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Financial development, governance and their impact on economic growth in MENA countries - as a sample

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Abstract:
This study aims at analyzing the effect of governance and financial development on growth in Middle East and North Africa countries as a sample namely: Egypt, Iran, Jordan, Lebanon, Morocco, Oman, Saudi Arabia and Tunisia. It has been sufficed of these countries because the rest does not have stock markets; this study lasted from 1996 to 2017. The study outcomes revealed a crucial importance of governance and financial development, thus, the governance has a significant and negative impact on economic growth in these countries due to the weakness of governance indicators implementation. With regard to the financial development variables, stock markets had no incorporeal effect, as a result, these countries has failed in attracting funds from a foreign country. However, a considerable and positive effect on growth is marked by the financial market, which played a leading role in financing development projects in these countries.

Keywords: Effect,governance,financial developement,economic growth,Random Effect,principal component analysis.

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Résumé:
Cette étude vise à analyser l'effet de la gouvernance et du développement financier sur la croissance dans les pays du Moyen-Orient et d'Afrique du Nord en tant qu'échantillon à savoir : l'Égypte, l'Iran, la Jordanie, le Liban, le Maroc, Oman, l'Arabie saoudite et la Tunisie. On a suffi de ces pays parce que le reste n'a pas de marchés de bourses ; cette étude s'est étendue de 1996 jusqu'à 2017. Les résultats de l'étude ont révélé une importance cruciale de la gouvernance et du développement financier, ainsi, la gouvernance a un impact significatif et négatif sur la croissance économique dans ces pays en raison de la faiblesse de la mise en œuvre des indicateurs de gouvernance. En ce qui concerne les variables de développement financier, les marchés boursiers n'ont eu aucun effet incorporel, en conséquence, ces pays n'ont pas réussi à attirer des fonds étranger. Cependant, un effet considérable et positif sur la croissance est marqué par le marché financier, qui a joué un rôle de premier plan dans le financement des projets de développement dans ces pays.
Mots Clés: Effet, gouvernance, développement financier, croissance économique, Effet aléatoire, analyse en composantes principales.

Introduction:

Stock-market and capital-market growth took a developmental role in the economy after its impact on corporate finance and economic activity, for instance, the liquidity enabled stock markets to quickly obtain needed capital and thus facilitate capital allocation, investment, and growth. Furthermore, stock markets helped to reduce investment risks due to the ease of stock trading; hence, stock market activity plays an important role in

determining the level of economic activity in most economies. The relationship between financial development and economic growth and according to Schumpeter (1935) its functions that include mobilizing savings, evaluating projects, managing risks, monitoring managers, facilitating transactions and technological innovation, are necessary for economic growth. Moreover, (BAGEHOT, 1962, p. 3) in his book Lombard Street argues that the specific characteristics of the English financial market encouraged the allocation of various savings to be used in profitable long-term profitable investment projects as new technologies that played an important role in promoting industrialisation in England. OPIE (1934) demonstrated the significance of banks in increasing economic growth by identifying investment projects that implement innovative products and production processes. Governance is also one of the key inputs to economic development, additionally, many theoretical and empirical studies have highlighted that governance quality is one of the key levers for sustained and inclusive economic growth. This is confirmed by some relevant international experiences in this field. The central role of institutions in real economic development is widely accepted, as many theoretical and empirical analyses have clearly shown that the governance quality is a key component of countries' intangible capital and important levers for sustainable and inclusive economic growth. Indeed, many studies have supported the idea that differences in the growth rates and development dynamics of economies can be attributed largely to the quality of existing institutions. Thus, the initiation of a rapid process of economic catch-up requires the establishment of an institutional framework that takes into account the explicit and implicit norms of society and standards of behaviour with regard to the ability to encourage desired economic behaviour.

In the light of the above, the following problems arise: Is financial development and governance in the above-mentioned countries closely linked to economic growth?

From the standpoint of the problem, the following hypotheses can be presented:

• Financial development is linked to economic growth and has a positive impact on it.

• Governance is linked to economic growth and has a positive impact on it.

This study is organized as follows: Section I a summary of literature review of theoretical and empirical issues about the relationships between financial development and economic growth, then governance and economic growth. Section II presents the methodology adopted at work.

