

The Impact of Economic Diversification on Economic Growth: Econometric Study Using Panel Data Model on the Arab Countries from 1999 to 2020

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Abstract:

This research aims to examine the relationship between economic diversification and economic growth by applying the panel data model to six oil and non-oil Arab countries: Algeria, Saudi Arabia, United Arab Emirates, Tunisia and Morocco, Egypt during the period (1999-2020). The results of the study confirmed that the fixed effects model was the appropriate model to test this impact. Its results showed a positive impact between the economic diversification and growth variables and that the relative impact of the services sector was greater than that of industry and agriculture, while the joint integration results showed a lack of long-run relationship between the variables in the model.

Keywords: economic diversification; economic growth; Arab countries; panel data; sector.

(JEL) Classification : Q43, F43, R11, C3.

1. Introduction:

The debate on the role of diversification as a lever for economic growth has been marked in recent years by a resurgence. There are several reasons for this resurgence. The high volatility of commodity prices, associated with the crises of recent years, has slowed economic growth and shown the high vulnerability of the economies of oil exporting countries (M.Hazem Shayah, 2015, p. 736).

Diversification is also a difficult task for countries, particularly those that rely on oil as a single supplier, as it is one of the most important strategies that help countries raise their levels of economic growth, reduce economic crises, as well as strengthen the rest of the economic sectors.

Arab countries are among the countries with most of their economies concentrated around a limited sector, in many cases hydrocarbons, which has led to a significant decline in the contribution of other sectors to their economic activity, putting them before the imperative of diversifying their economies. One of fundamental objectives of diversification is the utilization of the comparative advantages to enable an economy to make use of its resources by generated the GDP from various sectors (Owan, 2020). And promote it with the optimal exploitation of agricultural, industrial and service possibilities.

1.1. Research Problematic:

Biased on the presented overview above about the topic, we had determined the main problematic:

What is the impact of economic diversification on economic growth in Arab countries?

We hypothesized several points to determine the extent of their validity.

- The first hypothesis indicates that the industrial sector has a positive relationship with economic growth in the countries studied, however all our variables have a positive relationship with economic growth.
- We argued that the service sector has the most proportional impact on economic growth compared to the impact of agriculture. However, there is no long-term relationship.

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- Finally, the critical assumption assumed that economic diversification affects economic growth and helps create diversified and sustainable sources of income in these countries, limiting their dependence on oil, but they are low.

1.2. Research Aims:

The purpose of this study is to analyze the role of economic diversification in achieving economic growth. In addition, to study the impact of economic diversification variables on economic growth in the countries of the study sample. Our goal is to encourage the use of alternative sectors to diversify the economy.

1.3. Literature Review:

In our review, we found numerous studies on the topic of economic diversification and its relationship to economic growth, and their results differed depending on the samples studied, the specific time periods and the methods used: Study (Jagadeesh, 2018) This study aimed to find out the impact of export diversification on economic growth in 16 landlocked African countries, during the period from 2005 to 2015 using the (GMM) model. The results indicated that there is a significant negative relationship between export diversification and economic growth.

A study (Al-Marhubi, 2000) based on modern growth theories found empirical evidence that export diversification increases economic growth and that export diversification is associated with higher growth rates. more investment and higher growth. On the other hand, the study (Berthélemy, 2005) sought to investigate the rationale for economic diversification policies and the benefits of diversification in light of international trade theory. Participation in globalization is required for successful diversification.

Another research of the Nigerian economy (Baghebo & Timothy, 2014) revealed that oil and corruption had detrimental effects on economic growth, emphasizing the need to diversify resource sources through economic diversification. This has been accomplished previously (Gylfason, 2001), (Rosser, 2006), and (Dogon-daji & Muktar., 2012) in their studies, which concluded that there are other factors explaining why rich countries with natural resources suffer from the curse of these resources, such as the sharp decline in the return on human investment, which has resulted in inefficient natural resource allocation.

2. Theoretical Approach:

In this second section, we present the theoretical approach to economic diversification and its relationship with economic growth and analyze the evolution of the variables studied.

