defined pillars. The question one could ask is that, can such a relationship observed by Alomari, et al (2019) in the 21 high income (developed) countries be said of West African countries, considering the clear-cut differences that can be seen at their levels of financial market developments? This is a question the current study sought to answer.

Also, Alomari, et al (2019) considered the composite measure of financial market development given by the WEF in their analysis. This measure and the results thereof might not be the best for policy formulation, considering the fact that financial markets development consist of a lot of different dimensions that might require different policy formulation to ensure efficient functioning. The current study examines financial market development using both aggregated and disaggregated approachesanalyzed into depth of financial services variables and stability of financial markets variables as espoused by the WEF. Consequently, the contribution of this paper is in two folds: (1) to examine the effect of financial markets development on economic competitiveness growth in West African economies; and (2) to analyze the consequence of EALG, VCAG and SBG on economic competitiveness growth of ECOWAS member states. It is therefore the expectation of this study that the findings will highlight many views that will inform national policy formulation of these countries and countries with similar economic structure and status in ensuring greater competitiveness in order to stimulate economic growth.

The rest of the paper is organized as follows: Section 2 presents the theoretical and empirical literature review on the relationship between financial market development and economic competitiveness, Section 3 explains the research methodology adopted for the study, Section 4 is for the regression analysis and finally the conclusion and recommendations in Sections 5.

2. Literature Review
2.1 Theories of Financial Development
2.1.1 The Law and Finance Hypothesis
Musacchio and Turner, (2013) observed that, with regard to the body of work known as the law and finance literature, development of financial markets and the concentration of ownership across countries are to a large extent the consequence of the legal system nations created or inherited decades or hundreds of years ago. The exposition made by Musacchio and Turner, (2013), is in line with the Law and Finance Hypothesis, which says that a country's legal origin is aninfluential predictor of its investor protection laws and its financial development (Coyle, Musacchio and Turner, 2019). Corporate governance is more centered on how suppliers of finance are able to regulate the activities of managers and ensure that they obtain a good return on their investment. In the thinking of Shleifer and Vishny, the law and the quality of its enforcement are important determinants of the rights that providers of finance may have and how well these rights are protected(Raju, 2021). Accordingly, legal protection of suppliers of funds (finance) is a major indicator of the

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willingness of investors to finance the activities and operations of firms. This therefore means that, the protection of investors through the workings of the law is a major factor in financial development(Raju, 2018).However, within the ECOWAS sub-region, the law and its quality of providing full protection to investors is not fully guaranteed, which consequentially impacts on financial development. It is therefore not surprising to see that, while high income countries that were considered in a study byAlomari, et al (2019) had an average financial markets development of about 4.67%, ECOWAS countries considered in the current study had an average financial markets development of about 0.505%. These developments could affect the competitiveness of ECOWAS member states, as was observed by Schumpeter (1911).

2.2Financial Development and Economic Competitiveness Growth

In the development of the global competitiveness index, it is unquestionable that the theories of endogenous growth played a critical role (Alomari, et al, 2019). Endogenous growth theories advanced the arguments that sustained economic growth is actualized from within a system as a result of internal processes and that any improvement in productivity is directly attributable to fast innovation, investment and more investments in human capital by governments and private sector institutions. This study is therefore fortified by these theories together with the law and finance hypothesis and thereforehypothesizedthat, awell-developed financial markets will be able to mobilize the required capital needed for investments to drive home innovation and the right human capital, thereby enhancing a country's competitiveness. Schumpeter (1911) equally made similar observations that an efficient financial system inspires technological innovations through the advancement of funding to entrepreneurs, which ultimately leads to economic competitiveness and growth. These theories therefore form the foundation for the study.
The limited nature of empirical literature in examining the relationship between financial markets development and economic competitiveness is an attestation of the less attention given to the area. However, amidst this, some studies have tried to examine the relationship. Alomari et al. (2019), examined the contribution of financial markets development in competitiveness growth among 21 high income countries and observed that financial markets development had a positive significant effect on economic competitiveness growth. Levine (2004) equally espoused that countries with better and efficient banks and financial markets grow faster and thus become very competitive.