Section III introduces the discussion of the results, then in the last section comprise the conclusion.

SECTION I : REVIEW LITERATURE

Over the past 20 years, many researchers have analysed the impact of finance and stock-market development on economic growth. In a study of (Adjasi & Biekpe, 2006), the impact of stock market development on economic growth in 14 African countries was addressed using dynamic long data. To a large extent, the results showed the positive relationship between stock market development and economic growth. Further analysis was carried out based on the level of economic development and stock market capitalization. The results of the impact of stock market development on economic growth were positive. The overall trend of results revealed that low-income African countries and less developed stock markets need to grow more and develop their markets to obtain economic gains from equity markets. As for (Enisan & Olufisayo, 2009) study, it examined the long-term and causal relationship between stock market development and economic growth of seven countries in sub-Saharan Africa, and using the Autonomous Distributed Regression Model (ARDL) boundary test, it was found that stock market development coincided with growth in Egypt and South Africa. In addition, this test indicates that the development of the stock market has a significant positive the long term impact on economic growth. The study concluded that stock markets can help boost growth in Africa and to achieve this goal, African stock markets need to be further developed through their regulatory and appropriate macroeconomic policies. In another study entitled The Relationship between Stock Markets and Banks and Economic Growth and Industry Development for (Kim, Shin, Kim, & Lee, 2014), using cross-sectional data and time series for 94 countries for the period 1976-2005. The results showed that the average effect of financial market development on economic growth is positive; taking into consideration all levels of economic development, but this effect becomes negative in developing countries. Nevertheless, this effect is only positive in middle-income countries. Meanwhile, the results showed that the average impact of the stock market development on economic growth is negative, mainly due to the large negative impact that is found in high-income countries. In (Fanta, 2017) study, consideration was given to properly addressing the synchronization problem and applying the

Generalized Moment Method (GMM) system for all mixed countries economic growth to ignore country-specific effects that could have an impact on financing correlation with growth. The financing and growth correlation was highlighted using data from 36 economies over the period 1997-2011; its analysis was conducted for the entire sample and for the two sub-samples, each of which includes 21 advanced economies and 15 emerging economies in terms of financial markets. The results concluded that bond market capitalization has a positive effect on growth for the entire sample and advanced economies. In general, this study revealed that bond markets, neither banks nor stock markets, are linked to economic growth in advanced economies, and there is no same relationship for emerging economies. Correspondingly, (M Malkawi, 2019) has examined the balance and causal relationships between the stock market development and economic growth in Jordan for the period 1980-2018, the outcomes conveyed that there is integration between stock market development and economic growth. In addition, economic growth has a positive effect on long and short term development of the stock market. Likewise, there has been a two-way causal relationship between stock market development and economic growth, which confirms that a country with a developed financial system enables it to promote high economic expansion through technological changes, innovation in products and services. The study of Democracy and Growth by (BARRO, 1996), a group of about 100 countries over a period of time spanning from 1960 to 1990, included the interaction between democracy and economic development and the impact of political freedom on growth, standard of living and the expansion of democracy. In terms of growth, the cross-countries analysis highlighted positive impacts of upholding the rule of law, free markets, low government consumption and higher human capital. Once these types of variables and the initial level of GDP remain constant, the overall effect of democracy on growth becomes negative. There are some evidences of a non-linear relationship in which more democracy promotes growth at lower levels of political freedom but limits growth when a moderate level of political freedom has already been achieved. Furthermore, the study (Sridevi & Denise, 2015) summarized the countries of South and East Asia and the Pacific and based on 29 studies with 554 estimates from 1980 to 2012, the empirical results showed that corruption is highly and negatively related to growth, the government effectiveness and regulation are positively and importantly correlated, besides, politics and law do not have any significant influence on economic growth. They conclude that the empirical research literature on governance and growth has failed to provide evidence of the authentic impact of voice and accountability on growth. All in all, it has been demonstrated that inclusive governance is important for growth, thus, their results had

important political implications. (Kaufmann & Kraay, 2002) have elucidated that governance is hugely important for long-term growth; it indicates that improvements in governance will not occur automatically as the development process evolves. At the general level, these surveys shed light on a variety of corruption factors and identified institutions that suffer from poor governance and where corruption is particularly prevalent. Strategies to improve governance and fight corruption should be addressed within the framework of accountability and voice mechanisms, political competition, and transparency reforms (including media freedom, voice disclosure by parliamentarians, disclosure of assets by politicians, and regular monitoring through surveys and reports.). This calls for moving towards teamwork methods, and not only the selected agencies in the executive branch, yet, reformers in all directions including parliament, civil society and the private sector.

