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Inward Foreign Direct Investment in Algeria: Determinants, Performance, Challenges in the Last Twenty Years

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Abstract **– This paper investigated the determinants, performance, and challenges of inward foreign direct investment (FDI) in Algeria in the period from 1996 to 2016. We used the methodology of the study includes an analysis of the investment environment in Algeria, examining the main investment policies in Algeria by reviewing the trade and investment laws, also we used time series model for analyses, the results showed that there is a relationship between real exchange rate and GDP, also it showed that there is weak inward FDI in Algeria because there is weak diversity in the investment channels, because the investors invest in one sector which is petroleum manufacturing.**

Keywords **– Algeria, Growth, FDI, Time Series Model.**

I. INTRODUCTION

Algeria is one of the North African countries, and it has a population of about 43 million, according to the 2018 census. The oil and gas sector is the backbone of the Algerian economy, where Algeria ranks one of the largest gas exporters, and it also ranks 14 in oil reserves in the world. Consequently, the hydrocarbons sector contributes to 60% of budget revenues (IMF, 2018). Despite the abundant resource and high per capita GDP, the Algerian economy is still suffering from the high unemployment rate, and poverty remains prevalent. Within that, the government has not been able to diversify the economy with oil and gas dominating 97% of export earnings, and foreign investments were mainly focused on oil sectors (International Trade Center Report, 2014).

According to (World bank,2019) the volume of FDI inflows into Algeria has noticeably improved in 2000, mainly after ending the civil war and the adoption of more liberalized policies. Consequently, the level of FDI inflow jumped from less 0.5% in 1997 to 2% as a percent of GDP in 2001. Also, the maximum percentage was reached in 2006 and then began to drop due to many reasons such as 2008 financial crisis that had a negative influence on inflow FDI to developing countries generally and hindered the increase of their investments in Africa. Despite the previous indicators, increasing rate is still emerging compared to what Algeria had from natural resource and geographic location. Interestingly, it is still meager in respect to FDI inward as a percentage of GDP compared to Arab countries level (Musabeh, 2018).

A. *Research Purpose and Importance*

Due to the positive repercussions of foreign direct investment, most governments are looking for the best facilities and practices that help them to attract FDI and reduce any obstacles that might affect negatively affect the increase in FDI, especially in unstable investment environments. Consequently, the primary aim of this study is to help governments to make a good and clearer decision on how to encourage and attract FDI and determine appropriate investment policies according to current and future forecasts, by examining the main determinants of FDI inflows to Algeria. And the willingness to take a deep look to find out the difficulties facin-

-g by Algeria and its actions for attracting FDI.

B. *Methods and Techniques*

The techniques and methodology of the study includes an analysis of the investment environment in Algeria, examining the main investment policies in Algeria by reviewing the trade and investment laws, after that I will Find and identify the most important obstacles to FDI in Algeria based on the historical classification of this country in terms of relevant indicators (GCI, HDI, EDB, etc.), finally find an empirical estimation of determinants of FDI inflows in Algeria by using Time series analysis.

C. *Study Contributions*

This study aims to define the factors and determinants of FDI to Algeria, and also aims to clarify the challenges that facing FDI in Algeria in the last 20 years, and this study will include information, data and studies that contain it to shed light on the problems and limitations that facing FDI in the Algerian economy and find appropriate solutions that will be presented at the end of the thesis, in addition to that it will open the way for other similar studies in some other countries.

D. *Study Outline*

Following this introductory chapter, the thesis is divided into three main parts. The first part is covered in (chapter two and three) that is related to the theoretical foundation and background of the study. Second part covered in the chapter four aims to assess FDI path in Algeria, by analyzing the business environment and investment risk in this area. Finally, the third part which is covered in (chapter five and six) is related to discussing the hypothesis to be tested, methodology research findings, and research conclusion.

II. THEORETICAL FRAMEWORK

Nowadays, the financial system has gotten increasingly coordinated, in terms of trade as well as financial flows (Gregorio, 2012), which classified based on (IMF, 1993) into three categories which are foreign direct investment (FDI), portfolio investment, and others. Although in the ancient centuries trade based on the barter it is very important to have financial accumulations in trade (Uyan, 207). That's why FDI is related to finance of the countries and we will see it in the following sections. This chapter includes the definitions, types of FDI, also it presents the main theories which explain the idea behind firms expanding a broadly as FDI.

A. *Definitions of Foreign Direct Investment*

There are several definitions of FDI, and are different from one to another depends on investment goals and purpose. Based on OECD (2010), IMF (1996), and World Bank (2001) agree Foreign direct investment is a long-term relationship investment and is controlled by a foreign direct investor, this investment made outside the economic environment of the investor in a foreign country, and investors must own at least 10 percent of the ownership of the shares in order to classify them as a foreign direct investor.

B. *Types of FDI*

According to Figure 1, cross-border capital flows is contains three types of FDI which are portfolio investment, foreign direct investment and bank loans. Foreign direct investment is divided in to three types which are motive, target and directions.

