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Investigating the relationship of financial systems with economic growth in the Middle East countries by the approach of simultaneous equations using the seemingly unrelated regression (SUR) method.

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Abstract

Investigating the two-way relationship between economic growth and financial development is an important issue that can lead to a better understanding of economic dynamics. The purpose of this research is to investigate the relationship between financial development and economic growth for the Middle East countries between 2010 and 2023. This research has been carried out using the system of simultaneous equations method with the seemingly unrelated regression (SUR) approach. According to the research results, financial development does not have a significant effect on economic growth, but growth has a positive and significant effect on financial development. It can be concluded that financial development, as a key element in achieving sustainable economic growth, cannot be unilaterally influential. Although strong and efficient financial infrastructure is necessary to facilitate investment and financing, financial development alone cannot lead to economic growth. On the other hand, economic growth as a strong driving force has a positive and significant effect on financial development. When the level of production and consumption in a country increases, the demand for financial services also increases. This allows financial institutions to offer more variety in their products and services, leading to improved efficiency and financial leverage. Therefore, economic growth not only helps increase investment and innovation, but also strengthens financial structures and facilitates access to financial resources for all economic stakeholders.

Key words: financial development, economic growth, seemingly unrelated regression (SUR), simultaneous equations.

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1-Introduction

Financial development and economic growth are two key concepts in economics that have mutual and complex effects on each other. Financial development means improving and strengthening institutions, markets and financial instruments that help to provide financial resources and financial services to individuals and companies. On the other hand, economic growth refers to the process of increasing the production of goods and services in a country, which leads to an inprovement in the living level, reduction of poverty and improvement of living conditions. Discussions related to financial systems and economic development, from the 1960s onwards with studies such as Goldsmith (1969), Gurley and Shaw (1967), McKinnon (1973) and Shaw (1973), interred in the literature.

Since then, this debate has developed among academics and policy makers in this field. For the first time in his study, Goldsmith (1969) provided empirical evidence of the relationship between the development of the financial sector and economic growth for a sample consisting of a set of countries (Eschenbach, 2004). McKinnon (1973) and Shaw (1973) supported financial liberalization as a mechanism to increase savings, capital accumulation, and thus create long-term economic growth. Based on these basic theoretical ideas, a wide range of studies were formed in which the relationship between financial development and economic activity was investigated and confirmed. In the studies of Greenwood & Berthélemy 1996, King & Varoudakis, 1990, Jovanovic & Levine 1993, examined the relationship between financial development and economic growth through statistical approaches using intercountry data. These papers have provided evidence that the financial sector is an important driver of economic growth (Beck, Demirguc-Kunt & Levine, 2009; King & Levine, 1993; Levine, 1997; Aliahmadi et al., 2016). Some studies also focused on the impact of financial development on economic growth in Asian countries (Liu & Hsu, 2006; Sinha & Macri, 2001; Estrada, Park & Ramayandi, 2015; Fallah et al., 2021). Musa Ali et al. (2014) focused on the importance of finance in Africa's economic growth; Guru and Yadav (2019) in BRICS countries; Bitcourt (2012) and Garcia (2012) investigated the relationship between these two variables in Latin America. On the whole, the studies show that these studies have examined the relationship between financial development and economic growth and have obtained different results. But most of the researches in the field of finance and economic growth is focused on identifying the correlation or causality between these variables, and examining their simultaneous relationship has not been considered as it deserves. Therefore, this issue is still a research gap in economic literature.

Considering this research gap, investigating the two-way relationship between these two phenomena is particularly important, because in a healthy economic system, investments and active economic activities lead to financial development, and the development of the financial system can also attract investment and encourage economic growth. To help this meaningful relationship can help policy makers to implement effective strategies to improve the economic status of countries and achieve an improvement in public welfare. Therefore, the aim of this study is to analyze the relationship between financial development and growth by estimating a system of simultaneous equations using the seemingly unrelated regression (SUR) method. The importance of this review is especially due to the mutual effects of these two elements. On the one hand, financial development can improve investment conditions and facilitate commercial and economic processes, and on the other hand, economic growth can help strengthen financial institutions and markets. This bilateral relationship is important not only for economists and policy makers, but also for all economic stakeholders such as entrepreneurs, investors and citizens.