2.1 What is the economic diversification?

Economic diversification has been considered since the 1930s as an important issue for regional policies and national trade and industrial policies, and is also a central theme in development policies. (Jean claude et autres, 2005, p. 592) Diversification was defined differently by several economists due to their differing opinions. We chose to give the definitions below:

- Simply defined, export diversification is “changing the pattern of exports. By modifying the share of different products in the range exported or by including new products, a given country will have diversified its exports. According to a more general definition, diversification consists in gradually widening the range of products produced without necessarily modifying the levels of productivity” (Hammouda & Stephen N. Karingi, 2006, p. 27).
- The economy is said to be diversified “if its productive structure is dispersed among a large number of activities that differ from each other by the nature of the goods and services produced” (J.C, 2005).

In the words of Schuh and Barghouti (1988), economic diversification is “the process of structural transformation of an economy that migrates from an economic fabric dominated by primary activity sectors (natural resources, agriculture, etc.) towards the secondary (processing industry, manufacturing, etc.) and tertiary (trade, tourism, etc.) sectors” (Schuh & Barghouti, 2013, p. 80).

- Economic diversification is "essential for long-term economic growth and a vibrant, globally competitive private sector," according to the World Bank. It entails diversifying a country's sources of economic growth and income so that all sectors of the economy are more or less equally dependent on it (Ramdath Dwarka, 2011).

2.2. the relationship between diversification and economic growth:

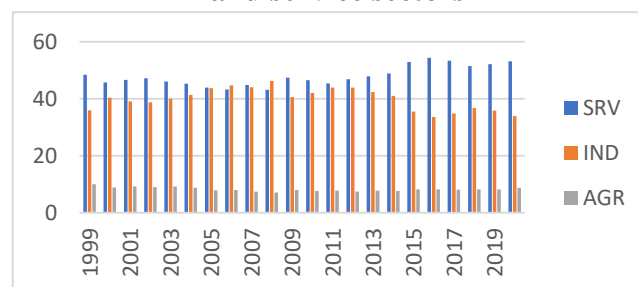
There are two basic themes that explain the relationship between economic growth and initial economic diversity: David Ricardo's idea of comparative advantage, which sees low economic diversification as a stimulus and source of growth. The second trend is evident in a number of research studies, the most notable of which are:

- **According to Kilian and Hady (1988)**, diversification should improve the stability and growth capacity of national economies (Johne, 2000, p. 3). Diversification has a positive impact on growth, according to Romer's model. Diversification, for example, can be seen as a key aspect of increasing the efficiency of production. Moreover, multiple field studies in other countries have indicated that Export diversification.
- **according to Michaely (1977) and Fider (1989)**, has a beneficial external impact on growth as well as on non-market sectors associated with more efficient management practices. Countries with a broad export base, for example, benefit from external influences and incentives for capital formation, resulting in increased growth. (Mejía & Juan, 2011, p. 33) economic diversification has a positive rather than negative impact on GDP and worker productivity
- **According to Agostin (2006)**, "export diversification does not always imply diversification into manufactured exports. Exports can be diversified, for example, by producing raw materials for resource-based firms. Similarly, some countries may have a comparative advantage in the majority of resource-based industries. (Mejía & Juan, 2011, p. 32).

2.3. The evolution of the value added of the three sectors (agriculture, industry, services) during the period (1999-2020):

Through this part of the study, we will try to analyze the evolution of each of the added values of the agricultural, industrial and service sectors of the countries studied for the period 1999-2020, and the following figure illustrates this:

Figure (01): Average value added of the agricultural, industrial and service sectors



Source: made by the author using Excel 2016.

It is noted in Figure 01, that the service sector is characterized predominantly among the three sectors, and contributes significantly to the economic growth of the countries studied, where the value added of the service sector recorded 48.38% of GDP in 1999 and then began to decline until 2014, during which the countries studied reached a rate of 48, 85%, to begin to increase from 2015, reaching 53.12% in 2020, and is the highest value reached in 2016 of 54.29% in this sector during the study period and of course thanks to the efforts made by each state A in the field of health, education, tourism and provision of various services (world Bank, 2020).