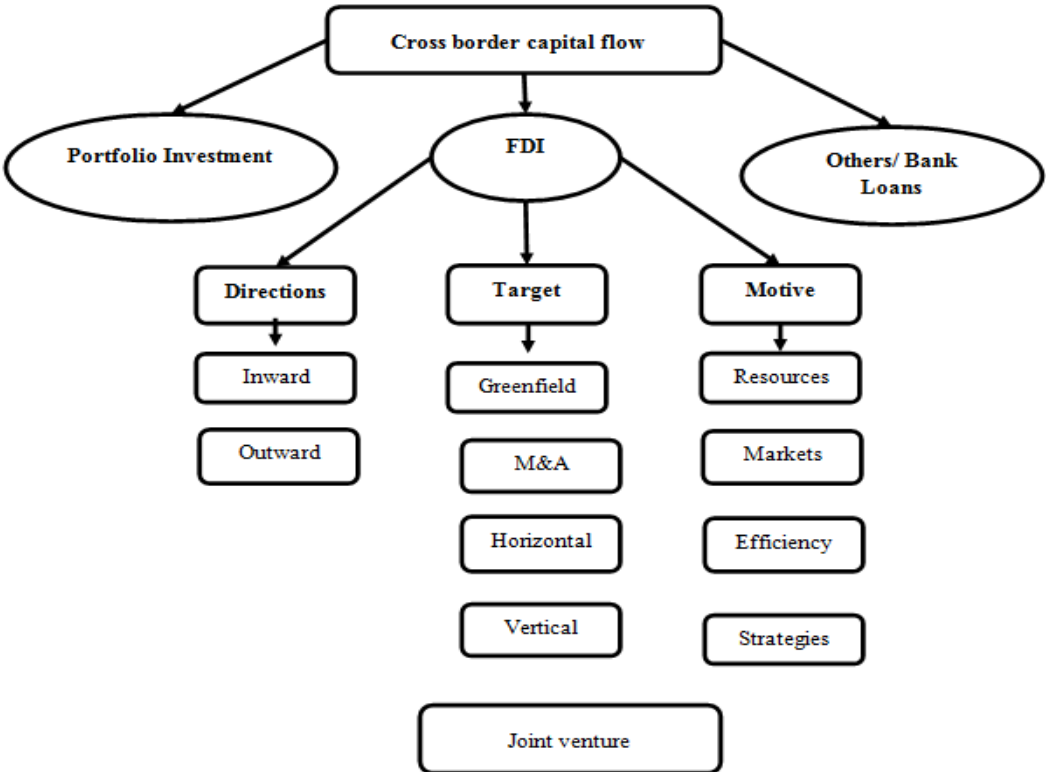

Fig. 1. Types of cross-border capital flows. Source: (Musabeh, 2018).

C. *The Main Theories of Foreign Direct Investment*

There are different types of theories of foreign direct investment, which combines theories of foreign direct investment at the micro and macro levels, studying the policies and factors that help to attract foreign direct investment, and why companies prefer investment abroad and how to make them enter abroad countries.

1. *Product Life Cycle Theory*

Product life cycle theory reveals the characteristics and condition of products in different periods of the market, and at the same time, it reflects the entire life movement process and the base of product development in the market. Due to changing market environment, consumption demand transmission, fierce competition environment, emergence of alternative products, level of marketing management, etc., limited life of products on the market etc. The organization should strengthen the product life cycle management theory, enhance the organization's management of the entire marketing process, and enhance their sense of urgency, so be prepared to understand the changes in products at different stages of the market, to better meet the market demand and changes (Xu, 2018).

2. *Capital Market Theory*

The capital market theory is a part of portfolio investment theory and is provided the basis for developing financial asset pricing models. This theory also related with SMEs (Jindrichovska and Ugurlu, 2013). The prevailing view of capital markets depends on the scenario of the ideal world, where markets are efficient in terms of information in asset prices, which quickly and accurately reflect new information when it reaches the market. According to the assumption of effective capital markets, all investors ignore risk and rationality completely in making their decisions (Hodnett, 2012).

3. *Internationalization Theory*

Internationalization theory of FDI is tested by comparing the gains from foreign expansion in foreign direct and indirect investment. Supporters of assimilation theory argue that the patterns of expansion of FDI are better because the risk of spreading a monopoly of information is less when companies expand using these methods. However, critics argue that there is no way to expand the preferred FDI range because of the agency's high decentralization costs associated with FDI patterns. This sheds some light on the discussion by comparing gains from expansion patterns in both FDI and foreign indirect investment. The results showed that the abnormal returns to shareholders are significantly higher when companies expand using patterns other than FDI associated with FDI patterns (Waheed, 1992).

4. *The Eclectic Paradigm of Dunning Theory*

This theory was introduced by John Dunning in 1976, international production of foreign direct investment theory provides that the company will invest directly in a foreign country only if it meets three conditions. First, the company must possess a proprietary asset, which gives it an edge over other companies that are exclusive to the company. Second, these assets must be absorbed within the company rather than contracted or licensed. Third, there should be an advantage in preparing production in a particular foreign country rather than relying on exports. Various types of ownership, local and internal factors (Blonigen, 2019).