2- Theoretical foundations and research background

Economic growth and financial development are two key concepts that help to analyze and understand economic processes. In the contemporary world, there is a close relationship between these two variables. Financial development refers to a set of processes and institutions that deal with the optimal allocation of financial resources, facilitates access to credits and promotes the efficiency of financial markets (Guru& Yadav 2019). On the other hand, economic growth refers to the sustainable increase of a country's gross domestic product and the improvement of people's living standards. Research on this relationship shows that financial development can act as a driver for economic growth, because it facilitates investment,

promotes innovation, and increases production efficiency. In addition, strong financial institutions and efficient banking systems help businesses to obtain the necessary resources to expand their activities (Lee et al, 2017). Financial development improves access to finance for companies and entrepreneurs, which can lead to increased investment and thus increased production and income. Efficient financial institutions can help to allocate resources optimally and reduce transaction costs, which leads to improved economic efficiency and increased growth rates. Advanced financial systems can help to identify and to support innovative ideas and thus lead to technology development and productivity improvement (NULL et al, 2024). On the other hand, economic growth increases incomes, and this increases the demand for financial services and financial institutions. By increasing production and income, the private sector is strengthened and this in turn can help the development and expansion of financial institutions. Economic growth helps to increase the government's financial resources and can lead to the improvement of economic and financial infrastructure (Muneeb et al, 2024; Nozari et al., 2023).

Considering the importance of the two mentioned variables, the research on the role of the financial sector in the process of economic development has been investigated by economists over the years. Jershenkron (1962), Goldsmith (1969) and Patrick (1966) emphasized the determinant role of the financial sector in the process of economic development. Gershenkron (1962) claimed that the degree of economic development of a country at the beginning of the industrialization process determines the role of the banking sector. In the 1970s, MacKinnon (1973) and Shaw (1973) developed a theoretical framework that helped explain the growth-stimulating effects of financial liberalization versus financial repression. Most studies conclude that financing induces growth in early stages of economic growth and financing induces economic growth in more advanced stages. (Eschenbach, 2004). Studies on large samples of countries support the idea that financial development facilitates the entry of newcomers (Rajan & Zingales, 2003). Growth in the number of new financial institutions is significantly higher in industries dependent on foreign investment when the economy is financially developed. While foreign markets bring opportunities and openness brings foreign competitors to domestic markets.

The development of the financial system is an essential aspect of the industrialization process. (Gerschenkron, 1962; Zysman, 1983). There are two main types of financial systems, bank-based and market-based, where the weight of each sector in the financing structure of a country is important. The significant differences between the structures of the financial systems of different countries can be related to the timing of their industrialization process. (Gerschenkron, 1962; Zysman, 1983).The development of the financial system is central to economic and financial stability, in order to stimulate domestic sources of financing that can help increase economic activity. Due to this reason, the study of these determinant factors has been part of the research agenda of many researchers. Some studies on the growth that creates financial development were done with the two-way causality method (Demater and Hossein (1996) and Levin Zervos, 1998). Some studies have addressed the issue that liquidity, size, fluctuations and integration of the stock market are strongly related to current and future rates of economic growth, capital accumulation, productivity improvements and savings rates. It was also confirmed that growth channels (capital stock, social capital and productivity), stock market liquidity and banking development have a positive and strong correlation. The development of the financial system is directly affected by the structural and institutional changes that reach the countries. The 1990s were important for emerging countries, both in terms of economic development and financial development. The World Development Report (1999-2000), published by the World Bank (1999),stated a set of characteristics that characterizes this period of progress in information and communication technology (especially in the financial system), distribution of financial innovations, opening of domestic financial and economic markets ,liberalization of capital account transactions and capital mobility. This series of evolutions attracted the attention of academics who sought to understand the positive and negative effects. For example, studies such as Sing and Wiese (1998) and Stiglitz (2000) analyzed the relationship between the financial system and economic development by including the characteristics of developing countries in terms of the potential benefits of financial liberalization. According to these studies, market liberalization can be beneficial for developed countries

that have a stable financial structure but can be harmful for underdeveloped economies that often have little decision-making power to regulate their financial systems. On the one hand, liberalization can have benefits, on the other hand, efficient regulation and supervision are important to reduce financial weakness, potential systemic risk and to support economic growth.

