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The Business Performance Environment and Attracting Foreign Direct Investment: Econometric Study

بيئة أداء الاعمال وجذب الاستثمار الأجنبي المباشر في الدول العربية: دراسة قياسية

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Abstract

This study aims to test the impact of the business performance environment through the ease of doing business index in attracting foreign direct investment in the Arab countries, by applying the Panels, joint complementarity and causation models on a sample of 19 Arabic countries during the period 2008-2018.

The study indicated that the ease of doing business has a positive effect in attracting foreign direct investment in the Arab countries, in addition to the existence of a long-term relationship between the study variables, and the existence of a causal relationship in the short term for the ease of doing business indicator.

Keywords : Business environment, Ease of doing business, Arab countries, Panels.

ملخص

تهدف هذه الدراسة الى اختبار أثر بيئة أداء الاعمال من خلال مؤشر سهولة أداء الاعمال في جذب الاستثمار الأجنبي المباشر في الدول العربية، وذلك من خلال تطبيق نماذج البانل والتكامل المشترك والسببية على عينة مكونة من 19 دولة عربية خلال الفترة 2008-2018.

وقد خلصت الدراسة الى أن سهولة أداء الاعمال لها أثر إيجابي في جذب الاستثمار الأجنبي المباشر في الدول العربية، إضافة الى وجود علاقة طويلة الاجل بين متغيرات الدراسة، ووجود علاقة سببية في المدى القصير لمؤشر سهولة أداء الاعمال.

الكلمات المفتاحية: بيئة أداء الاعمال، سهولة أداء الاعمال، الدول العربية، البانل.

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1. INTRODUCTION

The attractiveness of any economy to local and foreign investments depends on the integration of a set of basic and interrelated factors among themselves, as some of these factors are purely economic or marketing, and others are due to the investment policy drawn, the availability of qualified manpower and the ability to control modern technologies and the legal and legislative climate adopted in addition to factors related to the appropriate security environment provided for investments, and this is not achieved by providing a competitive institutional environment that provides exceptional facilities and incentives in a way that exceeds those provided by other countries. (Fahd & Jasim, 2017, p. 373)

The business performance environment is one of the governing factors in attracting foreign direct investment to countries in general and Arab countries in particular, as creating the appropriate atmosphere, as mentioned previously, would attract the largest possible amount of foreign capital in the form of direct investments, and the World Bank issues an annual report on the performance of Doing Business environment which ranks countries on the basis of this indicator.

Through the above, our study centers on the impact of the business performance environment in attracting foreign direct investment in Arab countries, as we will study this topic because of its importance in supporting the economies of Arab countries through a standard study on the relevant variables.

2. Theoretical framework:

The theoretical section is divided into two parts: previous studies, in which we list some of the studies that dealt with the topic, and the second section lists the theoretical side of the study by introducing the indicators related to the study.

2.1. Previous studies:

The study of (Hossain, Hassan, Shafiq, & Basit, 2018): This study aims to show the effect of ease of doing business on attracting foreign direct investment during the period 2011 to 2015, this study measures the ease of doing business through launching activities, obtaining loans, registering property, paying taxes and enforcing contracts. A sample of 177 countries was used, and the least squares regression method was applied to test the

causal relationship, and the study found a positive impact of contract enforcement and a negative impact for both obtaining loans and registering property and the presence of a moral impact for both starting the activity and paying taxes on attracting the direct foreign investment.

The study of (Corcoran & Gillanders , 2015): This study aims to test the impact of improving the business environment on attracting foreign direct investment, and the ease of doing business has been used for the World Bank, and the study concluded that the ease of doing business has a very significant impact during the period 2004-2009 The importance of facilitating cross-border trade in improving the business environment, and the existence of a moral relationship between improving the business environment and attracting foreign direct investment in middle-income countries, unlike poor countries such as sub-Saharan Africa.

The study of (MogesEbero & Begum, 2016): This study aims to analyze the impact of business performance indicators on the flow of foreign direct investment in Ethiopia during the period 2010-2014. The test was carried out through comparative charts, analysis of variance and correlation coefficient. The results of the correlation test were concluded. The cost of starting the activity, obtaining electricity, registering property, settling insolvency and building permits has an inverse negative relationship with the influx of foreign direct investment into Ethiopia during this period, and a study concluded a set of data on enterprises in Ethiopia in the years: 2006, 2011 And in 2015, the biggest obstacles facing improving the business environment are: finance, corruption, laws and customs, tax administration, access to electricity and transportation.

The study (Janaćković & Petrović-Ranđelović, 2019): This research paper shows that the relationship between indicators of ease of doing business and foreign direct investments in Serbia has been tested. Dynamic analysis and correlation have been used to study this problem during the period 2010-2017. The study concluded that the settlement of insolvency cases and Construction licenses has a very positive relationship with foreign direct investment. As for obtaining electricity, registering property, obtaining loans and enforcing contracts, it has a negative relationship with foreign direct investment.