SECTION II : METHODS AND MATERIALS

Data

The present study anticipates the financial development index represented by the financial market development indicators and the stock markets proposed by (Beck, Demirguç Kunt, & Levine, 2010, pp. 80-81). It found that the private credit variables, (pcrdbofgdp) and the liquid liabilities (llgdp) identified by (Robert & Levine, 1993, pp. 720-721) as financial market development indices , where private credit refers to the distribution of domestic assets, determined by the proportion of credit allocated to the private sector by the financial system. In short, this indicator represents the ratio of non-financial private sector credit to total domestic credit. The liquid liabilities are an indicator of financial depth, determined by the ratio of the financial system's liquid liabilities to GDP. The total market value (stmktcap), volume of trading activity (stvaltraded) and the ratio of turnover (stturnover) proposed by (Beck & Levine, 2004, p. 8), are commonly used indicators of stock market development (securities). Total market value is defined as the ratio of the total value of stocks in all stock markets to GDP. Whereas, the volume of trading activity is defined as the ratio of the value of local shares traded on local stock exchanges to the GDP. The ratio of liquidity turnover to the total volume of the stock market is defined as the ratio of the value of local shares traded on local stock exchanges to the total value of shares in all stock markets. Financial development indicators are

obtained from (World Bank Global Financial Development Database).

With regard to the governance variables obtained from the World Bank database (WDI) of the World Bank, represented by political stability and freedom from violence (pvgov): this indicator measures the likelihood of violent changes in the system or government, As well as serious threats to public order, including terrorism. It combines the internal and external risks of political instability, inter-social conflicts, strikes, street violence and crime, threats of terrorism. Corruption control (ccgov): it measures the use of authority powers for personal gain, particularly the wealth of individuals who are in a position of power. The governance dimensions covered by this indicator relate to anti-corruption policies and transparency, public confidence in the integrity of politicians, frequent acts of corruption and the embezzlement of public funds due to corruption. Voice and Accountability (vagov):it is the process, by which governments are selected, monitored and replaced. It covers several dimensions such as: human rights, freedom of expression and association, freedom of the press, political participation of citizens, freedom of elections, transparency and integrity in government work and the effectiveness of parliamentary oversight of public institutions, politicians and frequent acts of corruption and embezzlement of public funds due to corruption. The rule of law (rlgov): the appreciation of the level of trust and respect by citizens and the state in the institutions that govern their dealings. This indicator combines property rights, degree of trust in courts and the police, integrity of the judicial system, level of intellectual protection, frequency of tax evasion, and degree of security of goods and people. Government competence (gegov): it determines the efficiency of the public bureaucracy and the quality of public services. This is an assessment of policies aimed at improving the efficiency of the public sector through budget management, the government's ability to solve development problems, the quality of the infrastructure needed to develop institutions, the degree of implementation of decisions and the consistency of political leadership. Regulatory Quality (rqgov): it estimates regulatory barriers to the functioning of markets and measures the ability of public authorities to develop and implement good policies and regulations conducive to private sector development. Several elements are grouped within this aspect of governance, including, in particular, consistency and predictability in interpreting laws and regulations, distortions and complexity in the tax system, and unfair competitive practices. These indicators have values ranging from -2,5 to +2.5.

Since governance and financial development indicators are multidimensional, this makes it difficult to understand the interactions of these indicators with other variables and their comparisons. Therefore, we

have to use the Principal Component Analysis method (PCA) to minimise the variables of these two indicators to the least possible extent.

The numerical logarithm is used for both the GDP per capita as a dependent variable (Lgdp) and the control variables Xit represented by the literal logarithm of average years of total education (lhscoling) and the variable of government spending to GDP (gconsum), and the ratio of trade openness to GDP. Total (open), and average inflation rate (inf).