III. LITERATURE REVIEW

The literature review will contain the main variables that related to affecting and attracting foreign investment and enhancing the investment environment in the host country, governments adopted a lot of policies to enhance the investment environment and create appropriate conditions to attract foreign direct investment.

The variables that affect and attract FDI contain market size, corruption, exchange rate, infrastructure, inflation, trade openness, and natural resources.

A. *Market Size*

According to Amponsah et al (2019), the study covered the period from 1981-2014 for Sub-Saharan Africa countries, and used unbalanced panel data, the study was about Remittances, Market size, and FDI. The study found that market size has a positive effect on FDI and economic growth. Economic growth is the one of the important aim of the economies (Ugurlu, 2009). Another study of Shan et al (2018) examine the effect of market size and natural resources on Chinese foreign direct investment (FDI) in Africa, the study used a panel data across 22 countries for the period from 2008 to 2014, the study showed that natural resources did not attracting Chinese investment too much, but the market size did. Islam (2016) investigated the effect of market size on FDI inflow in Bangladesh, the writer was using a vector error correction model, the period of the investigation is from 1986 to 2012, the long term result showed a positive impact of GDP and export in FDI inflow, and identified a negative impact of import on FDI, and showed that market size is effect positively on FDI. Also Islami and Mulolli (2016) studied the relationship of the economy size of Western Balkan countries with FDI, the study used data that were taken from World Bank, in yearly frequencies 10 years period from 2005 to 2014. After using the Pearson Correlation technique for empirical analysis, the results showed that there is a clearly positive relationship between market size and FDI. According to Kimuli (2012) used a sample of 57 developing

countries for ten years period from 2000 to 2009 to determine the effect of market size on FDI, the results of this study indicated that the market size is considered as one of the most important determinants of FDI.

B. *Natural Resources*

According to Feulefack and Ngassam (2020) study, they examined the effect of natural resources in Africa on FDI, they used Pool Mean Group (PMG) method, and applied it to five African oil-exporting countries for the period from 1996 to 2017, the study shows that natural resources have not too much attracted on FDI. On other study of Peprah and Hongxing (2019). The study explored the connections between FDI inflows and natural resources, this study investigated a sample of ten resourced sub-Saharan African countries, and they used means of panel data for the period from 1990 to 2017, the results showed that there is a positive relationship between natural resources and FDI. On other words, the countries that have natural resources attracted FDI.

Elheddad (2016) study showed that resource-rich countries attract less FDI because of resource (oil) price volatility, this study examined the natural resources discourage FDI in Gulf Cooperation Council (GCC), this paper used a panel data analysis for six oil countries during 1980 to 2013, the findings showed that natural resources measured by oil rents have a negative association with FDI inflows.

C. *Corruption*

Zangina and Hassan (2020) study aims to explain the connection between corruption control and FDI in Nigeria, the study used the time series analysis and covered the period from 1984 to 2017, the results showed that there is a positive changes in respect of corruption control is positive similarly as statistically significant during long-run, which suggests that there is more FDI inflows when where could be a decrease in corruption control.

Acocella et al (2019) paper investigated the relationship between corruption and FDI inflows from African countries to South Africa, the study used a gravity model, the results showed that there is a negative relationship between South African corruption and FDI inflows from African countries to South Africa.

Yadav et al (2019) study investigated the impact of corruption on FDI inflows in India, the study examined the effect of corruption on FDI by suing a secondary data for the period from 1995 to 2017, the results showed how corruption influenced FDI decision of Indian economy in a positive way, which means that corruption in India attracting FDI.

D. *Exchange Rate*

Alba et al (2010) study examined the impact of exchange rate on FDI inflows in the US, the study used an unbalanced industry-level panel data, and the results showed that there is a positive effect on FDI inflows.

Kiyota and Urata (2004) paper examined the impact of exchange rate on FDI in Japan, the result showed that the depreciation of the currency of the host country attracted FDI, and the study showed also that flexible exchange rate attracted FDI.

Collins et al (2016) study investigated the impact of exchange rate on FDI inflows in Nigeria, the study used a descriptive analysis of secondary data on exchange rate data from CBN statistics data base, the results showed that there is a positive relationship between FDI and exchange rate in Nigeria.

This study examined the impact of exchange rate on FDI in India and China, Khandare (2016) study used a regression analysis techniques for analyzing the data, the period that used from 1991 to 2014, and the results showed that there is a positive correlation between exchange rate and FDI in India, but there is a negative correlation in China.

Nyarko (2011) paper investigated the effect of exchange rate on FDI inflows in Ghana, the study used a causal model to investigate the relationship between exchange rate and FDI period from 1970 to 2008, the result showed that the exchange rate in Ghana has weak attracting FDI which just 10 percent.

E. *Inflation*

Ibhagui (2019) article investigated the effect of inflation on FDI in 74 countries, the study found that there is a negative relationship between inflation and FDI, which means that the countries that have inflation do not attract FDI.