Dean et al. (2019) highlight the potential of ICT as a tool to promote financial inclusion and economic development, although they call for more research to fully determine the extent of its impact. This suggests that while mobile money services have begun to change the financial landscape in many developing countries, the overall impact on economic development remains a ready area for further research. Svirydzenka (2016) emphasizes the multidimensional nature of this relationship and suggests that financial development not only increases capital allocation, but also fosters innovation and entrepreneurship, which are critical for sustainable economic growth. The study's findings suggest that while financial systems can accelerate growth, the pathways through which this occurs are complex and require a precise understanding. Horvath et al (2013) in their study emphasize the statistically significant positive effects of financial development on economic growth, with special emphasis on the role of stock markets. The findings of this study show that stock markets are more effective than other financial intermediaries in stimulating economic growth, thus representing a potential area for policy focus. Also, Manning and Purnagunawan (2011) in a study for Indonesia show that how financial development, contributes significantly the economic growth, particularly through foreign direct investment (FDI) and an emerging middle class. This study highlights the importance of internal factors, such as the socio-economic landscape, in shaping the effectiveness of financial development initiatives. Eisenman, Jinjarak and Park (2011) explained the complementary role of banking sector development and stock market development in stimulating economic growth. Their analysis suggests that a well-developed banking sector can increase the overall efficiency of capital allocation, which, when combined with a strong stock market, leads to increased economic growth. Carbonell and Werner (2018) investigated the bidirectional relationship between financial development and economic growth and found that stock market development not only supports economic growth, but is also influenced by the growth paths of economies themselves. This interplay requires a deeper exploration of how economic policies can be designed to effectively leverage these relationships.

3-Methodology and variables

In this study, the relationship between financial development and economic growth in the Middle East countries during the years 2010-2023 has been investigated. The statistics required in this research were obtained from the World Bank Development Indicators (WDI) website. The research model taken from the study of Warner et al. (2023) is as follows:

Saudi Arabia, Iraq, Iran, Syria, United Arab Emirates, Turkey, Oman, Kuwait, Jordan, Egypt, Cyprus, Bahrain, Qatar, Yemen, Libya and Lebanon

$$growth_{it} = \alpha + \beta_1 finacial\ development + \beta_2 EDUCATION_{it} + \beta_3 regulation_{it} + \beta_4 government_{it} + \beta_5 Urban\ Population_{it} + \beta_6 inflation_{it} + \beta_7 trade_{it} + \beta_8 credit_{it} + \varepsilon_{it} \quad (1)$$

$$finacial\ development_{it} = \sigma + \gamma_1 growth_{it} + \gamma_2 regulation_{it} + \gamma_3 inflation_{it} + \gamma_4 Urban\ Population_{it} + \gamma_5 trade_{it} + \gamma_6 FDI_{it} + \varepsilon_{it} \quad (2)$$

The above models has been estimated using the simultaneous equation approach with the seemingly unrelated regression (SUR) approach. The seemingly unrelated regression models of SUR discuss relationships that are seemingly unrelated, but the evidence shows that changes in the first equation have an effect on the second equation (Manzoev, 2017). In fact, in these equations, the dependent variables Y1 and Y2 are respectively influenced by the explanatory variables X1 and X2, and there is no relationship between them, but there are factors in the structure of the random factor U1 and U2 that cause these two equations be related with each other in a hidden way. As we know, economic variables affect each other. Therefore, examining each of them separately will cause some information not to be included in the

calculations. This is in a situation where the desired information is not available and we are forced to estimate the information. To use the SUR method, the LM test must first be performed to ensure that there is a relationship between the disturbed sentences. In these equations, the GLS method can help because it allows more information to be used. With the system estimator, you can use the relationship between the disturbance sentences. In general, SUR can be used when the variables on the right side of the exogenous equations (Xs) and the following assumptions are true for the disturbance sentences:
-All disturbance sentences have zero mean.
-In a certain equation, the variance of the disturbance sentences is constant over time, but each equation can have a different variance.
- The two disturbance sentences in the equations are different, but they are related in the same time period (simultaneous correlation).
-Disturbance sentences in different time periods are uncorrelated whether they are in the same equations or not (there is no autocorrelation).