Model specifications

These models have acquired great interest in the current decade, especially in economic studies, for the reason that they take into consideration the effect of change in time as well as the effect of change in cross-sectional observations. Longitudinal data are defined as cross-sectional views measured at specific time intervals. The model can be expressed in data for cross-sectional data, time series of N individuals, and time T notes in the following manner:

$$y_{i,t} = \alpha_{it} + \beta' x_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots (1)$$

Where y_{it} is the logarithm of real GDP per capita in country i and time t and x_{it} is a set of explanatory variables, α_{it}, β_{it} are vector constants that differ by i and t respectively, and ε_{it} is the error term.

Materials

The cross-sectional data and the fixed time series will be tested by estimating the model pooled and then the model fixed effects, Random Model Effects. This is defined by the following equation:

$$y_{it} = \beta_{0(i)} + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \quad ,i=1,2\ldots\ldots,N \text{ , } T=1,2,\ldots\ldots,T\ldots..(3)$$

Pooled regression model: It is one of the simplest models for cross-sectional data, as it neglects the effect of the time dimension and assumes the stability of all the model parameters and takes the following form:

$$y_{it} = \beta_0 + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \quad ,i=1,2\ldots\ldots,N \text{ , } T=1,2,\ldots\ldots,T\ldots\ldots..(4)$$

The estimation is done by means of the ordinary least squares (OLS), while the fixed effects model aims to determine the behaviour of each cross-sectional data set independently, by making the segment parameter vary from one group to another, as this model allows for a difference between groups, but the slope coefficients are fixed for all groups. . And accordingly, the model will be of the following form:

$$y_{it} = \beta_{0(i)} + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \quad ,i=1,2\ldots\ldots,N \text{ , } T=1,2,\ldots,T\ldots\ldots..(5)$$

For the purpose of estimating the parameters of this model, dummy variables are usually used of (N-1) in order to avoid the case of complete linearity. This model has been known as the Least Squares Model with Dummy Variables (LSDV) and the model becomes of the following form:

$$y_{it} = \delta_1 + \sum_{p=2}^{N} \delta_p D_p + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \quad ,i=1,2,N \text{ , } T=1,2,..,T..(6)$$

Where $\delta_1 + \sum_{p=2}^{N} \delta_p D_p$ represents the change in the sectional sums of the segment parameter β_0 so that the model is as follows:

$$y_{it} = \sum_{p=2}^{N} \delta_p D_p + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \quad ,i=1,2\ldots\ldots,N \text{ , } T=1,2,\ldots,T..(7)$$

Finally, we find the Random Effects model, whose characteristics are that the error term in which ε_{it} has a normal distribution with a mean of zero and a variance equal to σ_ε^2, and in order for the parameters of the random effects model to be unbiased, the error variance is usually imposed constant (homogeneous) for all observations. Cross-sectional and there is no self-correlation through time between groups. In the random effects model, the intercept coefficient β_0 is treated as a random variable having a mean of μ.

$$\beta_{0(i)} = \mu + V_i \quad ,i=1,2\ldots\ldots\ldots\ldots N \quad \ldots\ldots\ldots\ldots\ldots\ldots(8)$$

By substituting equation (8) into equation (3), we obtain the following random effects model:

$$y_{it} = \mu + V_i + \sum_{j=1}^{k} \beta_j x_{j(it)} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(9)$$

In order to estimate this model, a generalized least squares method is adopted, which assumes that the variance of the error term is constant (Homoskedastic) and the error is of type (White Error).

In order to differentiate between these models, we resort to two tests. The first is the Breusch and Pagan test, which compares the random and the aggregate models, while Hausman is a comparison between the random and the fixed effects model.

Experimental model:

The econometric model is as follows:

$$y_{it} = \alpha_i + \beta_1 inf_{it} + \beta_2 open_{it} + \beta_3 \text{gconsum}_{it} + \beta_4 \text{lhscoling}_{it} + \beta_5 cgov_{it} + \beta_6 cdf_{it} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(10)$$

SECTION III: RESULTS AND DISCUSSION:

Principal Component Analysis (PCA):

After fulfilling the conditions for applying the principal component analysis (PCA) from the correlation matrix Table (1) in which most of the variables were correlated to each other, and the KMO test Table (2) where its value was more than 50%.