Mustafa (2019) study explained the relationship between inflation and FDI in Sri Lanka, the study used the time series data to investigate the data for the duration from 1978 to 2017, the results showed that there is a slowdown of economic growth because the is a high speed of inflation in Sri Lanka, and there is a negative relationship.

Omankhanlen, (2011) study investigated the influence of inflation and Exchange rate on FDI flows. He employed Nigeria as a case study and used the data from 1980 to 2009, the results showed that there is no significant effect of inflation on foreign direct investment flows.

Asiedu (2006) paper investigated the effect of inflation on FDI was investigated. And the study employed 22 African countries from 1984-2000, the results showed that the inflation affects significantly (negative) FDI.

F. *Trade Openness*

Musabeh and Zouaoui (2020) study investigated the main vairables and polices that affecting FDI inflows in five North African countries, the authors used a panel data of North Africa in duration from 1996 to 2013, the results show that there is a positive relationship between trade openness and FDI inflows, which means that trade openness attracted FDI inflows.

Alam et al (2016) paper examines the impact of trade openness and FDI on life expectancy in Pakistan, the study used time series data over the period from 1972 to 2013, the results confirmed that there is a positive relationship between trade openness and FDI, which means that trade openness attracting FDI.

Rappaport (2000) study examined the effect of trade openness on increasing FDI flows and enhancing economic growth. The findings indicated that trade openness plays the main role as a channel to achieve economic growth, through technological spillover that has been improved by FDI. This spillover effects on two ways (horizontal) within the same sector, and vertical through forward/ backward linkages.

G. *Infrastructure Development*

Mbiankeu (2020) study investigated the effects of infrastructure (communication, energy and transportation) on FDI in Cameroon, the study used a time series data for the period from 1984 to 2014, and the results show that the infrastructure has a positive and significant impact on FDI.

Wang (2019) study aimed to analyze the impact of infrastructure improvement on FDI by using the panel data of ASEAN countries for the duration from 2003 to 2017, the result showed that the infrastructure improvement attracting FDI inflows in general and in China specially.

Owusu-Manu (2019) paper aimed to explain the short-run causal relationship between infrastructure development and FDI in the developing country of Ghana, the writer used an augmented Dickey-Fuller test (ADF) to test the situation, the results showed that there is a positive and significant relationship between FDI and infrastructure.

IV. Research Methodology and Data Analysis

In this section, we investigated selected variables to investigate their moves in 2000-2018. The variables are real exchange rate, corruption, inflation, gross fixed capital formation (GFCF), trade openness, real GDP, GDP per capita, and inward FDI. The real exchange rate is named as EXCHG, and the source of the variable is World Bank data, and World Bank (2020) defined the real exchange rate as a measure of the value of a currency against a weighted average of several foreign currencies divided by a price deflator or index of costs.

Corruption is named as CORRUPTION, and the source of the variable is Corruption Perceptions Index (CPI) was created and used by Transparency International. Inflation is named as INFLATION, Real GDP is named as RGDP and Gross fixed capital formation is named as GFCF, and the source of the variable is World Bank Data. GDP per capita is named as GDPPER, and the source of the variable is World Bank data, GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates (World Bank, 2020). Inward FDI is named as INFW, and the source of the variable is World Band data, inward FDI is the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor (World Bank, 2020). Investigating graphs of the variables give us very useful information (Ugurlu, 2020).

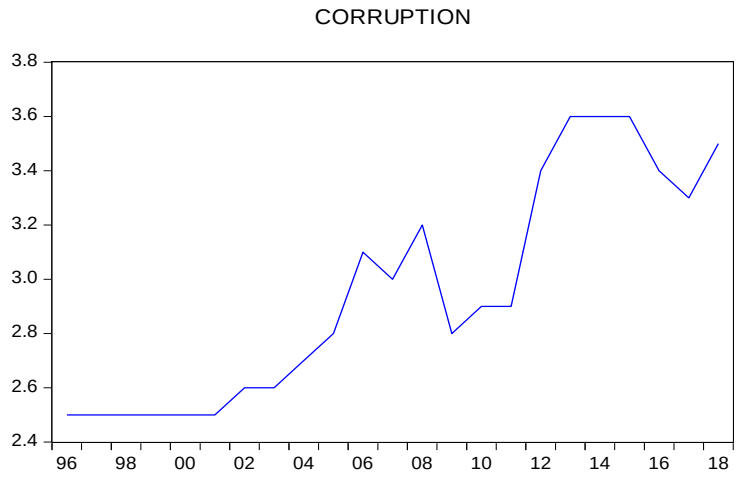

Fig. 2. Corruption.

Figure 2 explains the rates of corruption from 1996 to 2018, since the beginning of the year 2001 the indicators of corruption began to increase, moving from 2.5 to 2.6 in 2002, and this increase continued to increase until the year 2006 to reach to 3.1. In 2008, it reached to 3.2. At the beginning of the year 2009, the decrease came back to the index to 2.8, then it continued to increase gradually until 2013 to reach its highest level, which is 3.6 but then it decreased to 3.3 in 2017.