The study of (Bayraktar, 2013): This study aims to test the relationship

between ease of doing business and foreign direct investment in developing countries during the period 2004-2010, and the results of the study showed that countries that scored good results in measuring the ease of doing business have greater attractiveness for foreign direct investment.

The study of (Ismail & Hassan , 2017): This study aims to determine the determinants of foreign direct investment in the Arab countries during the period 1995-2010, where the data of the Panel was applied to a sample of 17 Arab countries, and the results concluded with high growth rates, a rise in the monetary mass, edited Trade and low growth rates are all factors that help attract foreign direct investment, in addition to improving and developing the efficiency of the role of institutions in countries in attracting more foreign investments, by providing guarantees to investors not to impose restrictions on capital flows, and to activate their role in combating and addressing corruption, In addition to developing the role of judicial oversight over state institutions.

The study of (Qaloul, 2017): This study is concerned with finding the main determinants of foreign direct investment and measuring the degree of difference between the countries under study, as the analysis of basic compounds was applied to a sample of 15 Arab countries during the period 2006-2015, and it was concluded that there are four Main axes in the process of attracting foreign direct investments which are the economic framework, the basic infrastructure, ease of doing business, and the institutional and legal framework.

The study (Bouabid & Haroun, 2016): This research paper aims to show the role of the business performance environment in attracting foreign direct investment in the Maghreb countries (Algeria, Tunisia and Morocco) during 2014-2015, and the study concluded that the general index of the business environment suffers from a delay in these countries, which is considered one of the most important factors that attract foreign direct investment, and which suffers from instability in these countries.

The study (Singh, 2016): This study focused on the relationship between 6 indicators of business performance and foreign direct investment in India, where the joint complementarity test and the causality of Granger were used, and the study concluded that there is a long-term relationship between the six indicators of business performance and foreign direct

investment and the absence of a short-term relationship.

There are many studies in this context as (Haliti, Merovci, Hetemi, & Sherpa, 2019), (Shahadan, Sarmidi, & Faizi, 2014) found that some indicators of ease of doing business had a positive impact on FDI and the rest of these indicators had a negative impact on FDI. Another studies found that ease of doing business indicators play a significant role in attracting foreign direct investment as (Vučković, Bobek, Maček, Skoko , & Horvat, 2020), (Nketiah-Amponsah & Sarpong , 2020), (Anggraini & Inaba, 2020), (Nangpiire, Rodrigues, & Adam, 2018).

2.2. Business performance environment:

The business performance environment is the conditions and policies that affect the confidence of investors and make them transfer their investments from one country to another, and it is a wide concept that affects and is affected by all economic, political, legal, and social levels. (Aouinan, 2017, p. 101)

The business performance environment is measured through the Ease of Doing Business Index[1], which focuses on several dimensions of the regulatory environment that affect local institutions, which consists of 10 quantitative indicators, namely: starting activity, building permits, obtaining electricity, registering property, obtaining loans, protecting young investors, cross-border trade, paying taxes, enforcing contracts, settling insolvency. In addition to two indicators: the employment of workers and contracting with the government, which are not included in the calculation of the ease of doing business index. (World Bank, 2020, p. 18)

This indicator monitors and analyzes the extent of the ease or complexity of procedures related to the performance of business in the target country, which in turn may be a constraint to growth and productivity or a catalyst for it, and from it the attractiveness of the investment environment and business performance is determined. (Belkacem, 2011, p. 62)

1 **For more information on how this indicator is calculated, see: Explanation of Economies Ranking and Ease of Doing Business outcomes (in English, PDF). On line: https://arabic.doingbusiness.org/en/methodology Or see Chapter Six of:**
World Bank. 2020. Doing Business 2020 : Comparing Business Regulation in 190 Economies. Washington, DC : World Bank. © World Bank https://openknowledge.worldbank.org/handle/10986/32436