Table (1): Correlation Matrix for Governance Variables

	Ccgov	gegov	Pvgov	rqgov	vagov	Rlgov
Ccgov	1					
Gegov	0.7197	1				
Pvgov	0.7983	0.7427	1			
Rqgov	0.6176	0.6772	0.5805	1		
Vagov	0.0073	0.0632	-0.0651	0.2183	1	
Rlgov	0.317	0.0589	0.2679	0.3344	0.1728	1

Source: From student achievement using STATA 14 program

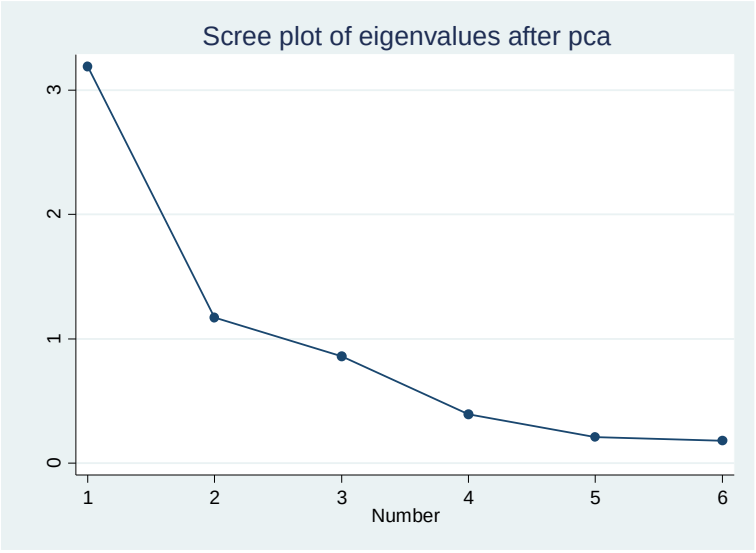
Table (2): KMO test for governance variables

Ariable	kmo
Ccgov	0.8164
Gegov	0.7177
Pvgov	0.7751
Rqgov	0.7977
Vagov	0.4184
Rlgov	0.4697
Overall	0.743

Source: From student achievement using STATA 14 program

Governance indicators were dealt with through two composite indicators (cgov1 and cgov2) that express the largest possible variations. We obtained them through the analysis of the main components (PCA) and based on its outputs, we find Figure (1) which represents the number of compounds in the way the Plot Scree Method for governance variables On the basis of which these two compounds are chosen.

Figure (1): Number of Compounds by Plot Scree Method for Post-PCA Governance Variables



Source: From student achievement using STATA 14 program

These two components interpreted 72.67% of the total information according to Table (3) and Table (4). The matrix of components after rotation in Table (5) shows that the componet (cgov1) includes the variances of the variables (ccgov, gegov, rqgov, pvgov) and explains the value of 53.17% of the total information represented by the axis (the government's ability to formulate and implement peace and stability policies Political with corruption control), while the (cgov2) component includes the variations of the two variables (rlgov and vagov) and explains the value of 19.50% of the total information represented by the axis (rule of law, voice and accountability).

Table (3): Matrix of variances for governance variables

Component	Eigenvalue	Difference	Proportion	Cumulative
cgov1	3.19015	2.02009	0.5317	0.5317
cgov2	1.17006	0.310999	0.195	0.7267
cgov3	0.859063	0.465904	0.1432	0.8699
cgov4	0.393159	0.184897	0.0655	0.9354
cgov5	0.208263	0.0289615	0.0347	0.9701
cgov6	0.179301	.	0.0299	1

Source: From student achievement using STATA 14 program

Table (4): Determine the number of components in the Kassiar method for governance variables

Component	Variance	Difference	Proportion	Cumulative
cgov1	3.11721	1.87421	0.5195	0.5195
cgov2	1.243	.	0.2072	0.7267

Source: From student achievement using STATA 14 program

Table (5): Matrix of components for governance after rotation

Variable	cgov1	cgov2	Unexplained
Ccgov	0.5142		0.1804
Gegov	0.5116		0.2096
Pvgov	0.5253		0.168
Rqgov	0.4212	0.2604	0.28
Vagov		0.7687	0.2922
Rlgov		0.566	0.5095

Source: From student achievement using STATA 14 program

As for the financial development variables, and after verifying that at least two conditions are fulfilled for the application of the principal component analysis (PCA) of the correlation matrix, Table (6) in which

most of the variables are related to each other, and the KMO test, Table (7) where its value was More than 50%.

