The Relationship between the Foreign Direct Investment and the Gross Domestic Product in Jordan

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ABSTRACT
This study will practically explore the impact of the Foreign Direct Investment (FDI) on the Jordanian Economy by utilizing the Gross Domestic Product (GDP) as a constant variable to measure the relationship between (FDI) and the Jordanian economy. The period from 1976 to 2009 will be examined for the present test. The Jordanian Department of Statistics (DoS) and United National Conference on Trade and Development (UNCATAD) are the sources of information in the present investigation in this research. Simple Linear Regression (SLR) has been employed to measure and analyze the impact of the Foreign Direct Investment (FDI) on the Gross Domestic Product (GDP). The results indicate that there is a positive relationship between the Foreign Direct Investment (FDI) and the Gross Domestic Product (GDP).

Keywords: Foreign direct investment, Gross domestic product, Simple Linear Regression, Jordan.

1. Introduction

Jordan, officially the Hashemite Kingdom of Jordan, is a country on the East Bank of the Jordan River in Western Asia. It borders Saudi Arabia to the east and south-east, Iraq to the east, Syria to the north, and Palestine to the west. Jordan's only seaport is located in the city of Aqaba which is located at the head of the Gulf of Aqaba in the south. Much of Jordan's landscape is made up of desert land. However, the north-western part of Jordan makes up the agricultural part of the country. The capital city is Amman. One of the most prominent, ancient states geographically located in Jordan, was the Nabatean Kingdom, with the capital city at Petra (The Jordanian Encyclopedia, 1989).

Jordan is a small country with limited natural resources. It has currently explored ways to expand its limited water supply and use its existing water resources more efficiently. The country depends on external sources for the majority of its energy requirements (Abu Hammour, 2001).
During the 1990s, its crude petroleum needs were met through imports from Iraq and other neighboring countries. Since early 2003, oil has been provided by some countries of Gulf Cooperation Council members. In addition, the Arab Gas Pipeline from Egypt to the southern port city of Aqaba was built in 2003. The government plans to extend this pipeline north to Amman area (The Jordanian Encyclopedia, 1989; Al-Madi, & Musa, 1988).

The Gross domestic product is considered as the total-market value of all final goods and services produced in a country in a given year, equal to the total consumer, investment and government spending, plus the value of exports, minus the value of imports (Agha, 2002; Ornelas, 2004).

The Jordan National Census for the year 2004 was released on the first of October in the same year. According to the census; Jordan had a population of 5,350,981. The national growth rate was 2.5% (at maximum) as compared with 3.3% of the 1994 census, which refers only to 4,139,400. The next census is scheduled to take place in 2014 (DOS, 2011).

The Administrative Divisions system by the Ministry of Interior divides Jordan into 12 governorates. Each one of the governorates is headed by a governor who is appointed by the king. Fig.1 shows the Jordan map.

Actually, they are the sole authorities for all governmental departments and developmental projects in their respective areas. The Governorates are, in turn, divided into 52 districts.

![Jordan Map](image)

Fig.1. Jordan Map which clarifies the managerial dividend (DoS, 2011).

The FDI refers to a long-term participation by country A into country B. It usually involves a participation in management, joint-venture, transfer of technology and expertise (AL-Otaibi, 2004).
Most countries attempt to promote the FDI through providing such taxes and customs incentives in addition to the institutional and foreign trade liberalization and the establishment of institutions, concerned with the development of the investment environment which highlights and promotes the importance of the foreign investment for the local economy. The Foreign investment which is considered as a source of external financing can hardly be obtained through the domestic savings, can provide a means for the transfer of foreign expertise, and can bring the necessary technology, difficult to be locally obtained due to high costs. The FDI creates many opportunities, benefiting the local economy such as providing employment opportunities, introducing modern management techniques, and increasing the productivity of capital money which affects positively on the Gross domestic product and the potential to expand the export market and increase trade with other countries (Hamid, 2005).

Considering that the achievement of these lofty goals requires substantial financial resources, difficult to be mobilized from domestic savings which are already weak, and some of their leakage in non-economic purposes altogether to deny their countries from the financial resources available, which can be used to finance the domestic investment to get many developing countries forced inevitably by using international funding sources, and to participate in financing economic development from FDI (Geloes, 1995).

The inequalities modernization shows lake or inequality in dividend growth of revenue and the gains of development both between and within regions and within the single state, and the dominance of economic activities in certain locations in Jordan, which means that there is a case of non-compliance and lack of harmony between the plans objectives for the development of Jordan in order to reduce the developmental disparities spatial (Friedman, 1966). The economic development disparities become clear from the presence of economic activities, which leads to the emergence of different forms of bilateral economic, of which one form is the existence of an agricultural system in a distorted economy, and another form is on the industrial economic system or service modern and sophisticated (Hunaiti, 1980).