Da Silva (2002) in examining the impact of financial system development on business cycles volatility, observed that well-developed financial systems have smoother economic fluctuations, thereby enhancing the competitiveness of countries. This observation advances the stands of Wurgler (2000), where it was espoused that developed financial markets ensure better economic capital allocation as opposed to countries with weak financial markets. This certainly strengthens efficiency and competitiveness(Raju et al., 2021). Hartmann, Heider, Papaioannou, Duca, and Marco (2007) postulated that a number of ways could be advanced to enhance the financial market framework conditions in Europe so as to increase the contribution of the sector to innovation, productivity, growth and hence competitiveness. These studies were however carried out in jurisdiction with a different economic structure than that which is examined in this paper. This study

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therefore examines the relationship between financial markets development and economic competitiveness in west Africa countries.

3. Research Methodology

3.1. Target Population and Sample Size

There are about 17 West African countries, which for the purpose of this study constitute the population of the study. The sample for the study however is seven member states (Benin, The Gambia, Ghana, Mali, Nigeria, Senegal and Mauritania) of ECOWAS. The study considers these as ideal because these countries belong to the same economic block and may be regulated by some similar economic regulations and agreements, with some common economic objectives to pursue. The seven countries were chosen for the study purely because of the availability of a complete data set for the variables of the study.

3.2. Type and Sources of Data

There are no quarterly or more frequent data sets available for the study. The study therefore employed annual secondary data for the seven ECOWAS member states. This data set was collected from the Global Competitiveness Reports issued by the World Economic Forum for 2008 to 2017 fiscal years. The period for the study was chosen because, after 2017, the scope, scale and measurement of the variables in the report was revised by the World Economic Forum, making it impossible to add the other years. The study therefore will be based on a Panel data set and panel data estimations are accordingly employed.

3.3. Variables and Their Measurement

3.3.1. Dependent Variable

The dependent variable for the study is Economic Competitiveness (ECOM) which is calculated within the Global Competitiveness index (GCI) through the inclusion of a weighted average of different components, with each distinct component measuring a different aspect of competitiveness within an economy.

3.3.2. Independent Variables

The study adopted both aggregated and disaggregated approaches to the measurement of the independent variables considered in the study. The aggregated approach looks at the composite measure of Financial Markets Development (FMD) as per the definition and computation of it by the World Economic Forum. The disaggregated approach however selected some instrumental financial market development variables (depth of financial services variables and stability of financial markets variables) for further analysis of their effect on economic competitiveness in West African countries. These variables are; Soundness of Banks (SB), Ease of Access to Loans (EAL) and Venture Capital Availability (VCA).

3.3.3. Control Variables

The World Economic Forum grouped the 12 pillars of the Global Competitiveness Index (GCI) into three major groups. Thus, Basic Requirements Pillars (pillar 1-4), Efficiency

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Enhancers Pillars (pillars 5-10) and Innovation and Sophistication Factors (pillars 11-12). Financial Market development is thus classified as an efficiency enhancer pillar, for this reason, the study controlled for all other efficiency enhancer pillars. These are; Labor Market Efficiency (LME), Market Size (MS), Technological Readiness (TR), Goods Market Efficiency (GME) and Higher Education and Training (HET). The Measurement of these variables was adapted from Alomari, et al, (2019).

Table 1: Variables and Their Measurement.