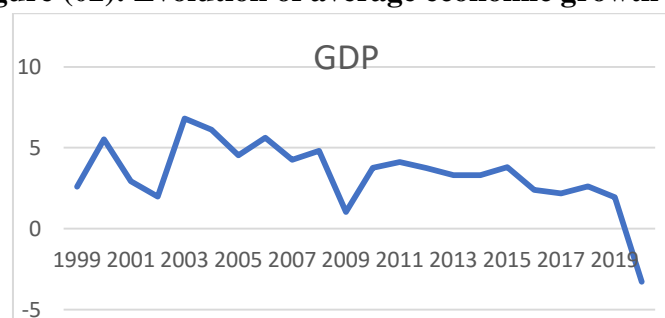
We also note that the indicators of the value added of the industrial sector for these Arab countries are relatively acceptable, reaching 35.92% of GDP in 1999, and it continued to increase until 2014, when it reached 40.91%, and the highest percentage reached during the study period in 2008 was estimated at 46.30%, to experience a significant decline thereafter, since it reached 33.94% in 2020, which is the lowest value reached during the study period. The reason for this is due to weak production and manufacturing operations, as well as the lack of exports due to the Covid 19 pandemic, with the two non-oil countries Tunisia and Morocco being considered the weakest in this sector, in contrast to the oil countries. Algeria, Saudi Arabia, and the United Arab Emirates, in addition to Egypt, the largest contributor, due to the significant contribution of oil and gas production to their economy's High prices in world markets (world Bank, 2020).

As for the agricultural sector, we see a low level compared to other sectors, since the value added of the agricultural sector of these countries reached its peak at 9.91% of their GDP in 1999, and then began to decline until 2020, when it was estimated at 8.74%, The study in 2008 represented 7.02% of its GDP, and the reason for this weakness of the agricultural sector is due to the lack of optimal exploitation of agricultural land and the lack of labor in this area, Egypt being the largest contribution in this sector (world Bank, 2020) .

2.4. Evolution of the economic growth rates of the countries studied for the period (1999-2020):

Through this part of the study, we will try to analyze the evolution of economic growth rates in the countries studied for the period 1999-2020, and the following figure illustrates this:

Figure (02): Evolution of average economic growth rates



Source: made by the author using Excel 2016.

Through the figure, it can be seen that the economic growth rate (gross domestic product) of the studied countries oscillates between high and low levels during the period from 1999 to 2004, when it reached its peak in 2003 and achieved a GDP growth of 6.81%, and then It began to decline for the last 15 years, as it was estimated at 1.03 in 2009, and this percentage is the lowest positive percentage achieved by the countries studied, due to the global crisis of 2008 and its negative effects, and continued to decline to reach in 2020 a negative percentage of %- 3.26, and this weakness is due to the crisis of Covid-19 and

the deterioration of the mood prevailing in the financial markets, which confirms the lack of economic conditions diversification strategy in the countries in the study sample (world Bank, 2020).

3. Methodology:

The study used panel models to be able to study the Arab countries, including oil and non-oil for comparison (Algeria, Saudi Arabia, Emirates, Tunisia, Morocco, Egypt) at the same time and arrive at the most appropriate models. The study of co-integration between the variables of the study was also addressed.

3.1 Econometric Strategy:

Panel data combines both time series and cross-sectional data and is divided into three available models: the aggregate regression model (FEM), the fixed effects model (FRM) and the random effects model (FEM). Using the panel models as they are having several advantages: It controls for individual heterogeneity. Providing more information, more variance, less multicollinearity between variables, a greater degree of freedom and more efficiency. Indeed, time series models often suffer from multicollinearity. It was also able to measure and identify hard-to-detect effects in the data. segment or time series. (Baltagi, 2008, pp. 4-8)

To determine the optimal model among the three models, we perform two steps: the first is the comparison between the cumulative regression model and the fixed effects model, and the second step is the comparison between the fixed and random effects model.