The method proposed by Zeland in 1961 to estimate the variance-covariance matrix for a system of seemingly unrelated equations is used for estimation .The following steps have been done for this method: First, the equations were estimated by OLS method and the residual was extracted. As can be seen, σ u is obtained based on the residual sentences.

$$\sigma_u = \frac{\sum e_1 e_1}{n} \quad (3)$$

If the number of observations is small, it can be divided by n-1.
Now we put the variance-covariance matrix in the system equations and calculateβ_{SUR}.

$$\beta_{SUR} = (X(\hat{\sum} \otimes I_r)^{-1} X)^{-1} X(\hat{\sum} \otimes I_r)^{-1} Y \quad (4)$$

Which is the best unbiased linear estimator for β, this estimator has less variance than the OLS estimator, because it considers the simultaneous correlation between disturbance sentences of different equations. Using the SUR method under two conditions compared to the OLS method leads to an increase in efficiency:
-All simultaneous correlations are zero.
-Explanatory variables are the same in all equations.

4. Results

The results are presented in two descriptive and inferential statistics sections:

4.1. Descriptive statistics

Before entering the discussion, the descriptive statistics of the research variables have been examined. The purpose of this type of analysis is to display and describe data. The descriptive statistics analyzed in this research are defined as follows: Mean: In the study of the distribution of a statistical population, the representative value around which the measurements are distributed is called the central value, and any numerical measure that represents the center of the data set is called the measure of central tendency. Mean and median are the most common measures of central tendency

Median: It expresses the numerical median which shows that 50% of the data of a variable have a value smaller than or equal to it and 50% have a value greater than it.

Variance: a measure to measure the dispersion (distance) of data from their mean. Skewness: In the science of statistics, skewness is a measure of symmetry or asymmetry of the distribution function. For a completely symmetric distribution, the skewness is zero, and for an asymmetric distribution with a skew toward higher values, the skewness is positive, and for an asymmetric distribution with a skew toward smaller values, the skewness is negative. According to the proposed definitions, descriptive statistics related to the research variables are presented in Table (1):

Table 1: Descriptive statistics of research variables.

max	min	variance	mean	variable
16.50	-8.88	3.44	3.46	GROWTH
0.87	0.00	0.25	0.38	financial development
11.9	2.7	2.35	8.07	EDUCATION
3.01	-2.25	0.99	0.07	Regulatory Quality
147.9	5.5	15.42	15.59	Expenditure Government
100.0	18.9	22.99	62.22	Urban Population
55.88	-2.29	5.04	5.07	Inflation
100.0	18.18	19.11	76.51	Access to Sanitation
425.2	0.14	94.44	96.71	Trade
58.55	-2.23	7.00	5.05	Foreign Direct Investment
225.3	1.50	45.55	60.14	Credit to the Private Sector

Considering the above table, the descriptive statistics show the status of the variables. Therefore, it can be said that the average of all research variables is positive, in other words, other observations related to this variable are distributed around the average.

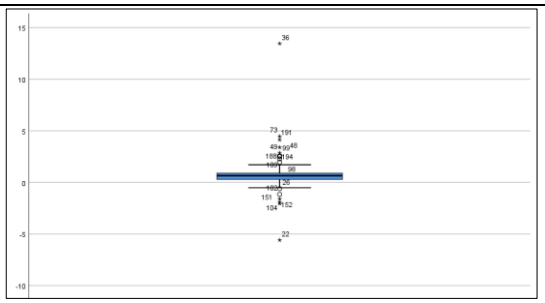
4.2. Inferential statistics

Based on the definition of inferential statistics, since it is not possible to study a large population, first a sample is taken from a part of the population. Then, using statistical techniques, the results are generalized to the larger population. First of all, the required tests are reviewed, the results of which are presented below: Normality test of research variables