Variable Type	Variable	Abbreviation	Formula	Measure
Dependent	Economic Competitiveness	ECOMG	$ECOMG_{it} = \dfrac{COM_{it} - COM_{it-1}}{COM_{it-1}}(100)$	Economic Competitiveness growth rate
Independent (aggregated)	Financial Market Development	FMDG	$FMDG_{it} = \dfrac{FMD_{it} - FMD_{it-1}}{FMD_{it-1}}(100)$	Growth rate of financial market development
Independent (disaggregated)	Soundness of Banks	SBG	$SBG_{it} = \dfrac{SB_{it} - SB_{it-1}}{SB_{it-1}}(100)$	Growth rate of soundness of banks
	Ease of Access to Loans	EALG	$EALG_{it} = \dfrac{EAL_{it} - EAL_{it-1}}{EAL_{it-1}}(100)$	Growth rate of ease of access to loans
	Venture Capital Availability	VCAG	$VCA_{it} = \dfrac{VCA_{it} - VCA_{it-1}}{VCA_{it-1}}(100)$	Growth rate of venture capital availability
Control Variables	Labour Market Efficiency	LMEG	$LMEG_{it} = \dfrac{LME_{it} - LME_{it-1}}{LME_{it-1}}(100)$	Growth rate of labour market efficiency
	Market Size (MS)	MSG	$MSG_{it} = \dfrac{MS_{it} - MS_{it-1}}{MS_{it-1}}(100)$	Growth rate of market size
	Technological Readiness (TR),	TRG	$TRG_{it} = \dfrac{TR_{it} - TR_{it-1}}{TR_{it-1}}(100)$	Growth rate of technological readiness
	Goods Market Efficiency (GME)	GMEG	$GMEG_{it} = \dfrac{GME_{it} - GME_{it-1}}{GME_{it-1}}(100)$	Growth rate of goods market efficiency

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	Higher Education and Training (HET)	HETG	$HETG_{it}$ $= \dfrac{HET_{it} - HET_{it-1}}{HET_{it-1}}(100)$	Growth rate of higher education and training

3.4. Model Specification

Panel data analysis has gained much prominence in contemporary economic studies. This paper employs a panel regression model to examine the relationship between financial market development and economic competitiveness for West African countries. Through the preponderance literature review conducted, the study built the empirical regression model below;

$$ECOMG_{it} = a_j + \sum_{j=1}^{k} \beta j X_{it} + \hat{e}_{it} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots 1$$

Where ECOMG, is the economic competitiveness growth rate, X_{it} is the independent variables for country "i" at time "t," α is constant, β is the coefficient of j independent variables, and ê is the error term.

From the general regression model (1), and in consideration to the objectives of the study, the following regression models are also eminent;

Aggregated Approach Model
$$ECOMG_{it} = a_j + \beta FMDG_{it} + \beta 1 LMEG + \beta 2 MSG_{it\,it} + \beta 3 TRG_{it} + \beta 4 GMEG_{it} + \beta 5 HETG_{it} + \hat{e}_{it} \dots \dots 2$$

Disaggregated Approach Model
$$ECOMG_{it} = a_j + \beta SBG_{it} + \beta 1 EALG_{it} + \beta 2 VCAG_{it} + \beta 3 LMEG + \beta 4 MSG_{it\,it} + \beta 5 TRG_{it} + \beta 6 GMEG_{it} + \beta 7 HETG_{it} + \hat{e}_{it} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots .. \dots 3$$

In order to determine whether to adopt the Fixed Effect (FE) model or the Random Effect (RE) model for the Panel data estimation, the Hausman Test was performed, with the null hypothesis (H0) indicating the acceptance of the Random Effect model while the alternative hypothesis (H1) indicating the acceptance of the Fixed Effect.

4.0 Analysis and Discussion of Results

This section took a critical look at the descriptive statistics of the variables considered in the study, through the use of descriptive statistics such as; the mean, median, standard deviations, minimum and maximum observations. The section then proceeded with a correlation analysis to establish the relationship between the independent variables and the dependent variable and also to know the level of correlation between the variables so as to avoid the problem of multicollinearity – the correlation analysis was done given

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regard to the aggregated and disaggregated models in model 2 and 3 respectively. The section ended with an analysis and discussion of the panel regression model formulated and analyzed under a Random effect model to identify the effect of financial markets development variables on economic competitiveness growth in West African countries.