2.3. Attracting foreign direct investment factors:

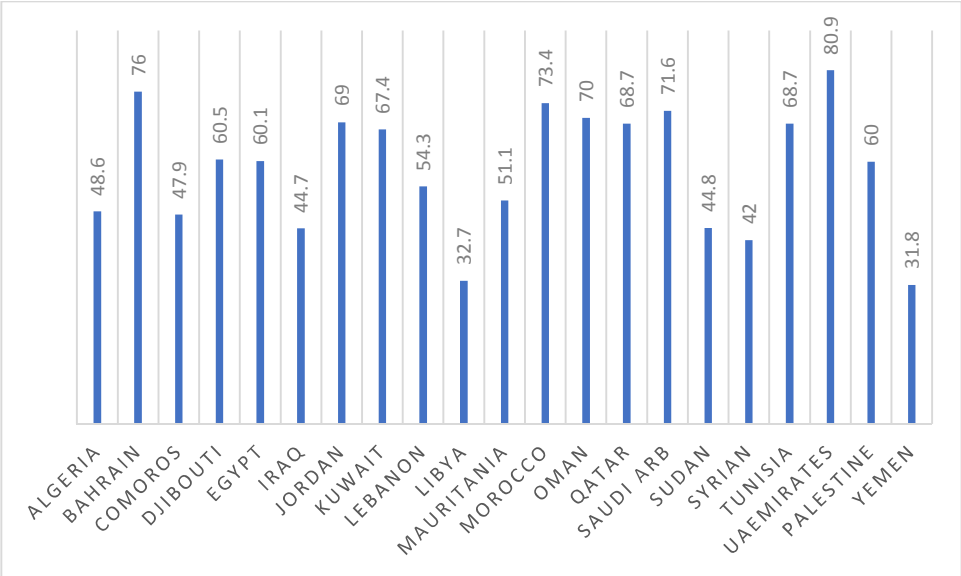
The attractions are divided into economic, political and legal factors. They can be summarized as follows: political and economic stability, ease of investment implementation procedures, the volume of returns achieved from investment, provision of infrastructure and the size of the local market, clarity of laws and legislations and respect for agreements, facilities and privileges provided by the host country, tax exemptions (Ghaidan & Kazim, 2015, pp. 78-79)

2.4 Statistics about the balance and ranking of Arab countries:

2.4.1 The balance of Arab countries in 2020:

Through Figure 1, which is represented by the balance of Arab countries from the Ease of Doing Business Index for the year 2020, we note that countries such as the UAE, Bahrain, Morocco, Saudi Arabia, Oman, Jordan, Qatar and Tunisia achieved excellent and good balances (points or grades) in this field, This is due to the reforms that these countries have undertaken in the field of the business performance environment, as Bahrain implemented 9 reforms covering almost all areas mentioned in the general index (which is a record number), Saudi Arabia implemented 8 reforms, Kuwait 7 reforms, Morocco 6 reforms, the UAE, Oman and Egypt 4 reforms. (World Bank, 2020) This is evidence of these countries' endeavor to improve the business performance environment in order to attract the largest possible amount of reforms. Other countries are still suffering in this area, for example Yemen got 31.8 points, Libya 32.7 points, and this is because of political and security reasons.

Figure 1: Arab countries' balance from the Ease of Doing Business Index for the year 2020.

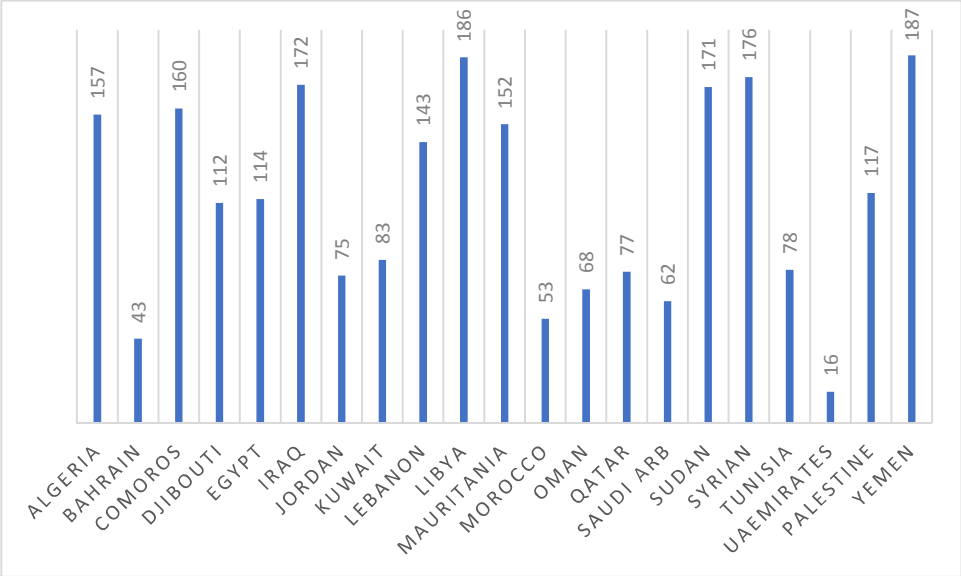


Source: Prepared by researchers, depending on World Bank statistics

2.4.2 The ranking of Arab countries in 2020:

Through Figure 2, which represents the ranking of Arab countries in the Ease of Doing Business Index for the year 2020, we note that the UAE is at the forefront of the Arab countries and has advanced in the international classification to the 16th place, followed by Bahrain, which is one of the top 10 countries in the world that have undertaken reforms in this field, it was accompanied by Saudi Arabia, Jordan and Kuwait, so it advanced in the ranking to 43 globally, Saudi Arabia ranked fourth in the Arab world and 62 internationally, Oman ranked fifth in the Arab world and 68 in the world. Jordan ranks sixth in the Arab world and 75 in the world and Kuwait 83 in the world and ninth in the Arab world, in addition to Qatar, which ranks 77 in the world and seventh at the Arab level, Tunisia 78 in the world and the eighth in the Arab world, to the bottom of the ranking are the countries of Algeria, Iraq, Libya, Syria, Yemen, Lebanon and Sudan for lack of provides a suitable business environment, as well as the political and security instability in some countries.