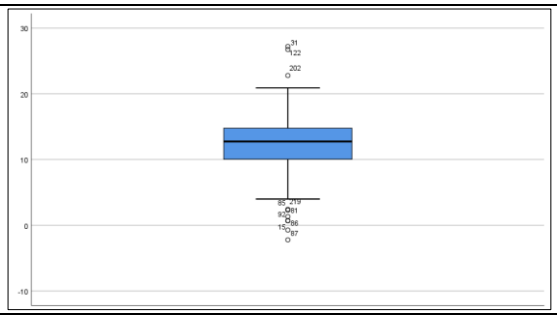
Before entering the correlation test, the status of the variables should be checked for normality. To check the normality of the distribution of the research variables, the Kolmogorov-Smirnov test is used.

Table 2: Checking the normality of research variables.

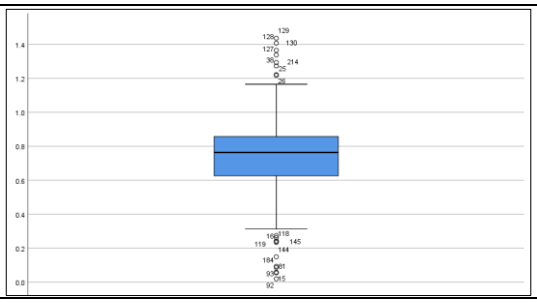
status	significant level	variable
0/000	0/096	GROWTH
0/002	0/148	financial development
0/000	0/113	EDUCATION
0/000	0/221	Regulatory Quality
0/000	0/257	Expenditure Government
0/000	0/195	Urban Population
0/000	0/428	Inflation
0/000	0/325	Access to Sanitation
0/000	0/231	Trade
0/000	0/444	Foreign Direct Investment