4.1 Descriptive Analysis of Variables
The descriptive statistics featured in the study include; the mean, median, maximum value, minimum value and standard deviation. These statistics are illustrated extensively in Table 2. This was necessary to identify the basic features of the data and also to determine if there are major discrepancies and variations among the variables.

Table 2: Descriptive Statistics of Variables

Descriptive	ECOMG	FMDG	EALG	VCAG	SBG	GMEG	HETG	LMEG	MSG	TRG
Mean	-0.061	0.505	0.736	-0.097	0.797	0.022	0.401	0.168	2.571	0.028
Median	0.000	-1.775	0.000	0.000	-3.704	0.000	1.169	0.266	1.659	0.000
Maximum	23.301	115.714	62.500	33.333	126.087	40.967	64.737	34.242	106.000	30.454
Minimum	-7.796	-11.842	-38.710	-19.231	-20.455	-13.750	-25.135	-21.854	-46.800	26.667
Std. Dev.	4.633	15.165	15.436	11.469	18.986	6.691	10.296	7.330	18.804	7.657

Economic competitiveness growth had a mean of negative 0.061 percent, with a minimum and maximum value of negative 7.8 percent and 23.3 percent respectively. The mean value of negative 0.061 percent was far lower than the mean value of 5.24 percent observed by Alomari, et al (2019) for higher income counties. Financial markets development on the other hand had a positive mean growth value of 0.505 percent, this was however also lower than the mean value espoused by Alomari, et al (2019) for higher income countries. The conclusion from these findings is that higher income countries have higher average economic competitiveness and financial markets development growth compared to west African countries. Details analysis of all the other variables are illustrated in table 2, except to point out that venture capital availability was also observed to have a negative mean growth value of 0.097 percent.

4.2 Correlation Analysis of Variables
In conducting the regression analysis pursuant to the objectives of the study, there was the need to ascertain the correlation between the dependent variable and the independent

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variables. Pallant (2007) observed that correlation analysis is used as a preliminary test to measure the relationship between variables and the strength of such a relationship. The study employed the Pearson product-moment correlation analysis due to the nature and measurement of the variables.

Table 3: Correlation Analysis – Aggregated Model

Variables	ECOMG	FMDG	GMEG	HETG	LMEG	MSG	TRG
ECOMG	1						
FMDG	0.693	1					
GMEG	0.755	0.798	1				
HETG	0.752	0.798	0.850	1			
LMEG	0.373	0.555	0.618	0.538	1		
MSG	0.308	0.519	0.313	0.414	0.158	1	
TRG	0.592	0.557	0.732	0.728	0.438	0.222	1

The results in Table 3 indicated that all the variables were observed to have a positive relationship with economic competitiveness growth. A detailed analysis also revealed that the majority of such relationships were either weak form or semi-weak form; with a maximum of 0.693 and a minimum of 0.158. However, there were some variables that had a higher correlation between them. These were observed to range between 0.728 – 0.850. This could be a potential threat to issues of multicollinearity.

Bryman and Cramer (2001) observed that multicollinearity abounds when correlation between variables exceeds 0.80. Whereas Anderson, Sweeney and Williams (1990) used 0.70 and Kennedy (2008), stated that correlation is high when its value is above 0.90. The current study however adopted a middle position, thereby setting the limit for multicollinearity where the correction coefficient between variables exceeds 0.80. From Table 3, it can be seen that the correlation between Higher Education and Training growth (HETG) and Goods Markets Efficiency Growth (GMEG) violated the standard set by Bryman and Cramer (2001), and that of Anderson, et al (1990). The study therefore mindful of that, excluded the HETG variable in the estimation of the results for model 2.