Figure 2: Ranking of Arab countries in the Ease of Doing Business Index for the year 2020

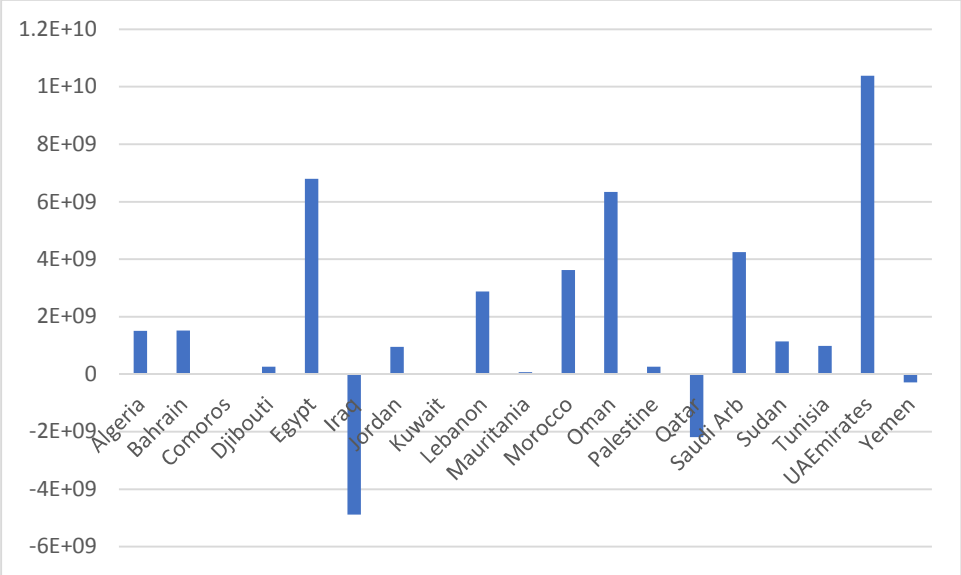


Source: Prepared by researchers, depending on World Bank statistics

2.4.3 Net inflow of foreign direct investment for the year 2020:

Through Figure 3, we notice the variation in the flow of foreign direct investment to Arab countries. There are countries such as the Emirates that achieve the largest net positive flow of foreign direct investment between Arab countries, followed by Egypt, Oman, Saudi Arabia, then Morocco, and the largest negative net was the share of Iraq, then Qatar, and then Yemen.

Figure 3: Foreign direct investment flows to Arab countries for the year 2020.



Source: Prepared by researchers, depending on World Bank statistics

3. EXPERIMENTAL

3.1 The model:

In this part of the applied study, we have relied on Panel data models in order to estimate the function of inward foreign direct investment during the period (2008-2018) in the Arab countries except (Libya, Somalia, Syria, and South Sudan) due to the lack of data on them. Using the most important explanatory variables for foreign direct investment as shown in the following equation:

$$ln(FDI)_{it}=(\gamma_1)_i+\gamma_2 \ln(EDB)_{it}+\gamma_3 \ln(GDP)_{it}+\gamma_4 \ln(GCF)_{it}+\gamma_5 \ln(INF)_{it}+\gamma_6 \ln(LBR)_{it}$$

So that:

$(FDI)_{it}$: It represents the volume of Foreign Direct Investment inflows, expressed as net inflows (US dollars).

$(EDB)_{it}$: It represents the ease of doing business index.

(GDP)it : Represents the gross domestic product (in constant prices of US dollars for the 2010 base year).

(GCF)it: Represents gross capital formation (in constant prices of US dollars for the 2010 base year).

(INF)it: The rate of inflation (percentage) for each country (i).

(LBR)it: Represents the total labor force for each country (i).

ξ_{it} **:**Random error.

3.2. Estimating the foreign direct investment equation through the three Panel models:

Table 1: Results of estimating the foreign direct investment equation through the three Panel models.