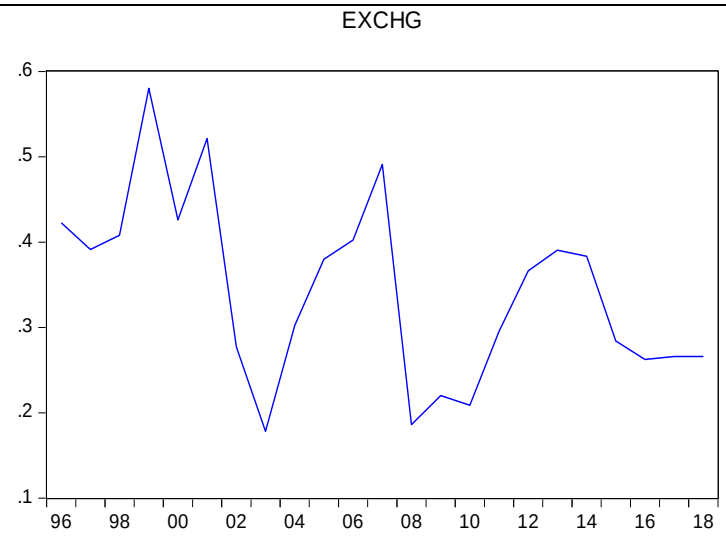

Fig. 3. Exchange rate.

Figure 3 shows the changes in the exchange rate from 1996 to 2018, and as the graph shows, there is instability in the exchange rate over these years, in 1996 the average exchange rate was 4.2. In 1997 there was a significant increase to reach its highest level in 1998, which is 5.9, after which the exchange rates decreased slightly to reach 4.3 in the year 2000. In the year 2001, an increase occurred to register 5.0, but after this, there was a strong collapse in the exchange rates to reach 1.9 in 2003. Then there was a fluctuating increase to reach about 4.7 in 2006, then it gradually decreased, reaching to 1.9 in the year 2007, then, there was a fluctuating increase to reach to 3.5 in the year 2013, then it decreases to 2.5 in 2015 to maintain stability in this number, which 2.5 is until 2018.

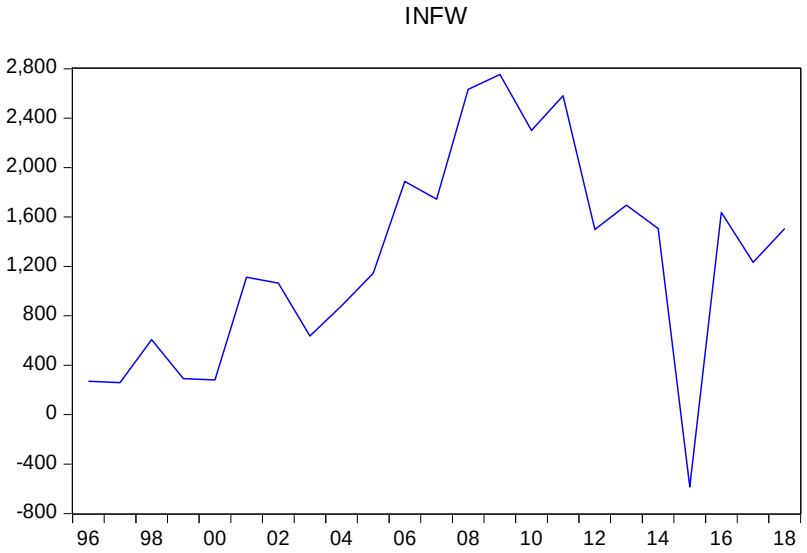

Fig. 4. Inward FDI.

Figure 4 shows foreign direct investment in Algeria is shown from 1996 to 2018, in 1996 the indicator was 270.0, then it increased to 606.0 in 1998, then the index decreased to 280.1 in the year 2000, to increase significantly to reach 1065.0 in the year 2002, then it decreased in the year 2003 to reach the index to 637.9. Then the index increased significantly to reach the highest percentage in 2009 to reach the index to 2753.8. There was a breakdown in the index to reach -584.5 in 2015, and then increased significantly in 2016 to reach the index to 1637.0, then the index stabilized to reach 1506.3 in 2018.

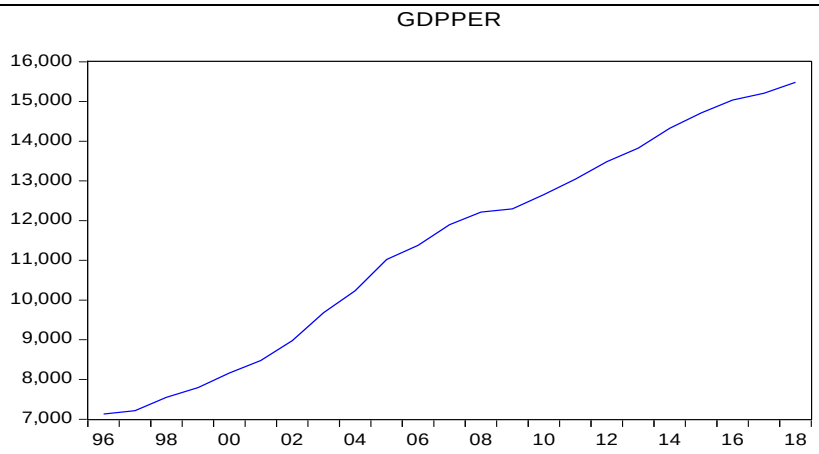

Fig. 5. GDP Per Capita.