Table 4: Correlation Analysis – Disaggregated Model

Variables	ECOMG	EALG	VCAG	SBG	GMEG	HETG	LMEG	MSG	TRG
ECOMG	1								
EALG	0.172	1							

VCAG	0.556	0.439	1					
SBG	0.609	-0.189	0.275	1				
GMEG	0.855	0.298	0.541	0.579	1			
HETG	0.752	0.333	0.505	0.571	0.851	1		
LMEG	0.373	0.187	0.199	0.411	0.618	0.538	1	
MSG	0.308	0.089	0.174	0.245	0.314	0.414	0.159	1
TRG	0.592	0.441	0.386	0.297	0.732	0.728	0.438	0.223	1

From Table 4 and in estimating the results for model 3, similar considerations and analysis were made as it is in the case of table 3 and for model 2. In the final analysis of table 4, HETG and GMEG were both excluded from the model as a result of the high correlation between the two variables and that of GMEG and economic competitiveness growth (ECOMG).

4.3 Trend Analysis of Economic Competitiveness Growth and Financial Markets Development

The trend analysis of the two major variables of the study revealed a direct relationship between the two variables. This was so because, at every rising moment of financial markets development, economic competitiveness was also observed to be on the rise and vice versa. However, further analysis would have to be conducted to determine if such a relationship is significant. This was done as per the results in table 6.

Figure 1: Trend Analysis

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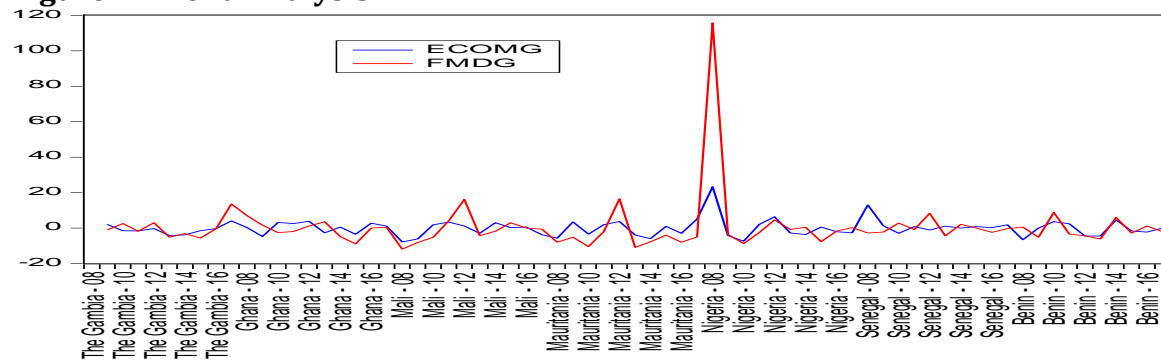
4.4 Estimation and Discussion of Results

4.4.1 Results and Discussion of Model 2

In the estimation of the results of model 2, the study employed the Random Effect model. This was deemed appropriate after conducting the Hausman test, where the p-value of the test results for the model was insignificant - which signifies a failure to reject the null hypothesis and an indicative of the fact that the Random Effect model was the best for the analysis. The Hausman test results for the model was presented in Table 5.

Table 5: Hausman Test – Aggregated Model

Test Summary	Chi-square Statistic	Chi-square d.f	P-value
Cross -section Random	5.189	5	0.393

Note: * indicates significance at 1% level. ** indicates significance at 5% level and *** indicates significant at 10% level.

Table 6 presented the results of the effects of financial markets development on economic competitiveness growth in West African countries.