The model		Dependent variable: foreign direct investment (FDI)			
	Independent variables	coefficients	coefficients signification		decision
			T value	Sig	
Pooled Regression Model	Ln EDB	86669867	2.224606	0.0277	sig
	Ln GDP	7.67E-08	2.722983	0.0073	sig
	Ln GCF	6.05E-07	5.931962	0.0000	sig
	Ln INF	2.90E+08	3.207506	0.0017	sig
	Ln LBR	44.28944	0.880775	0.3800	Non-sig
	C	-4.62E+09	-1.954552	0.0526	Non-sig
	R^2	0.564722			Significant model
	F value	36.06726 (sig: 0.000000)			
Fixed effects model	Ln EDB	2.43E+08	2.399536	0.0179	sig
	Ln GDP	-3.79E-08	-0.799770	0.4254	Non-sig
	Ln GCF	2.68E-07	2.482896	0.0144	sig
	Ln INF	1.24E+08	1.496977	0.1369	Non-sig
	Ln LBR	-29.25269	-7.910971	0.0000	sig
	C	5.85E+09	0.891900	0.3742	Non-sig
	R^2	0.744939			Significant model
	F value	18.10790 (sig: 0.000000)			
Random effects model	Ln EDB	86669867	2.744844	0.0069	sig
	Ln GDP	7.67E-08	3.359770	0.0010	sig
	Ln GCF	6.05E-07	7.319188	0.0000	sig
	Ln INF	2.90E+08	3.957602	0.0001	sig
	Ln LBR	44.28944	1.086750	0.2790	Non-sig
	C	-4.62E+09	-2.411636	0.0172	sig
	R^2	0.564722			Significant

	F value	36.06726 (sig value: 0.000000)	model

Source: Prepared by researchers based on Eviews 8 program outputs.

It is evident from the regression table that the results of the estimation through the three Panel models are significant, given that the significant value (sig) of Fisher's test is less than 0.05, and it is clear that the effect of the ease of doing business index on foreign direct investment is positive and significant in the three models because the significant value (sig) of its coefficient is less than 0.05. Therefore, statistical tests must be conducted to determine the most appropriate model for the study.

3.3. The choice between a fixed effects model and a random effects model:

The Hausman test was used as a first stage for choosing between the two models, where the test results were as follows:

Table 2: Hausman test results.

Test	Test value	Test significance
Chi-Sq. Statistic	80.980061	0.0000

Source: Prepared by researchers based on Eviews8 program output.

Through the table it becomes clear that the test value (80.980061) is greater than the tabular value, and the significant value of the probability (sig) is less than 0.05, and therefore we will accept the alternative hypothesis, meaning that the appropriate model for the study is the fixed effects model.

3.4. The choice between a fixed effects model and an additive regression model:

As a second stage, we will choose between the fixed effects models and the aggregate regression model, using the Dummy variables to verify the hypothesis of the existence of heterogeneity between countries.

Table 3: The significance test of the Dammy variables' coefficients "Wald Test"

test	**Test value**	**Test significance**
F-statistic	**115.9174**	**0.0000**
Chi-square	**463.6695**	**0.0000**

Source: Using modern sources based on Eviews 8 program outputs.

Since the value of each of F and Chi-square is greater than the significant tabular values, and the probability value (sig) is less than 0.05, so

we accept the alternative hypothesis, meaning that the parameters of the dummy variables differ significantly from zero, and therefore the most appropriate model for the study is the fixed effect model.

3.5. Estimate the final form of the study:

Based on the fixed effects model chosen for the study, the equation for estimating the foreign direct investment function is as follows:

ln FDI = 5.85+ 2.43*ln EDB -3.79*ln GDP+2.68*ln GCF+ 1.24*ln INF - 29.25*ln LBR

The results of the regression equation indicate the existence of a positive statistically significant relationship for the ease of doing business on foreign direct investment in Arab countries, as its coefficient reached (2.43), which indicates that an increase of 1% in the ease of doing business index will lead to an increase in the volume of foreign direct investments by 2.43%. Also, the variable of gross capital formation had a positive effect on the volume of foreign direct investment, whereas, the 1% increase in total capital formation will lead to an increase in employment by 2.68%. However, the effect of the variable of GDP and inflation on foreign direct investment was not significant, as their coefficients reached (-3.79 and 1.24), respectively. Their intangible value was greater than 0.05, and the total labor force variable had a negative relationship with foreign direct investment, i.e. an increase of 1% would lead to a decrease in the volume of these investments by 29.25%.

3.6. Study of Co-integration between study variables:

We aim through this stage to test whether the study variables have a long-term equilibrium relationship.

3.6.1. Study of the stationarity of variables:

The necessary initial condition for the existence of complementarity relationships between the variables is that they be stable of the same degree, as all unit root tests for panel data were used to study the stationarity of the variables used in the study except for the variables of GDP and inflation due to the insignificance of their coefficient in the model. Where the results of the study were as follows:

Table 4: Study of the stationarity of the foreign direct investment (FDI)

variable.