GDP per capita is the total gross domestic product divided by the population in a particular country, and the result is the annual per capita share in US dollars in this graph, and here we see in Figure 5 that the GDP per capita is constantly increasing, as we see in 1996, the GDP per capita was 7129 USD, to continue to increase to reach 15481 USD in the year 2018.

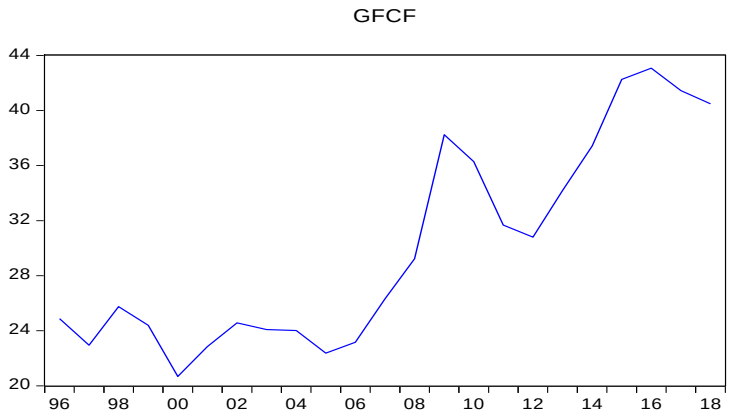

Fig. 6. Gross Fixed Capital Formation.

In figure 6, the gross fixed capital formation in Algeria from 1996 to 2018 varied between increase and decrease, in 1996 the indicator was 24.87, then this indicator declined in 1997 to 22.95, and in 1998 the index increased to 25.79, and between the slight increase and decrease the indicator reaches to26.32 in 2007, in the year 2009 the index reached to38.23, then it continued to decrease to reach 30.79 in the year 2012, then it increased significantly to 42.25 in 2015, then the index reached to 40.48 in 2018.

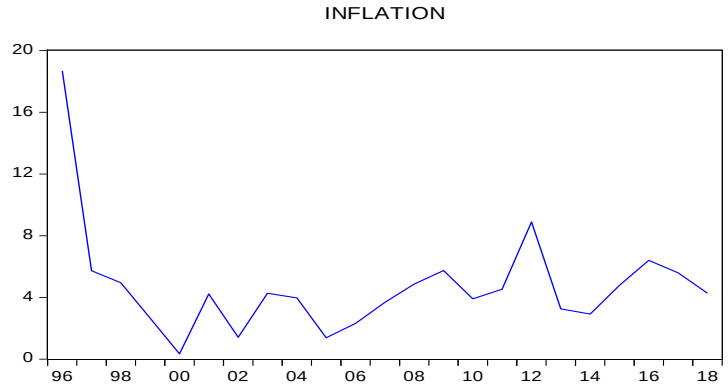

Fig. 7. Inflation.

Figure 7 shows the rate of inflation in Algeria from 1996 to 2018, the inflation index in 1996 was at its highest to reach 18.6, then it decreased significantly in 1997 to reach the index to 5.7, to continue its decrease to reach 0.3 in the year 2000, then it increased again in 2001 to reach 4.2, and this increase continued to reach to 8.8 in 2012, and then decreased significantly in 2013 to reach 3.2, then the index increased again to reach to 6.3 in 2016, and in 2018 the index reached to 4.2.

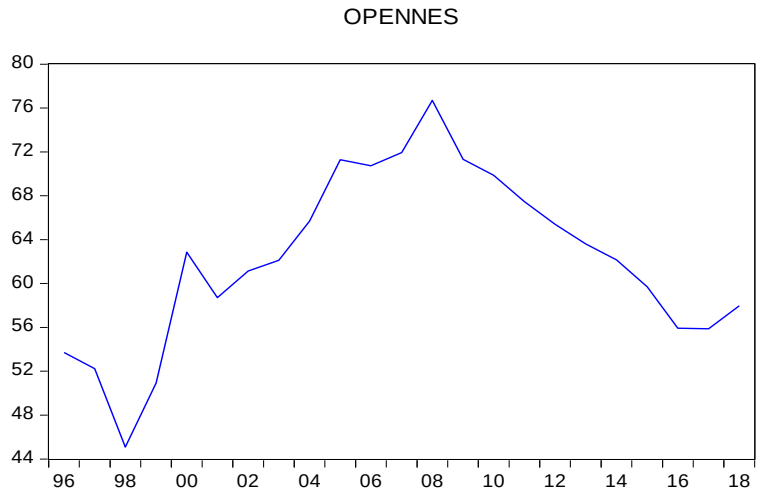

Fig. 8. Trade Openness.