Jordan is considered one of the developing countries with economies in light of the population and the disproportionate use of available resources and imbalances of different developmental forms, which means that the productive investment leads to several negative relations and links such as: low proportion of the workforce, declining productivity, lack of integration of economic activities among themselves, non-regional integration of non-site units, and concentration of investments in some urban centers. Thus, it has negative consequences on the part of distributive justice (Ramadan, 1995; Hussein, 2007).

In the light of what mentioned before, studying the relationship between FDI and GDP in Jordan demonstrates how they relate to specific relationships and verify that through the investigation of foreign investment for many years illustrates the magnitude of the impact of the natural relationship.
1.1 Research Problem and Objectives

Despite the high risks, involved in FDI, non-oil Arab countries compete to attract more foreign direct capital through more specifically economic and financial resources as a contributing operator to achieve growth if it was brought under control without carries (dominance and control). So the research problem appears in the miscalculation of the benefits achieved from FDI as compared with drawbacks and thereby promoting the adoption of a clear position by developing countries towards the FDI. The main objective of this research are to determine the impact of foreign investment on Gross Domestic Product (GDP) on the national scale and then to conclude some recommendations, pertaining to the findings of this research.

1.2 The Importance of Research

The importance of such research is connected to the importance of attracting foreign investment which can radically change the reality of the local economy by reducing the burden on the state and the provision of job opportunities that contribute with reducing the levels of unemployment which, in turn, will reduce poverty and raise the level of social welfare and pace the global developments in the application of globalization. The matter underlines the important and mandatory study of economic gravity and its role in foreign trade (Bergstrand, 2005; Todaro, 2000), and the relationship of economic development, planning in different levels (Jhingan, 1999; Chen, 1995).

If the researcher was able to reach the results commiserating with the reality of investment and providing appropriate suggestions and recommendations on the subject of this research, he may be able to contribute with a statement following the contribution of such investments to attract foreign investment, and thus contributing to the support of our local economy in many ways.

This study covers 34 years of the Foreign Direct Investment (FDI), from the (1976 - 2009) on a national macro-level because data are not available on local or regional level, or even on the recently identified three planning regions: the northern, middle, and southern regions. It is possible to make it when data are available, on levels of national planning at least, dealing with regional economic and national levels in the framework of macro-analysis and diagnosis of their relationships together (Marouf, 2006).

2. Theoretical Framework

According to the manual preparation of BOP statistics issued by the IMF in 1993, FDI is a form of an international investment in which an investor obtains a long-term interest in a business that operates in a country other than the investor’s home country. The investor who obtains a lasting interest in an enterprise in another economy is referred to by the term “direct investor”, and the institution or business that is operating in another economy is referred to as “the direct investment corporation”. This type of relationship usually lasts for a long period of
time and gives the direct investor a high degree of influence in managing the institution (DoS, 2007).

Not only direct investment on the initial treatment or the original that led to the relationship mentioned between the investor and the institution, but also all subsequent transactions between them and all transactions among affiliates whether they contribute or don’t.

Some of researchers defined the FDI as a "formation of a new facility or expansion of a facility list by residents of a certain country within another country." or it can define as a “long-term investment activity, carried out by non-resident investor in a host country, with a view to the effective participation or independence management and resolution (Arab fishers Company, 1997). Some other researchers defined it as "the quota fixed for the investor resident in one economy in the project which is constructed in the other economy."

Overall, all these definitions state that FDI is: incoming money to a non-state in order to gain more profit. It includes transactions capital direct investment of the transactions which leads to the creation or abolition of investments and transactions to preserve the continuity of the investments or to expand or liquidate the investment.

Furthermore, according to the IMF, if the direct investor purchases 10% or more of the enterprise in another country, the market value of these shares and other additional capital investments will be registered as an DI, whereas if the shares are less than 10% for the non-resident investor, it will be registered as investments in securities. This concept or definition is used in preparation of the statistics balance of payment (DoS, 2007).

The FDI refers to a long-term partnership between two countries which usually involve participation in management, joint ventures, technology transfer and expertise. There are two types of FDI: the FDI and the inward investment from abroad of FDI, resulting in a net flow of FDI (positively or negatively) and "the stock of foreign direct investment", a cumulative number for a certain period. The direct investment excludes investment through purchase of shares. It is no secret that there is a long debate among economists about the importance of FDI in the economy, the host, where the Group supports the bringing in foreign capital, owing to the need of developing countries, that as long as the form of decreasing a major obstacle to its development and growth, and another group warns of encouragement, and felt that what is only a kind of neo-colonialism, which aims at exploiting and plundering the economic surplus of the developing world.