Model		In the level			Take the first-degree differences		
Unit root test		In the level	Fixed limit C	Trend and C	In the level	Fixed limit c	Trend and C
LLC	T	8.08098	-1.92021	2.35527	-3.7994	-2.2200	-7.4630
	Sig	1.0000	0.0274	0.9907	0.0001	0.0132	0.0000
Breitung	T	/	/	-2.6702	/	/	-1.5460
	Sig	/	/	0.0038	/	/	0.0611
Im, Pesaran, Shin	T	/	0.82874	0.15092	/	-3.4123	-1.7403
	Sig	/	0.7964	0.5600	/	0.0003	0.0409
Fisher ADF	T	6.95293	30.4401	31.7066	85.6520	72.8579	67.7061
	Sig	1.0000	0.6428	0.5805	0.0000	0.0001	0.0005
Fisher-PP	T	7.60142	86.9803	83.9381	130.793	158.052	131.565
	Sig	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
decision		unstationary serie			stationary serie		

Source: Prepared by researchers based on Eviews 8 program outputs

Table 5: Study of the stationarity of the Ease of Doing Business (EDB) index variable:

Model		In the level			Take the first-degree differences		
Test the root of the unit		In the level	Fixed limit C	Trend and C	In the level	Fixed limit C	Trend and C
LLC	T	4.06739	2.17688	1.73517	-4.6211	0.0514	-10.173
	Sig	1.0000	0.9853	0.9586	0.0000	0.520	0.0000
Breitung	T	/	/	3.31542	/	/	-0.6575
	Sig	/	/	0.9995	/	/	0.2554
Im,Pesaran,Shin	T	/	3.4947	1.9827	/	0.4904	-1.2774
	Sig	/	0.9998	0.9763	/	0.006	0.0101
Fisher ADF	T	12.9267	19.4990	21.1289	59.5367	34.742	64.1772
	Sig	0.9999	0.9886	0.9770	0.0081	0.022	0.0026
Fisher-PP	T	14.1208	14.5828	34.103	115.235	85.658	215.179
	Sig	0.9996	0.9994	0.5591	0.0000	0.000	0.0000
Decision		unstationary serie			stationary serie		

Source: Prepared by researchers based on Eviews 8 program outputs

Table 6: Study of the stationarity of the Gross Capital Formation (GCF) variable

Model		In the level			Take the first-degree differences		
Test the root of the unit		In the level	Fixed limit C	Trend and C	In the level	Fixed limit C	Trend and C
LLC	T	3.78185	2.00174	-2.0078	-4.5363	-3.5533	-5.3797
	Sig	0.9999	0.9773	0.0223	0.0000	0.0002	0.0000
Breitung	T	/	/	2.67865	/	/	-2.3412
	Sig	/	/	0.9963	/	/	0.0096
Im,Pesaran,Shin	T	/	3.02487	0.58652	/	-1.7380	-0.4185
	Sig	/	0.9988	0.7212	/	0.0411	0.3378
Fisher ADF	T	13.4305	19.2574	22.3355	59.8697	45.3333	34.260
	Sig	0.9960	0.8900	0.7655	0.0004	0.0204	0.1286
Fisher-PP	T	12.5877	28.0851	47.6521	125.542	106.639	110.023
	Sig	0.9978	0.4599	0.0117	0.0000	0.0000	0.0000
Decision		unstationary serie			stationary serie		

Source: Prepared by researchers based on Eviews 8 program outputs

Table 7: Study of stationarity of Total Labor force Variable (LBR)

Model		In the level			Take the first-degree differences		
Test the unit root		In the level	Fixed limit C	Trend and C	In the level	Fixed limit C	Trend and C
LLC	T	3.4662	-7.0017	-5.9332	-1.3026	-8.0972	-9.5159
	Sig	0.9997	0.0000	0.0000	0.0963	0.0000	0.000
Breitung	T	/	/	2.5422	/	/	2.305
	Sig	/	/	0.9945	/	/	0.9894
Im,Pesaran,Shin	T	/	-0.4014	-0.4483	/	-1.9731	-0.3971
	Sig	/	0.3440	0.327	/	0.0242	0.3456
Fisher ADF	T	9.4317	59.485	45.748	72.375	57.332	49.916
	Sig	1.0000	0.0082	0.1280	0.000	0.0134	0.0614
Fisher-PP	T	0.2107	102.48	54.203	78.932	57.550	49.404
	Sig	1.0000	0.0000	0.0263	0.0000	0.0127	0.0676
Decision		unstationary serie			stationary serie		

Source: Prepared by researchers based on Eviews 8 program outputs

It is evident through the unit root test that all the variables under study

are not stable at the level in the three models, because the significant value (sig) is greater than 0.05 in the majority of the tests used, but when taking the differences of the first degree, the significant values (sig) were less than 0.05, and thus these variables became stable at the first differences.