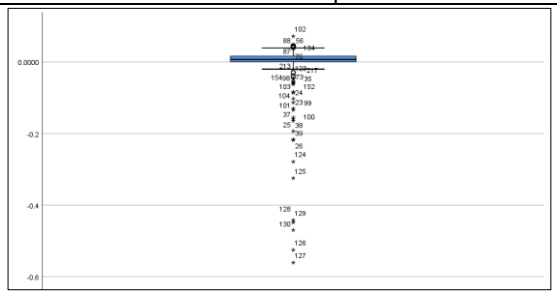
GROWTH



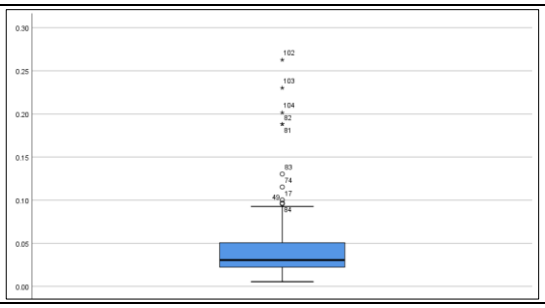
financial development



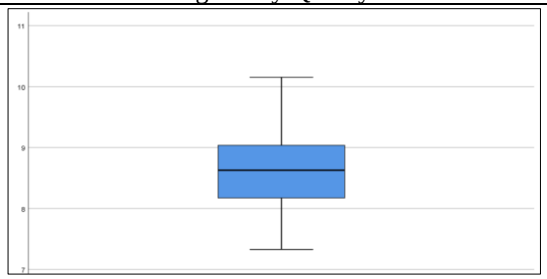
Education



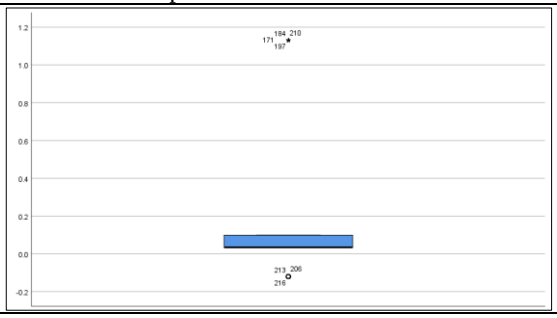
Regulatory Quality



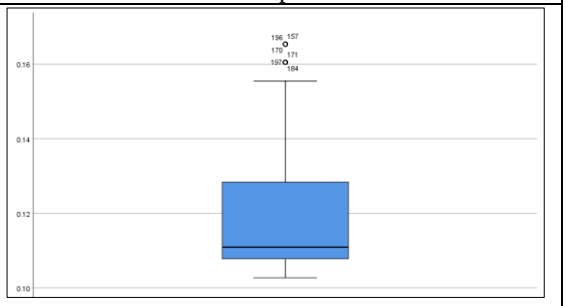
Expenditure Government



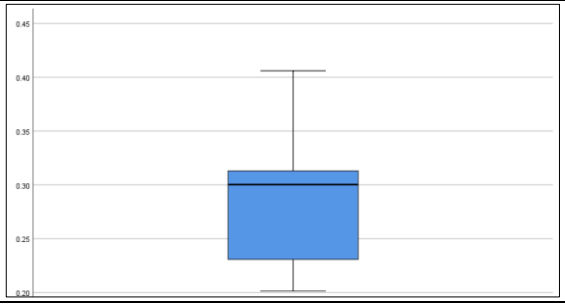
Urban Population



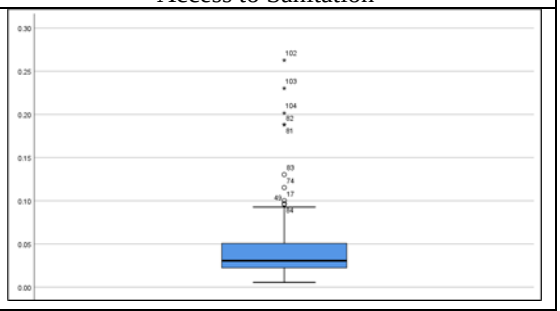
Inflation



Access to Sanitation



Trade



Foreign Direct Investment

Chart 1: The results of the normality test of model variables.

Unit root test

The use of time series statistics is based on the assumption that the used time series variables are stable. On the other hand, the prevailing belief is that many time series variables in economics are not stable. Therefore, before using these variables, it is necessary to ensure their reliability or lack of reliability. As far as macroeconomic theories are concerned, the most important consequence of the single root revolution is that when a time series variable is proven to be unstable, random impulses or shocks will have a permanent effect on that variable. Put therefore, it is very important to carefully consider the validity of the unit root test as an empirical fact. Various tests have been presented to check the existence of unit root in mixed data that some of them include Levin, Lin and chu (LLC), Breitung and Im, Pesaran and Shin, ADF-Fisher, PP-Fisher, Choi and Hadri that Levin-Lin-Chu (LLC) test is used in this study. This test is presented as follows:

H0 = there is a common unit root (not a stable variable).

H1 = there is no common root (it is a stable variable).

Considering the results of the LLC test, if the prob was smaller than 0.05 at the 95% confidence level, the null hypothesis is rejected and therefore the desired variable is stable and vice versa. Table (3) shows the results of the LLC test for the following variables:

The variable type of the level of variables (variables at the level) Levin Lin Jo (LLC) Probability Level Statistics

Table 3: The result of reliability test of variables

The level of variables(variables at the level of)		The type of variable
Level of probability	(LLC) Levin ,Lin statistics	
0/353	-0/375	GROWTH
0/0006	-3/262	financial development
1/000	4/431	EDUCATION
0/000	-9/954	Regulatory Quality
0/000	-4/190	Expenditure Government
0/126	-1/144	Urban Population
0/000	-5/934	Inflation
0/000	-18/551	Access to Sanitation
0/02	-7/235	Trade
0/000	-0/426	Foreign Direct Investment
		Credit to the Private Sector

As can be seen in Table (3), all variables are at the 99% level .But the variables of economic growth, education and urban population are not at the Mana level. Considering the non-significance of all variables in this level, to ensure that the estimated regressions are not false, the co-accumulation or co-accumulation test should be used. In this study, the Kao co-integration test is performed. If in this test the obtained result is that the variables are both sum or accumulated, then without worrying about the existence of the unit root, the coefficients of the variables can be estimated (Ranjabr et al., 2012).