The first step: In this step, it is checked whether or not there are differences between countries or between periods. Where a model with a secant for each country is chosen against the hypothesis of the model with a common secant, where:

$$H_0 = \mu_0 + \mu_1 + \dots + \mu_n ,$$

$$H_0 = \gamma_0 + \gamma_1 + \dots + \gamma_n$$

While the null hypothesis test is based on the Fisher statistic according to the following formula:

$$F = \frac{(R_{FEM}^2 - R_{PM}^2)/(N-1)}{(1 - R_{FEM}^2)/(NT - N - K)}$$

where: k: the number of estimated parameters.

R_{FEM}^2 : coefficient of determination of the fixed effects model.

R_{PM}^2 : coefficient of determination of the aggregate regression model (common intercept model).

The second step: When the first step is completed and the fixed effects model appears to be the appropriate model, we then compare it to the random effects model using the Hausman test based on the following assumptions:

H_0 : The random effects model is the appropriate model.

H_1 : The fixed effects model is the appropriate model.

This test determines the capabilities of the two models so that it represents the null hypothesis that the random effects capability is consistent and efficient, versus the alternative hypothesis that the random effects capability is inconsistent (Greene, 2002).

3.2 the data:

In this research, we will study the impact of economic diversification on economic growth in a sample of 6 Arab countries, namely Algeria, Saudi Arabia, Emirates, Tunisia, Egypt and Morocco (N=6), during the period (T=22) 1999 to 2020. Thus, the total number of observations is 132 views. To carry out this standard study, we will use panel data models, and this is because they take into account the impact of

time changes and differences in the cross-sectional series data at the same time, which is exactly what we need to carry out this study. The data were collected from the World Bank data, with the use of the data interpolation method using the EViews program to fill in missing data.

The variables representing economic diversification, as well as economic growth, were determined based on previous applied studies, which are as follows:

GDP: GDP growth (in % per year).

AGR: value added in the agricultural sector (% of GDP).

IND: value added in the industrial sector (% of GDP).

SRV: value added in the services sector (% of GDP).

3.3 Empirical Finding and Discussion:

This study is based on a comparison between the three models and an attempt to find the most appropriate model for the study, by carrying out several tests which will be specified later.

3.3.1 Hsiao test:

The homogeneity test is one of the most important tests that help to determine the structure of the panel data and to know the homogeneity of the parameters of the estimated model, and based on this, the current study depends on Hsiao's test, which proposes sequential hypothesis tests to know or not the homogeneity of the study data (Bourbonnais, 2015), and using EViews 9 The following results were obtained:

If the Fisher statistic calculated by the homogeneity test is found to be greater than the Fisher tabular statistic, the hypothesis $H_0 = a_i = aB_i = B$ will be rejected.

It is represented as follows:

$$F_1^{\text{tab}} = (SCR_1, c - SCR_1) / [(N-1)(K+1)] / SCR_1 / [NT - N(K+1)]$$

$$F_2^{\text{tab}} = (SCR_2, c - SCR_2) / [(N-1)(K)] / SCR_2 / [NT - N(K+1)]$$

$$F_3^{\text{tab}} = (SCR_1, c - SCR_2) / [(N-1)] / SCR_2 / [N(T-1) - K]$$

Table (01): Results of the Hsiao test

P_value	F ^{tab} Tabular Fisher	F ^{cal} Fisher calculated
PVALUE F1 0.0025	F ^{0.05} _{20.108} = 1.6685	F ₁ = 4.0062
PVALUE F2 0.8606	F ^{0.05} _{15.108} = 1.7599	F ₂ = 2.9365
PVALUE F3 0.00018	F ^{0.05} _{5.123} = 2.2879	F ₃ = 5.3155

Source: made by the author using Eviews 9.

We note in the table, $F_1 = 4.0062 > F_{0.05, 20.108} = 1.6685$ and the probabilistic value of the calculated Fisher statistic F_1 is estimated to be 0.0025, which is below the 5% level of significance, and from this we reject the null hypothesis (there is not complete homogeneity between the coefficients).