Table 6: Results of Aggregated Model (Model 2)

Variable	Coefficient	Std. Error	T-statistic	P-value
FMDG	0.094	0.047	2.017	0.048**
GMEG	0.397	0.117	3.389	0.001*
LMEG	-0.102	0.065	-1.551	0.126
MSG	-0.003	0.024	-0.124	0.902
TRG	0.053	0.072	0.736	0.464
C	-0.094	0.365	-0.258	0.797
R-squared	0.649		Durbin-Watson stat	1.984
Adjusted R-squared	0.582			
F-statistic	9.597			
P-value	0.000			

Note: * indicates significance at 1% level. ** indicates significance at 5% level and *** indicates significant at 10% level

The results in table 6 showed that financial markets development had a significant positive effect on economic competitiveness growth at 5% significance level in West African

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countries. This means that a percentage growth in financial markets development will lead to a 0.094% increase in economic competitiveness in West African countries. This clearly justifies the indispensable role played by financial markets in the mobilization of economic resources to promote and sustain productivity and economic development. Indeed, the promotion of national savings and venture capital availability through functional and well-regulated financial markets will enhance countries' economic competitiveness. The findings of the study are similar to the findings of Alomari, et al (2019), where financial markets development was observed to have a significant positive effect on economic competitiveness growth for high income counties. This was expected because high income countries generally have much more developed and efficient financial markets compared to that of West African countries, which makes them more economically competitive in growth than West African countries. Also, the coefficient of financial markets development in the study conducted by Alomari, et al (2019) for high income countries, was 0.146% compared to that which is espoused in the current study of 0.094% for West African countries. This means that the impact of financial markets development on economic competitiveness growth is greater for high income countries than for West African countries. The findings of the study are also in line with the findings of Masoud and Hardaker (2012); Beck (2008); Levine (2004) and Da Silva (2002) where financial markets development was observed to have a significant positive effect on economic growth.

The coefficient of GMEG was also observed to have a significant positive effect on economic competitiveness growth at 1% level of significance. This means that a percentage growth in goods markets efficiency of West African countries will lead to a 0.397% increase in economic competitiveness growth. TRG also had a positive but insignificant effect on economic competitiveness growth. LMEG and MSG were both observed to have a negative but insignificant effect on economic competitiveness growth in West African countries.
The results from table 6 showed an R-square value of 0.649. This means that approximately 65% of variations in economic competitiveness growth are being explained by the independent variables in West African countries. The Durbin Watson test statistic value of 1.984 falls within the acceptable range of 1.5 – 2.5. This is an indication that there is no evidence of any serial or autocorrelation between the residuals of the estimated model results. An F-statistic value of 9.597 and P-value of 0.000, showed the overall significance of the results. This means that the independent variables jointly explain any variation in economic competitiveness growth. Under these diagnostics and circumstances, the random effect model was much appropriate and the study results made valid.

4.4.2 Results and Discussion of Model 3
Table 7 presented the Hausman test results for the model. The p-value of the test results for the model was insignificant, indicating that the Random Effect model was the best for the analysis. The Hausman test results for the model was presented in Table 7.

Table 7: Hausman Test – Disaggregated Model

Test Summary	Chi-square Statistic	Chi-square d.f	P-value

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Cross -section Random	2.632	6	0.853

Note: * indicates significance at 1% level. ** indicates significance at 5% level and *** indicates significant at 10% level

Table 8: Results of Disaggregated Model (Model 3)

Variable	Coefficient	Std. Error	T-statistic	P-value
EALG	-0.020	0.032	-0.643	0.522
VCAG	0.132	0.039	3.402	0.001*
SBG	0.093	0.025	3.723	0.000*
LMEG	-0.007	0.059	-0.117	0.907
MSG	0.020	0.020	1.015	0.313
TRG	0.224	0.061	3.668	0.000*
C	-0.165	0.364	-0.454	0.651
R-squared	0.642		Durbin-Watson stat	2.083
Adjusted R-squared	0.607			
F-statistic	18.531			
P-value	0.000			

Note: * indicates significance at 1% level. ** indicates significance at 5% level and *** indicates significant at 10% level