Figure 8 shows the indicators of trade openness in Algeria in the years from 1996 to 2018, beginning in 1996 the index was 53.7, but the index of trade openness in 1998 decreased to 45.0, then the index increased rapidly to reach 62.8 in the year 2000, and this continued the increase in indicators to reach the index in the year 2005 to 71.2, and this increase continued to reach to 76.6 in the year 2008, then gradually decreased for several years to reach in the year 2016 to 55.9, and at the end of the year 2018 the index of trade openness reached to75.9.

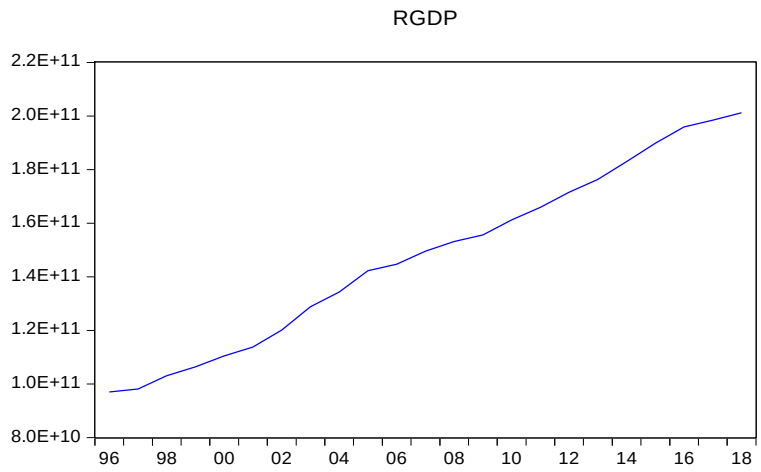

Fig. 9. Real GDP.

Figure 9 shows the real GDP in Algeria from 1996 to 2018 when the index in 1996 was less than 1.0E+11, and this indicator continued to increase gradually to reach 2.0E+11 in 2018. Real GDP is a measure of the total economy of the value of the economic adjustment Output according to price changes. This adjustment transforms the measurement of the value of money, nominal GDP, into an indicator of the amount of GDP (Kohli, 2004).

A. *Unit Root Test*

Time series data is often not stationary so cause a spurious regression. Spurious regression happens when the result of regression shows a statistically significant coefficient, but the relationship among variables in the model does not correlate Widarjono (2007: 339). Non-stationary data can be said to be stationary when there is a tendency that the mean and variance is not constant. To check the stationary of the variables, we need to conduct some tests. There are many tests to check the stationary of the variables. There are non-formal tests and formal tests. Observing the stationary of the variable from the graph is a non-formal test; on the other hand, we can also perform a formal test by conducting the Augmented Dickey-Fuller (ADF) test. In this paper, we will investigate the stationary of the variables by performing the ADF test if a time series has a unit root problem, the first difference of such a time series is 'stationary'.

The Results of these formal tests are summarized in the following tables, indicating that the first differences of all variables are stationary.

Table 1. Result of unit Root Test (Augmented Dickey-Fuller) Level.

	Model with Constant	**Model with Constant and Trend**
INWF	-2.8167(0.0757)	-2.9667(0.1671)
EXCHG	-2.9300(0.0614)	-4.1918(0.0202)
LGDP	-5.3629(0.0006)	-2.4162(0.3592)
OPEN	-0.7650(0.8049)	-1.1377(0.8929)

Table 2. Result of unit root test (Augmented Dickey- Fuller) first log- difference.

	Model with Constant	**Model with Constant and Trend**
INWF	-6.5174(0.0000)	-6.5361(0.0003)
EXCHG	-5.3263(0.0005)	-5.2807(0.00027)
LGDP	-1.9113(0.3191)	-3.0510(0.1499)
OPEN	-5.8406(0.0002)	-6.1678(0.0005)

The unit root results shows that only LGDP is stationary but only in constant model. The rest of the variables are not stationary. They are stationary in first difference. Therefore we will take all variables I (1) and we will construct Granger Causality test with first differenced values.

B. *Granger Causality Test*

In the Granger-sense X is a cause of Y if it is useful in forecasting Y. In this framework, "useful" means that X is able to increase the accuracy of the prediction of Y with respect to a forecast, considering only past values of Y. Such a test will not only test the relationship between two variables but which of the variables that affect each other.

Before Granger Causality Test we have to find its number of lags. To find it, we estimated the VAR model and used lag length selection criteria. The results of the criteria show that 2 lags is chosen. You can see the output of the lag length test in the a-Appendix (Musabeh, 2020).

Table 3. Granger Causality Tests.