Table (6): Correlation Matrix for Financial Development Variables

	stturnover	stvaltraded	stmktcap	pcrdbofgdp	llgdp
Stturnover	1				
Stvaltraded	0.8797	1			
Stmktcap	0.466	0.6687	1		
Pcrdbofgdp	-0.168	0.0017	0.2926	1	
Llgdp	-0.2039	-0.0921	0.0858	0.6595	1

Source: From student achievement using STATA 14 program

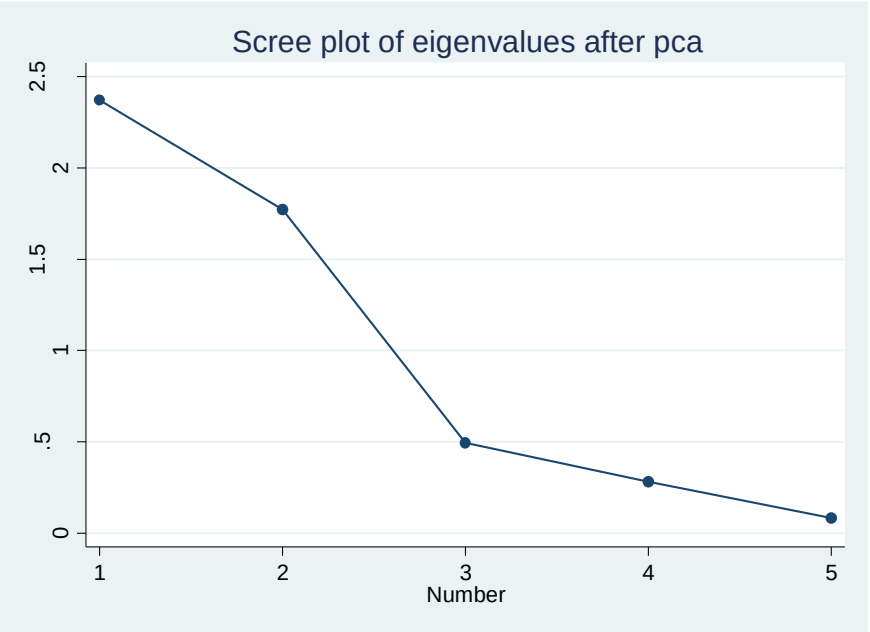
Table (7): KMO test for financial development variables

Variable	kmo
Stturnover	0.5651
Stvaltraded	0.5411
Stmktcap	0.6162
Pcrdbofgdp	0.5164
Llgdp	0.5455
Overall	0.5568

Source: From student achievement using STATA 14 program

The variables have been reduced to two basic components (cdf1, cdf2) that express the largest possible variations, which were obtained through the principal component analysis (PCA). Based on its outputs, we find Figure (2) which represents the number of compounds by the Plot Scree method for financial development variables, these two compounds are interpreted as 82.84% of the total information according to Table (8) and Table (9).

Figure (2): Number of Compounds by Plot Scree Method for Post Financial Development Variables (PCA)



Source: From student achievement using STATA 14 program

Table (8): Matrix of variances for financial development variables

Component	Eigenvalue	Difference	Proportion	Cumulative
cdf1	2.37072	0.599234	0.4741	0.4741
cdf2	1.77148	1.27709	0.3543	0.8284
cdf3	0.494389	0.212924	0.0989	0.9273
cdf4	0.281465	0.199516	0.0563	0.9836
cdf5	0.081949	.	0.0164	1

Source: From student achievement using STATA 14 program

Table (9): Determining the number of components for financial development using the Kassiar method

Component	Variance	Difference	Proportion	Cumulative
cdf1	2.36799	0.593779	0.4736	0.4736
cdf2	1.77421	.	0.3548	0.8284

Source: From student achievement using STATA 14 program

The matrix of components after the rotation in Table (10) shows that the component (cdf1) includes the variances of the variables (ccgov stturnover, stvaltraded, stmktcap) and explains the value of 53.17% of the total information and represents the axis of the stock market, while the component (cdf2) includes the variances of the two variables (pcrdbofgdp, llgdp) and explaining the value of 19.50% of the total information and representing the axis of the financial market.