Co-accumulation or co-integration test

Before stating the definition of co-accumulation or co-integration, it is better to see what this term was used for the first time and what are its current uses. When the variables used in the regression are of time series type and are not static, a phenomenon called false regression is created, but if all the variables used in the regression model become static together (collectively), it means that the residuals of the model are static. Then the phenomenon of accumulation or co-integration occurs. Therefore, this word (co-accumulation) gradually acquires its use in time series as well, and any time series that is stationary is called co-accumulated, and if the time series becomes static, or co-accumulated after the d times of differentiations, it is called co-accumulated. It is called cumulative of order d and denoted by (d) I. In general, if two cumulative variables (series) are of the same order (for example, d), their linear combination can also be cumulative. In such cases, the regression on the values of two variables is significant, that is, the regression is no longer artificial and we do not lose any long-term information. In short, if we determine that the residuals from the regression are I (0) or static, the traditional regression methodology (including t

and F tests) can be used for the data. Valuable concepts of unit root, co-integration, etc. help us to recognize the static of regression residuals. Therefore, if the existence of a relationship between the variables is proven through the collinearity test (even if the variables are not significant), the estimation can be done without worrying about creating a false regression due to the non-significance of the variables. In this study, Kao test is used to check collinearity. In this test, the hypotheses are presented as follows:
H0: There is no co – integration (co-accumulation) between the variables.
H1: There is co-integration (co-accumulation) between the variables.

If the obtained probability is smaller than 0.05 or 0.1, the null hypothesis is rejected and it can be said that there is a co-occurrence relationship between the variables with a probability of 95 and 90%, so without worrying about false regression, we can Estimating the payment model.Table (4) shows the results of the Kao co-integration test:

Table 4: The results of the Kao co - integration test

Kao co – integration (or co-accumulation)test		
	t statistic	probability
ADF (The model related to factors affecting economic growth)	-3/07	0/001
ADF(The model related to factors affecting financial development)	-3/509	0/002

As can be seen in Table 4 and according to the probability obtained in this test, the null hypothesis of no co-accumulation between the variables is rejected at the 99% confidence level and the opposite hypothesis is accepted. Therefore, based on the results of the Kao test, it can be said that although all the variables are not at the significance level, they are accumulated at the I (0) level and the estimated regression will not be false.

Model estimation results

In this part, the results of the estimation of the model have been examined. Based on this, the estimation results of the variables are presented in table (5):

Table 5: The results of estimating the effect of model variables on economic growth and financial development with simultaneous equations method and SUR approach

The estimation results of the second equation (financial development)		The estimation results of the first equation (economic growth		variable
probability	statistic	probability	statistic	
0/02	0/08	-	-	GROWTH
-	-	0/235	-0/023	financial development
-	-	0/08	-0/011	EDUCATION
0/468	-0/0022	0/025	0/235	Regulatory Quality
-	-	0/000	0/874	Expenditure Government
0/001	0/071	0/001	-0/034	Urban Population
0/130	0/011	0/562	-0/03	Inflation
-	-	-	-	Access to Sanitation
0/236	0/009	0/243	-0/003	Trade
0/011	-0/005	-	-	Foreign Direct Investment
-	-	0/001	0/162	Credit to the Private Sector
0/78		R^2		

The results of Table (5) show that the variable effect of inflation on economic growth and financial development, the effect of financial development on economic growth, and the effect of trade on economic growth and financial development are meaningless. The interpretation of the coefficients is presented in the conclusion section. Also, in order to prove the increase in the efficiency of model estimation through the seemingly unrelated regression (SUR) method, compared to the ordinary least square (OLS) method, we use the Wald test. The results of the parent test are shown in Table (6):

Table 6: Wald test

probability	coefficient	statistics
0/000	170/412	Chi-square

Source: research findings

Based on the results of this test, the null hypothesis based on the equality of the rejection coefficients and the opposite hypothesis is accepted. As a result, using the simultaneous equations method with the apparently unrelated regression approach will lead to an increase in efficiency compared to the OLS method.