Null Hypothesis:	Obs	F-Statistic	Prob.
DINW does not Granger Cause DEX	17	0.13357	(0.8762)
DEX does not Granger Cause DINW		0.61538	(0.5566)
DLGDP does not Granger Cause DEX	15	2.93391	(0.0994)
DEX does not Granger Cause DLGDP		3.47662	(0.0714)
DOPEN does not Granger Cause DEX	17	0.21695	(0.8081)
DEX does not Granger Cause DOPEN		0.35345	(0.7093)
DLGDP does not Granger Cause DINW	15	0.48097	(0.6318)
DINW does not Granger Cause DLGDP		0.31285	(0.7383)
DOPEN does not Granger Cause DINW	17	1.17135	(0.3430)
DINW does not Granger Cause DOPEN		0.35024	(0.7115)
DOPEN does not Granger Cause DLGDP	15	1.95746	(0.1917)
DLGDP does not Granger Cause DOPEN		1.63986	(0.2421)
Notes: Lag 2 is selected based on BIC.			

The results show that the null hypothesis is rejected for DLGDP and DEX. GDP Granger cause of the exchange rate and exchange rate Granger cause of GDP, which means that when GDP in Algeria increases, the exchange rate will increase, and when the exchange rate in Algeria increase, GDP will increase.

For all other variables, probability values are greater than 0.10 which means the variables fail to reject, which means there are no Granger causes between DINW and DEX, and also no Granger causes between DOPEN and DEX, also DLGDP and DINW, and DOPEN and DLGDP.

In the relationship between GDP and exchange rates, the study of Rodrik (2008) and Isard et al (1999) found that there is a positive relationship between exchange rates and GDP, that is, the higher the exchange rates lead to the greater the proportion of GDP, in Wong et al (2005) the authors found that the countries that there is a high economic growth supported by export growth, and hence the rise in the value of exchange rates due to increased demand for the local currency, which helps the good exchange rate to liquidate the capital markets, which leads to increased liquidity in the market, which in turn leads to achieving economic growth.

Algeria, like other developing countries, seeks to enhance its external balance and achieve economic stability, so that Algeria has relied on many different exchange rate regimes in the past decades. In 1974, the Algerian dinar exchange rate was related to several currencies, but the US dollar had the largest weight in view its importance in export earnings, but after the oil shock in 1986, the Algerian bank left the local currency down against other currencies, and in 1994, one of the most important goals of the adjustment program was to correct the previous true appreciation of the Algerian dinar, since in 1995 the exchange rate policy was aimed in shear in order to maintain a stable exchange rate through the application of the systematic floating system that has continued today, the bank of Algeria through its interventions adjusts the nominal exchange rate periodically and continuously in order to achieve the real exchange rate (Yahia et al, 2018).

The changes in the real exchange rate in Algeria respond to the three forces, which are the differences between the balance of the real exchange rate and its different actual value, the imbalance in the overall economy (the difference between supply and demand) on money, and the lowering of the nominal value which are positive parameters. Thus, an adjustment to the fundamentals that affect the real exchange rate of equilibrium (for example, increased spending from increased oil production, and changes in import protection) to fade excess supply or demand by adjusting prices and wages, which will gradually bring the real exchange rate closer to the equilibrium level. Monetary pressure (for example, from increasing reserves from higher oil exports). On the other hand, tends to cause real appreciation by increasing the supply of money demand. Changes in the nominal exchange rate affect RER only if it is not in equilibrium. Thus, exchange rate manipulation will not have a long-term effect on the equilibrium price (Sorsa, 1999).

V. CONCLUSION

In this article, FDI inflows were studied in Algeria in a study that covered the years from 1996 to 2016, where the determinants, performance and future challenges were studied in this period, and this article highlights the conditions of the investment environment in Algeria in the last twenty years, and in the end, the main results are summarized with suggestions for future studies in the area of foreign direct investment.

In the section of research methodology and data analysis in this article, it was divided into three main parts, in the first part, a general introduction was made about the main variables that are directly related to foreign direct investment so that the data were analyzed in the form of graphs that change the indicators in the period between 1996 to 2016, in the second part the unit root test was used, and in the last part Granger causality test was used in the analysis of causal relationships.

In the theoretical part, the results indicated that foreign direct investment in Algeria is weak and suffering, sometimes it rises and sometimes it decreases, so that there is no stability, so the results revealed that the diversity in the field of foreign investment is weak, as the largest share in foreign direct investment is in one area it is the field of petroleum industries, due to weak economic reforms, weak technology, weak investment incentives, high corruption, and others.

Through the use of time-series data analysis, the results showed a continuous rise in corruption rates, an increase in real GDP and a slight increase in foreign direct investment inflows, while indicators show a decrease in rates of trade openness, and a lack of stability in indicators of market size and exchange rate, while there is stability in inflation. Unit Root Test (ADF) was used to detect unit root, the results showed that the only GDP is stationary, but only in the constant model. Other variables are not stationary like inward FDI, Exchange rate, and Trade openness. We used is the Granger causality test, the results of this test showed that there is a relationship between GDP and real exchange rate, which means when the GDP increases, the real exchange rate will increase, and when the real exchange increasing, the GDP will increase. And the results showed that there is no Granger causality between other variables.

With regard to the inward FDI in Algeria, the results showed that foreign direct investment in Algeria is relatively weak due to the lack of diversity in the field of foreign direct investment, as the largest proportion of foreign direct investment is limited to the field of petroleum industries and the field of natural resources extraction.

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