In the second step, we note that the probabilistic value of the calculated Fisher statistic F_2 is estimated to be 0.8606, which is exactly above all significance levels, and from there we accept the null hypothesis (the regression parameters of the explanatory variables are similar between individuals).

Finally, after proceeding to the third step, we see that $F_3 = 5.3155 < F_{0.055,123} = 2.2879$, and the probabilistic value of the calculated Fisher statistic F_3 is estimated to be 0.00018, which is lower than all levels of significance, and from there, we accept the null hypothesis (the intersectional parameters are the same across individuals), and from there we say that the parameters of the estimated model are homogeneous and that panel data is the appropriate methodology for the study.

3.3.2 Estimated results of cross-sectional time series study models:

Using the Eviews9 program, and after data entry, the following results were given, which show the estimation outputs of the three models (collective regression model, fixed effects and random effects):

Table (02): Panel estimation regression results for PRM, FEM and REM

		Estimated models		
		PRM	FEM	REM
C	coeff	/	31.36358	30.63719
	prob	/	0.0503	0.0097
AGR	coeff	0.1417	0.369199	-0.286743
	prob	0.0271	0.0273	0.1559
IND	coeff	0.0695	0.155006	-0.193547
	prob	0.0000	0.0003	0.0088
SRV	coeff	-0.0119	0.392998	-0.359772
	prob	0.5609	0.0118	0.0039
R²		0.034797	0.205160	0.114369
DW		1.310051	1.486053	1.406652

Source: made by the author using Eviews 9.

Through the table above, we see that the probability values of the transactions are generally significant so that they are less than 0.05, which means that they are significant, except for the value of the constant in the case of the constant effects model, the value added of the service sector in the case of the aggregate model and the value of the probability of the AGR variable in the case of the random effects model were the values greater than 0.05, which means that it is not significant. In general, the models are statistically acceptable in principle.

3.3.3 The results of the comparison tests between the study models in the sample

To find out which of the three models is suitable for the study, the following tests are performed:

- **The results of the trade-off between the aggregate and fixed effects regression models**

In order to search for the appropriate model for the study, a comparison was needed between the aggregate and fixed effects model. This is done by calculating the Fisher statistic as follows:

$$F_{cal} = [(0,205-0,034)/5] / [(1-0,205)/123] = 5,34$$

Through the result, we see that the computed Fisher statistic (5.34 F_{cal} =) is greater than the tabulated Fisher statistic ($F_{tab} = 2.28$). Therefore, we reject the null hypothesis and accept the alternative hypothesis, and thus the appropriate model is the fixed effects model.

- **Results of the Hausman test for choosing between a fixed-effects model and a random-effects model**

The Hausman test is used to separate the fixed-effects and random-effects model, and its results are presented in the table below:

Table(03): Results of the Hausman test

Correlated Random Effects - Hausman Test			
Pool: PANEL			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.518644	3	0.0364

Source: made by the author using Eviews 9.

For the test between fixed and random effects, the results of the Hausman test indicated, as shown in the table above, that its probability value was less than 0.05, and therefore we accept the alternative hypothesis, which means that the fixed-effects model is the appropriate model to study the impact of economic diversification on economic growth for the countries selected in the sample.

3.3.4 Estimation of the fixed effects model:

After analyzing the results of the previous tests, we identified the appropriate model for our study, which is the fixed effects model, and the estimation results of this model in the following table:

Table (04): Fixed Effect Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	31.36358	15.86471	1.976940	0.0503
AGR	0.369199	0.335826	1.099377	0.0273
IND	0.155006	0.164227	0.943852	0.0003
SRV	0.392998	0.153780	2.555591	0.0118
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.205160	Mean dependent var	3.370758	
Adjusted R-squared	0.153463	S.D. dependent var	3.113883	
S.E. of regression	2.865003	Akaike info criterion	5.008762	
Sum squared resid	1009.614	Schwarz criterion	5.205317	
Log likelihood	-321.5783	Hannan-Quinn criter.	5.088633	
F-statistic	3.968524	Durbin-Watson stat	1.486053	
Prob(F-statistic)	0.000328			

Source: made by the author using Eviews 9.