5-Conclusions and suggestions

To analyze the simultaneous relationship between economic growth and financial development, two equations were estimated using the simultaneous equations method with seemingly unrelated regression approach. The results of the first estimated equation presented in Table 5 show that financial development does not have a statistically significant effect on economic growth, so with the evidence provided by Bittenor 2012 and Estrada et al. 2015 is contradictory. In equation 2, economic growth shows a positive and significant effect on financial development. In addition, laws and regulations showed a positive and significant effect on economic growth in equation 1, which is in line with the results of Viana and Molik (2018), although in equation 2, laws and regulations did not show a statistically significant coefficient. In line with the results of Lee et al.'s (2017) studies, the urbanization variable was an important parameter in both equations. As shown in equation 1, urbanization has a negative effect on economic growth and in equation 2, it has a positive effect on financial development. These results show that developing countries with less urbanization have higher growth rates, while emerging countries with more urbanization present a more developed financial sector. These results need to be further investigated, but they may be related to irregular urban density costs. Typically, large cities in emerging countries are characterized by high income inequality, high cost of living, and environmental conditions in these large centers, which have affected economic growth. In addition, a significant part of the population of these countries still lives in rural areas that are less productive (World Bank, 1999).

As previously stated by Shahbaz et al. (2017), it is expected that the positive impact of urbanization on financial development is also significant. Manufacturing, service, and financial sector growth typically occurs in large, concentrated cities that benefit from accumulated economies and adequate markets for inputs, outputs, labor, and knowledge. Inflation and trade variables are not statistically significant in any of the equations and therefore are not interpreted. In equation 1, the education variable has a negative and significant effect on economic growth. This result is consistent with the evidence presented for a sample of African countries by Adamu (2013), even if it contradicts much of the theoretical literature on human capital and growth. According to Adamo (2013), the negative impact of human capital on growth can be explained by the variable characteristics of the average years of education used. The author suggests using a variable that measures high-quality human capital, although this type of data is not available for a long period of time, nor for many countries. As expected in the relevant literature, the credit variable to the private sector presents a positive and significant coefficient in equation 1, which indicates that this variable has a positive effect on economic growth. This result is consistent with the findings of Gründler and Witzel (2013), who stated that the channeling of credit from banks to productive activities is the main approach in which finance affects growth.

Finally, the foreign direct investment variable has a negative and significant effect on financial development, which shows that developing countries with higher foreign direct investment experience less development of the financial sector. This result is consistent with the findings of Oseni et al. (2018) and shows that financial openness to foreign capital can have adverse effects on the development of the financial sector in emerging countries. This evidence contradicts the proponents of financial liberalization. In general, the results show that in some developing countries, the entry of foreign capital can have negative effects on financial development. This does not mean that developing countries should approach foreign

investment, but the inflow of this type of capital should be carefully examined with the necessary monitoring methods

The estimated model provides evidence that financial development does not seem to have a significant effect on economic growth, although growth has a positive and significant effect on financial development. In addition, the results also showed that the quality of regulations and domestic credit towards the private sector have a positive effect on economic growth, while urbanization and education have a negative effect on growth. The estimated model also showed that urbanization has a positive effect on financial development, while foreign direct investment has a negative effect on the development of the financial sector. Development of the financial sector may benefit the real sector, but depends on the ability to allocate resources to the most productive uses. Based on the results, the role of financial systems to reduce inter-regional, sectoral and production inequalities is important to be considered as part of a broader development program for Middle East countries. Otherwise, the expansion of the financial sector, rapid growth of financial services, integration in international markets, greater vulnerability, and dependence of these countries on international financial flows can be magnified, which points to the possible policy and regulatory framework.

In general, it can be said that economic growth has a significant positive effect on financial development. When a country is on the path of economic growth, we usually see an increase in incomes, consumption and production. These factors, in turn, create a demand for more financial services and upgrade the financial structures in such a way that they can cover the new economic needs.

In addition, economic growth can lead to the improvement of infrastructure and increasing the level of financial literacy in society. These improvements have helped strengthen financial systems and increase public confidence in them, and as a result, lead to more sustainable financial development. Therefore, the relationship between economic growth and financial development is a two-way relationship that both can help strengthen each other and ultimately lead to the improvement of the country's economic situation.

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