Table (10): Matrix of components for financial development after rotation

Variable	cdf1	cdf2	Unexplained
Stturnover	0.5799		0.148
Stvaltraded	0.628		0.06454
Stmktcap	0.5142	0.2471	0.2757
Pcrdbofgdp		0.6914	0.1514
Llgdp		0.6584	0.2181

Source: From student achievement using STATA 14 program

Analysis of estimates:

The first case: In the presence of the axis of the government's ability to formulate and implement peaceful policies and political stability while controlling corruption (cgov1) and the stock market axis (cdf1):

Table (11): The first case is estimates of the three models			
Variable	Model Pooled	Model Fixed	Model Random
Inf	-.0253086***	-0.00475039	-0.00481694
Open	.00693463***	.00593078***	.0059425***
Gconsum	-.03045844***	0.00382417	0.00347238
Lhscoling	0.04691187	.12029465***	.11851646***
cgov1	-.06561953*	-.18037146***	-.178717***
cdf1	.05720257*	0.00748742	0.007346
cons	11.277486***	8.3949768***	8.4262759***
N	176	176	176
N_grope		8	8
r2	0.48409091		
r2_a	0.46577461		
r2_w		0.44249859	0.44242188
r2_b		0.3020533	0.29472609
legend: * p<.1; ** p<.05; *** p<.01			
Source: From student achievement using STATA 14 program			

Tables (12): Breusch and Pagan and Hausman test			
Test	Valeur de Chi2	Prob	Decision
Breusch and Pagan	840.37	0	R.E
Hausman	1.01	0.9854	R.E
Source: From student achievement using STATA 14 program			
R.E: Random Effect			

After estimating the three models (Model Pooled), (Model Fixed Effects), (Random Model Effects), then doing a test (Breusch and Pagan) for the comparison between the Pooled model and the random model, and according to the results obtained from the Chi2 value equal to 840.37 and its probability value less than 5%, it is clear to us that the random model is appropriate and for the sake of differentiation between this model and the fixed effects model we use the (Hausman) test and according to the results

obtained from the Chi2 value equal to 1.01 and its probability value greater than 5%, it becomes clear to us that the random model is the best, according to the results contained in Tables (11) and (12). The coefficients of trade openness, human capital, and the (cgov1) axis of governance were statistically significant in the range of 1%. Economically, one unit increase in trade openness leads to an increase in per capita income by 0.6% and one unit increase in human capital leads to an increase in per capita income by 11.9% while the (cgov1) axis of governance contributes inversely to income growth, as an increase of one unit leads to a decrease in income growth of 17.9%.

As for the estimates of Table (15) (Model1) and there is only (cgov1) represented in (the government's ability to formulate and implement peaceful policies and political stability while controlling corruption), which came in the range of 1%, but economically, the increase and severity is one of them. It leads to a decrease in the growth of per capita income by 17.56%. This reflects that governance does not contribute to improving the economic situation of these countries, which suggests that the tools of governance are not fully implemented. The (Model2) estimates also came with the existence of only (cdf1) the stock market, which was not significant but had no effect on the rest of the growth variables, the majority of which were statistically significant, except for inflation.

The second case: With the rule of law, voice and accountability axis (cgov2) and the financial market axis (cdf2):

Table (13): the second case, estimates of the three models

Variable	Pooled	Fixed	Random
Inf	-.01658987**	**00934563.-	-.00923974**
Open	.00475718***	.00382941***	.00378907***
gconsum	-.02260883***	0.00162407	0.00114151
lhscoling	.24365393***	0.00574121	0.00559487
cgov2	-.35889144***	-.06537188**	-.06803459**
cdf2	.11501652**	.18484014***	.18337673***
_cons	10.278935***	8.9441802***	8.9856254***
N	176	176	176
N_g		8	8
r2	0.55467264		
r2_a	0.5388622		
r2_w		0.43856857	0.4383794
r2_b		0.11552944	0.10214805
legend: * p<.1; ** p<.05; *** p<.01			