3.6.2. Examination of co-integration:

Since all the variables of the study are stable at the degree (I (1)), this allows us to search for the possibility of long-term equilibrium relationships between foreign direct investment with the rest of the variables used in the model through the use of the Pedroni (Engle-Granger Based) test, as its results indicate the following:

Table 8: Results of the Fisher co-integration test.

		within-dimension					between-dimension	
Model	Test	Statisti	Prob	Statist	Prob	Test	Statisti	Prob
	Panel v-Statis	-0.85	0.80	-2.29	0.98	rho-Statistic	3.08	0.99
Individual intercept	Panel rho-Stat	2.50	0.99	1.58	0.94	PP-Stat	-8.74	0.00
	Panel PP-Statistic	-0.41	0.34	-5.66	0.00	ADF-Statistic	-3.19	0.00
	Panel ADF-Statistic	-0.42	0.33	-2.96	0.00	Non-significant model: no co-integration relationships		
	Panel v-Statistic	-2.51	0.99	-4.14	1.00	rho-Statistic	4.47	1.00
intercept and trend	Panel rho-Statistic	3.59	0.99	3.08	0.00	PP-Statistic	-11.32	0.00
	Panel PP-Stat	-1.96	0.02	-7.95	0.00	ADF-Statistic	-2.94	0.00
	Panel ADF-Statistic	1.66	0.01	-2.13	0.01	Significant model: co-integration relationships exist		
	Panel v-Statis	-0.54	0.70	-1.60	0.94	rho-Statistic	2.26	0.98
No intercept or trend	Panel rho-Stat	1.31	0.90	0.64	0.00	PP-Statistic	-8.93	0.00

	Panel PP-Stat	-1.39	0.04	-4.44	0.00	ADF-Statistic	-4.46	0 .00
	Panel ADF-Statistic	-3.37	0.00	-3.15	0.00	A significant model: co-integration relationships exist		

Source: Prepared by researchers based on Eviews 8 program outputs

The results of the Pedroni Co-integration Test indicate the acceptance of the hypothesis that there is a long-term equilibrium relationship between the study variables, due to the presence of two significant models out of three, because the majority of tests for this test had a level of significance (sig) less than 0.05.

3.6.3. Determining co-integration relationships:

After making sure that there are long-term equilibrium relationships between the study variables, the model for each of them can be determined as follows:

* The first relationship: for the dependent variable: Foreign Direct Investment (FDI)

(3) D(FDI) = - 0.41*(FDI (-1) - 111272776.53*EDB (-1) - 3.76*GCF (-1) 213.43*LBR (-1) + 5597862290.1) + 0.08*D (FDI (-1)) + 0.10*D (FDI (-2)) - 16345819.54*D (EDB (-1)) - 121695092.78*D (EDB (-2)) - 7.55*D (GCF (-1)) - 7.60*D (GCF (-2)) - 1142.42*D (LBR (-1)) - 866.87*D (LBR (-2)) + 178244279.73

* The second relationship: for the dependent variable: Ease of Doing Business Index (EDB)

(4) D(EDB) = 0.006*(EDB (-1) - 8.98*FDI (-1) + 3.38*GCF (-1) + 1.91*LBR (-1) - 50.3075636666) + 0.05*D (EDB (-1)) + 0.36*D (EDB (-2)) - 2.15*D (FDI (-1)) + 6.53*D (FDI (-2)) + 2.15*D (GCF (-1)) + 1.035*D (GCF (-2)) -1.22*D (LBR (-1)) + 8.16*D (LBR (-2)) + 0.55

* The third relationship: for the dependent variable: total capital formation (GCF)

(5) D(GCF) = - 0.10*(GCF (-1) + 567215652.84*LBR (-1) - 2657579.87*FDI (-1) + 2.95+14* EDB (-1) - 1.48) - 0.31*D (GCF (-1)) - 0.29*D (GCF (-2)) + 391195864.57*D (LBR (-1)) - 1353965294.84*D (LBR (-2)) + 76946.80*D (FDI (-1)) + 231275.53*D (FDI (-2)) - 1.15*D (EDB (-1)) - 2.76*D (EDB (-2)) + 4.09

* The fourth relationship: for the dependent variable: total labor force (LBR)

(6) D(LBR) = - 0.0003*(LBR (-1) - 0.004*FDI (-1) + 521347.19*EDB (-1) + 1.76*GCF (-1)- 26227707.36) + 0.38*D (LBR (-1)) + 0.19*D (LBR (-2)) - 1.75*D (FDI (-1)) -1.76*D (FDI (-2)) + 15710.63*D (EDB (-1)) - 9872.16*D (EDB (-2)) + 3.18*D (GCF (-1)) - 6.87*D (GCF (-2)) + 32999.82

3.6.4. Ensure that there is a long-term causal relationship.

In order for a causal relationship to exist in the long run, the coefficient of co-integration of the dependent variable with the degree of delay in the regression coefficient equation must be negative and with a significant significance.