Based on the results in the table above and in light of the fixed effects estimation results, we found that:

- Each of the coefficients of the probability values of the independent variables is less than 0.05, which means that the coefficients AGR, IND, and SRV are significant (probability values 0.0273, 0.0003, and 0.0118, respectively). While the probability value of the fixed coefficient is greater than 0.05, the coefficient is therefore not significant (coefficient probability is 0.0503).
- To test the overall significance of the model, the table gives the Fisher test probability less than 0.05 and estimated at (0.0003), and thus the model is significant. The selected explanatory variables AGR, IND and SRV are represented in the value added of the agricultural and industrial sectors and the service sector, respectively, as they contribute 20.51% to the interpretation of the dependent variable GDP, which represents the gross domestic product.

- The positive sign of the AGR coefficient, which is (0.369199), indicates that the relationship is direct between the AGR variable and GDP, i.e., the relationship is direct between the agricultural sector and the increase in GDP.
- The positive sign of the coefficient of value of IND (0.155006) indicates that the relationship is direct between IND and GDP, and thus the relationship is direct between the industrial sector and the increase in GDP.
- The positive sign of the SRV coefficient, which is (0.392998), also indicates that the relationship is direct between the SRV variable and GDP, that is, the relationship is direct between the service sector and the increase in GDP.
- The direct relationship between the explanatory variables of the study and the dependent variable confirmed that the diversification of the economy towards economic sectors other than the hydrocarbon sector played on the growth of domestic product. The research also confirms that the use of these sectors limits these countries to their dependence on oil and the creation of new sustainable sources of income.
- The Durbin Watson DW test with a value of (1.48) showed that the model has autocorrelation to errors, and this requires making the first difference of the variables in the model to try to get rid of this problem.

3.3.5. Results of the stability tests:

The results of the unit root probability tests for all variables are presented in the table below: The hypothesis of the sum tests is as follows:

H₀: Panel data with a unit root.

H₁: Panel data do not have a unit root.

The hypotheses of the Hadri test are as follows:

H₀: Panel data does not have a unit root.

H₁: Panel data with a unit root.

Table(05): Probabilities Results of Unit Root Tests

		Summary					Hadri
		LLC	Breitung	Im, Pesaran	ADF	PP	
The gross domestic product	GDP	0.0538	0.9600	0.0746	0.0970	0.0126	0.0067
	DGDP	0.0000	0.8459	0.0000	0.0000	0.0000	0.0000
The value added of the agricultural sector	AGR	0.0167	0.8980	0.1928	0.0712	0.0760	0.0000
	DAGR	0.0000	0.0011	0.0000	0.0000	0.0000	0.0000
Value added to the industry sector	IND	0.0907	0.7930	0.4369	0.3013	0.3177	0.0000
	DIND	0.0000	0.0001	0.0000	0.0000	0.0000	0.0177

Value added to the service sector	SRV	0.1456	0.1902	0.1693	0.2878	0.2125	0.0000
	DSRV	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119

Source: made by the author using Eviews 9.

The table above shows the following:

- At the level for all the variables studied, they have probability values for the summary tests greater than 0.05, while for the Hadry test they are less than 0.05. With the exception of the value of the PP test related to the variable GDP, which was lower than 0.05, and the value of the LLc test related to the variable AGR, which was lower than 0.05, with a value (0.0167), which gives the advantage of recognizing the existence of unit walls, which means that all the variables are unstable at the level.
- When performing the first difference for the variables, the results showed that the variable DPIB is stable in first difference, where the summation tests gave a probability lower than 0.05, while the hadry test has a probability lower than 0.05, which means that the variable DPIB is stable with a total of five tests out of six.

As for the variables DAGR, DIND and DSRV, they are stable after the first difference.

- Since the variables studied are stable to the same degree, this indicates the possibility of a long-term relationship between these variables. In order to confirm the existence of this long-term relationship, we will study it using the Pedroni cointegration test.