Source: From student achievement using STATA 14 program

Tables (14): the Breusch and Pagan and Hausman test

Test	Valeur de Chi2	Prob	Decision
Breusch and Pagan	762.58	0	RE
Hausman	2.27	0.8938	RE

Source: From student achievement using STATA 14 program

R.E: Random Effect

After estimating the three models (Model Pooled), (Model Fixed Effects), (Random Model Effects), The Breusch and Pagan test was performed for the comparison between the Pooled model and the random model. According to the results obtained from the Chi2 value equal to 762.58 and its probability value less than 5%, it appears that the random model is appropriate and for the sake of differentiation between this model and the effects fixe model we use the (Hausman) test and according to the results obtained from the Chi2 value equal to 2.27 and its probability value greater than 5%, it becomes clear to us that the random model is the best, according to the results contained in Tables (13) and (14).

The coefficients of both inflation and the axis (cgov2) were significant within the range of 5%. While the trade openness and the axis (cdf2) which represented the financial market is significant within the range of 1%. Economically, one unit increase in inflation leads to a decrease in income growth of 0.9%, while one unit increase in trade openness leads to an increase in per capita income by 0.3%, and one unit increase in cgov2 leads to a decrease in growth, income by 6.8% while an increase in cdf2 leads to an increase in per capita income of 18.33%.

With regard to the estimates of Table (15) (Model3) and the presence of (cgov2) represented by (the rule of law, voice and accountability), which was significant in the range of 1%, but economically, an increase of one unit of it leads to a decrease in income growth Including 11.47%, but it had an impact on the rest of the growth variables that were significant in the range of 1% and with a positive effect on growth, excluding inflation. As for the (Model4), with the presence only of (cfd2) which represented the financial market, which was significant in the range of 1%. Economically, one unit increase of it leads to an increase in income growth of 19.64%, which

suggests that the financial market in these countries it has a positive impact and contributes to financing projects that contribute economically to the country's development.

Table (15): Estimating models

Variable	Model1	Model2	Model3	Model4
Inf	-0.00467567	0.00032898-	0.00058711-	-.00962489**
Open	.00623164***	.00906352***	.00888542***	.00335034**
Gconsum	0.00296284	.00566714*	.00765329***	-0.0007039
lhscoling	.11453198***	.07973151**	.16726899***	-0.0564632
cgov1	-.17567527***			
cdf1		-0.00580735		
cgov2			-.11472172***	
cdf2				.19649194***
Cons	8.4528158***	8.0857441***	7.7174841***	9.3210456***
N	176	176	176	176
N_g	8	8	8	8
r2_w	0.44128415	0.2614455	0.30174902	0.42437175
r2_b	0.29797877	0.04697975	0.00373177	0.1555301

legend: * p<.1; ** p<.05; *** p<.01

Source: From student achievement using STATA 14 program

Conclusion:

Empirically, there is substantial literature emphasizing the importance of institutional quality as a determinant of economic growth. But what was found in this study shows that the two governance indicators obtained (cgov2, cgov1) and represented in (the government's ability to formulate and implement peaceful policies and political stability while monitoring corruption) and (rule of law, voice and accountability) had both incorporeal and negative impact on economic growth in these countries under study came in agreement with the study of the International Monetary Fund (2003), which showed that the relationship between institutional quality and economic growth about the possibility of an inverse causal relationship between institutional quality and growth. Thus, Anderson and Markweiler (2002), Dollar and Cray (2002), Based on the fact that bad institutions increase the cost and risks of foreign trade, and from this logic, we can say that corruption, violence, and political instability as a result of faltering democracies in these countries do not contribute to the proper implementation of governance mechanisms, in addition to the rampant

corruption. While the two financial development indicators (cdf2 and cdf1) represented in the stock market and the financial market, the stock market was no significant and had no effect on growth, due to the latter's weakness in attracting capital from outside these countries. As for the financial market, it had a significant and positive impact on growth in these countries, and we see from this, that they contribute to the embodiment of the development projects.

In light of this study, it becomes clear that there are two approaches that complement each other in governance and financial development. The serious application of governance mechanisms leads to improving the factors of financial development and then economic growth.

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