Table 9: Results of long-term causal relationships confirmation

Co-integration relationship		Co-integration factor	The factor significance	Decision
The first relationship	Dependent variable: foreign direct investment (FDI)	-0.4016 (t* = -7.77) (sig =0.00)	Negative and significant	The existence of a long-term causal relationship
The second relationship	Dependent variable: Ease of Doing Business (EDB) index	0.0068	positive	The absence of a long-term relationship
The third relationship	Dependent variable: total capital formation (GCF)	-0.1020 (t* = -2.73) (sig =0.006)	Negative and significant	The existence of a long-term causal relationship
The fourth relationship	Dependent variable: total labor force (LBR)	- 0.0003 (t* = -0.38) (sig =0.69)	Negative and non-significant	The absence of a long-term relationship

Source: Prepared by researchers based on Eviews 8 program outputs

It is clear from the table that there are two causal relationships in the

long run, the first is related to the co-integration relationship of foreign direct investment (FDI) and the second is related to total capital formation (GCF), because the value of the coefficient of co-integration for the variable dependent on the degree of delay (FDI) -1)) And (GCF (-1)) in the regression equation is negative (-0.4127, -0.1020), and significant (<0.05 sig). As for the rest of the co-integration relationships for each of (EDB and LBR), they emphasized the absence of any long-term causal relationship, because the value of the co-integration coefficients of the dependent variable with the degree of delay was either positive or negative, but not significant.

3.6.5. Ensure a causal relationship exists in the short term:

To ensure the existence of a causal relationship in the short term, the coefficients of the independent variables with degrees of delay in the regression equation must differ from zero, and for this reason the (Wald Test) test was used, whose results were as follows:

Table 10: Results of the Test (WaldTest)

Co-integration relationship		Test value (Chi-square)	Test significance	decision
First relation	Dependent variable: foreign direct investment (FDI)	8.18	O.22	The absence of a causal relationship in the short term
Second relation	Dependent variable: Ease of Doing Activities Index (EDB)	99.63	0.00	The existence of a causal relationship in the short term
Third relation	Dependent variable: total capital formation (GCF)	7.72	0.25	The absence of a causal relationship in the short term
Fourth relation	Dependent variable: total labor force (LBR)	16.91	0.009	The existence of a causal relationship in the short term

Source: Prepared by researchers based on Eviews 8 program outputs

Through the results of the (Wald Test) test, two causal relationships are confirmed in the short term, which are those related to the joint complementarity relationship for each of the Ease of Doing Business (EDB) variable and the total labor force (LBR). This is because the significant value of the test (sig) is less than or equal to 0.05.

4. RESULTS AND DISCUSSION

The standard study concluded the following results:

The existence of a positive and statistically significant impact of the Ease of Doing Business Index on the volume of foreign direct investments in the Arab countries. This confirms the role played by policies and measures related to providing a stimulating business environment for foreign investments, which need government authorities to give utmost importance to by removing all legal and economic restrictions that would impede the flow of these investments.

The presence of an insignificant effect of the variable of gross domestic product and inflation on foreign direct investment, which confirms that some economic variables have no importance in stimulating foreign direct investment in Arab countries and this is in contrast to the theoretical proposition that confirms that foreign investment decisions must be taken into account all Economic, political, security and social dimensions.

The existence of a positive impact of the variable of gross capital formation on the volume of foreign direct investment, and this reflects the importance of local fixed assets and infrastructure in supporting foreign direct investments.

The existence of a negative impact of the size of the labor force on the volume of foreign direct investment, that this result is contradictory to the relationship between the size of the labor force and foreign investment in theory, as economies that are rich in human resources are more attractive to these investments, especially in Arab and developing countries that have a non-labor force, eligible, and low-paid. This confirms that the Arab countries do not take advantage of this comparative advantage that they have in attracting more foreign capital to invest in the local economy.

The co-integration methodology used in this study confirmed the existence of two long-term equilibrium relationships between the study variables.

With regard to long-term causal relationships, this study indicated the existence of two long-term causal relationships out of four equilibrium relationships, which are those related to the equation of the regression joint integration of the variable foreign direct investment (FDI) and gross capital formation (GCF), as this study proved that the rate of rapid arrival of the variable foreign direct investment (FDI) to the equilibrium is about 40.16%. The ratio of the velocity of GCF to equilibrium is about 10.20%.

With regard to the causal relationships in the short term, the study revealed the existence of two causal relationships in the short term for the joint integration equation for each variable: The Ease of Doing Business Index (EDB), and the total labor force (LBR).

5. CONCLUSION

Many developing and Arab countries in particular have tended to adopt radical economic reforms based on the rules of the market economy and total openness with the outside world with the aim of achieving sustainable economic development and stability. Therefore, the majority of these countries resorted to searching for effective sources of financing for their economies represented in Foreign direct investment as the mechanism that ensures it provides the funds and technology necessary for the growth of its economies, develops the competitiveness of its local institutions and facilitates their integration into the global economy, which requires them to provide the appropriate investment climate to attract these investments through adopting policies and measures to facilitate the performance of business organizations and provide them with economic freedom in accordance with international indicators.

Through the results of the applied study applied in Arab countries during the period (2008-2018), it is clear that these countries have begun to pay attention to all the determinants that would provide an encouraging and appropriate legal, administrative and financial environment for the performance of business organizations, which will contribute to the development of the volume of foreign direct investments and the achievement of economic results desired of them.

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