• Results of the cointegration tests

After reference to the results of the unit root, it is possible to resort to co-integration tests between stable variables of the same degree (GDP, AGR, IND, SRV) Pedroni co-integration test will be used where the test is applied to the variables at the level, i.e., without making the first difference. And its results are presented in Table 05.

Through the table below, the results showed that all the probabilities of the tests are greater than 0.05, and therefore we accept the null hypothesis that there is no co-integration and therefore the absence of long-term relationship between the variables of economic diversification and GDP growth.

Table (06): Results of Pedroni co-integration tests

Null Hypothesis: No cointegration
Trend assumption: Deterministic intercept and trend
User-specified lag length: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Alternative hypothesis: common AR coeffs. (within-dimension)

	Statistic		Weighted	
	Statistic	Prob.	Statistic	Prob.
Panel v-Statistic	0.633310	0.2633	1.179213	0.1192
Panel rho-Statistic	-0.379733	0.3521	-0.206014	0.4184
Panel PP-Statistic	-4.119051	0.0000	-3.604609	0.2340
Panel ADF-Statistic	-2.573004	0.0050	-2.760080	0.0029

Alternative hypothesis: individual AR coeffs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	0.483166	0.6855
Group PP-Statistic	-3.959313	0.0100
Group ADF-Statistic	-2.475965	0.0066

Source: made by the author using Eviews 9.

3.3.6 Analysis of the results:

Since the appropriate model for the study is the fixed effects model, which takes into account the change in slope and section from one unit to another, as it assumes that the parameters change regularly, and its results will be analyzed as follows:

The results of the estimation of the fixed effects model show that the variables studied explain the growth of GDP by 20.51%, while the remaining value is due to other factors that were not included in the model. The results also show that the diversification variables directly affect GDP growth: every change in the value added of the agricultural sector by 1% will lead to a change in GDP growth of 0.36% and a change in the value added of the service sector by 1% will lead to a change in overall GDP growth of 0.39%, while every change in the value added of the industrial sector by 1% will change GDP growth by 0.15%, which is a small percentage compared to the other sectors.

This explains the percentage of the industrial sector in the countries studied, where we find that the industrial sector contributes 37.44% of GDP in Algeria, while the industrial sector in Egypt contributes 35.62% of GDP.

Given that the contribution rates of these sectors to a continuous improvement in these countries, this will often lead to an improvement in the growth of the domestic product and thus a diversification of the production base. On the other hand, the relative impact of these variables on GDP growth is due to the nature of the activity practiced in most of the countries studied, where the proportion of agricultural land in Algeria is 18% of the total area of the country, while Egypt has agricultural land of 3.85% of its total area.

Pedroni test revealed the absence of co-integration, that is, the absence of a long-term relationship between the variables of the study, that is, the absence of a relationship between the diversification variables and the growth of GDP in the long term, and this does not apply to the economic theory. This explains the strong dependence on the rentier economy, particularly in Algeria, and the lack of diversification of the productive base in these sectors.

4. Conclusion:

Economic diversification is the process of expanding the production base by increasing the contribution of different sectors to GDP and relying on a balanced method of economic development and reducing dependence on a single resource in order to increase the growth rate and protect the economy from external shocks (Mishrif & Al Balushi, 2018, p. 4). Therefore, through this study, we have attempted to determine the magnitude of the impact of economic sectors expressing economic diversification on economic growth through a study of a sample of Arab countries, most of which share the advantage of their high dependence on depleted resources (Algeria, Saudi Arabia, United Arab Emirates, Tunisia, Morocco and Egypt) for the period from 1999 to 2020. Using panel data, the results of the study revealed that there is a weak positive effect between the variables, and this is due to the lack of interest in these sectors (agriculture, industry and services) and the encouragement of investments in them, as well as the Corona crisis in recent years, which caused the low contribution of the sectors to the increase in growth levels. For the success of the economic diversification strategy in these Arab countries, it is necessary to take advantage of the comparative advantage that each country has in various sectors to diversify its production base, pay attention to the private sector and open the way to attracting various foreign investments that are not limited to one area, such as investments in tourism, as the United Arab Emirates has done, or in manufacturing industries.

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