The results in table 8 is a disaggregated approach to examine the effects of some key financial markets development variables on economic competitiveness growth for some specific policy considerations in West African countries. These financial markets development variables; ease of access to loans (EALG), venture capital availability (VCAG) and soundness of banks (SBG) were selected because of their importance in promoting economic activity. In table 8, it was observed that EALG had a negative insignificant effect on economic competitiveness growth in West Africa. This means that any increase in access to credit will not impact on the economic competitiveness of West African countries. This paints a worrying picture for West African countries. Mills and McCarthy (2014) observed that small businesses are a major contributor to America's economic competitiveness, thus a healthy small business sector will enhance economic competitiveness. However, small and medium scale businesses generally have difficulty in accessing credit in West African countries; the posting of huge collateral and other difficult to meet credit conditions affect the operations of these businesses. Credit and loan facilities granted to businesses are sometimes misapplied or managed, that is why till date West African countries still have major challenges in dealing with non-performing loans of the banking sector.

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VCAG on the other hand was observed to have a significant positive effect on economic competitiveness growth in West Africa at 1% level of significance. This means that a percentage growth in venture capital availability will lead to a 0.132% increase in economic competitiveness. This is rightly so because, venture capital availability could promote the spirit of entrepreneurship and the establishment of businesses across different sectors of the economy, thereby contributing greatly to productivity and competitiveness. An economy with optimal amounts of venture capital availability promotes economic activities, such as the sale and purchase of economic goods and services, acquisition of means and machinery needed for converting raw materials into finished products and carrying out production. All these, when effectively and efficiently deployed, will culminate into an economy's economic competitiveness.

SBG was equally observed to have a significant positive effect on economic competitiveness growth at 1% significance level. This means that a percentage growth in the soundness of banks will lead to an increase in the economic competitiveness of West African countries by 0.093%. The findings of the study certainly solidified the critical role that banks play in channeling productive economic resources from surplus spending economic units to deficit spending economic units in order to propel productive economic activities. A sound West African banking system will ensure effective financial intermediation which is very key given the relative scarcity of savings in West African economies, the relatively underbanked population and the large-scale investment needs of such economies. Given regards to the findings of the study and the crucial role played by banks in the scheme of promoting economic activity, Regulators of the banking system must endeavor to maintain a sound banking system. This is more particularly so because the banking sector of west African countries tends to be more concentrated and constitutes a larger share of the domestic financial system, signifying those problems in the banking system will have an amplified effect on economies and on the fiscal costs that come with bank rescues.

From table 8, TRG was also observed to have a significant positive effect on economic competitiveness growth at 1% significance level. This means that a percentage growth in technological readiness will increase economic competitiveness of West African countries by 0.224%. LMEG and MSG were however seen to have insignificant positive effect on economic competitiveness growth. This means that a percentage growth in LME and MS will not impact on the competitiveness of West African countries.

The results from table 8 showed an R-square value of 0.642. This means that approximately 64% of variations in economic competitiveness growth are being explained by the independent variables in West African countries. The Durbin Watson test statistic value of 2.083 falls within the acceptable range of 1.5 – 2.5. This is an indication that there is no evidence of any serial or autocorrelation between the residuals of the estimated model results. An F-statistic value of 18.531 and P-value of 0.000, showed the overall significance of the results. This means that the independent variables jointly explain any variation in economic competitiveness growth. Under these diagnostics and circumstances, the random effect model was much appropriate and the study results made valid.

5.0 Conclusions and Recommendations

The study aimed at investigating the effects of financial markets development on economic competitiveness growth in West African countries through both aggregated and a

disaggregated approach of financial markets development variables. To this end, the study adopted Random Effect regression models after conducting the Hausman test to analyze the panel data of seven West African countries over the period (2008–2017).

The results of the regression analysis disclosed that of the major variables of the study; FMDG, VCAG and SBG were observed to have a significant positive effect on economic competitiveness growth, which demonstrates the existence of a relationship between these variables and economic competitiveness. However, one of the major variables of interest – EALG had an insignificant negative effect on economic competitiveness growth.

The study recommends conscious efforts by financial authorities and market regulators to building resilient financial markets through among others the promotion of venture capital availability and sound banking systems

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