3. Literature Review

Many studies have tackled this topic because of the need to learn the importance of foreign investment in host countries. The variety of topics addressed by these studies focused on the impact of FDI on economic growth in the host countries, including the factors that affect the economic mobility of capital to the host countries. Studies also focused on topics which have a close relationship to foreign investments:

Momani (1987), assessed the impact of capital, loans and aid on both the economic growth and domestic savings was analyzed. The results of this study showed the negative impact of
foreign loans on economic growth and domestic savings and the positive impact that foreign aid had on economic growth and local savings. On the other hand, Abdel-Rahman (1994) found that the level of GDP has an effect on the positive relationship between inflation and foreign direct investment, and significant flow of foreign investments into the Kingdom of Saudi Arabia. This study stated that the increase in inflation by 3% in Canada lead to a decline in U.S. FDI in Canada by 7% and this would reduce U.S. investments in Turkey by 1.9% and increase domestic investment America by 0.3% (Sayek Selin, 1999).

A study by Azzam (1993) aimed at analyzing the determinants of the demand for foreign investments in Jordan for the period from 1972 - 1994. This study suggested that there was a positive impact and effective both economic and political stability and the size of GDP in attracting foreign investment and flow of the Jordanian economy.

Factors were located by Alhijazin (1996) they have an impact on attracting FDI to Jordan and of environment-economic infrastructure, the stability of economic and legal environment, security and political stability, the social environment and the workforce and the development of industrial exports and policies and organizations of the Jordan Investment Board. The study concluded that institutions encourage Investment Jordanian role in the process of attracting FDI and its importance in economic development.

Adding to the AL-Lataefeh (1996) it demonstrates the impact of foreign investment on the economic growth in Jordan. The study found limited and modest volume of foreign investments in the Jordanian economy during the period 1980-1994, and therefore poor contribution to economic growth, and that it has clear relationship sources of external funding is desirable.

The present study aimed at analyzing the impact of FDI (FDI) on the Gross Domestic Product (GDP) in Jordan by employing a time series covering 34 years, where Jordan tends to develop its economy through a series of developmental plans, following the 1967 war, which resulted after its different negative effects. Based on the above literature, we can hypothesis such that: There are no relationship between FDI and GDP.

4. Methodology

This study is based on the use of analytical descriptive method to analyze and interpret the relationship between the economic variables of Gross Domestic Product (GDP) and the effect of the FDI. Data analysis process will be based on the basis of the specific null hypothesis testing, and the use of a linear regression equation:

\[ \hat{Y} = \beta_0 + \beta_1 X \]

Whereas:

\[ \hat{Y} = \text{Gross Domestic Product “GDP”}, \text{ (Dependent Variable)}. \]

\[ X = \text{Direct Foreign Investment “FDI”}, \text{ (Independent Variable)}. \]
4.1 Data Sources

The data used was obtained from the Jordanian Department of Statistics, Directorate of National Accounts and from UNCATAD (United National Conference on Trade and Development).

5. Discussion

The study sample is taken for the time period of 1976 and 2009, these data represent the gross domestic product and the value of FDI flows. Look to Appendix (A).

As shown in Appendix (A) FDI in Jordan increased 1976 and GDP took the form of increasing and sustained growth, which is summarized in Fig.2.

![Graph showing the relationship between FDI & GDP](image)

Fig.2. the relationship between FDI & GDP

To clarify that, the study will find the value of R, R2 as shown in table (2). It is clear that there is a strong relationship between FDI and GDP, where R=.885, with Std. Error=2020.5; also it is statistically significant as shown in Table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.885(a)</td>
<td>.782</td>
<td>.776</td>
<td>2020.4997</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), FDI
Table 2: ANOVA (b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>469674293.018</td>
<td>1</td>
<td>469674293.018</td>
<td>115.048</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>130637403.884</td>
<td>32</td>
<td>4082418.871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>600311696.902</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Predictors: (Constant), FDI, b Dependent Variable: GDP

Table (3) refers to the analysis of variance indicated significant differences between the averages of treatments (F = 115.048).

The value of the corresponding P-value equal to (0.000) leads us to reject the null hypothesis (There is no relationship between Direct Foreign Investment and Gross Domestic Product).

Table 3: Coefficients (a)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2870.517</td>
<td>395.336</td>
<td>7.261</td>
<td>.000</td>
</tr>
<tr>
<td>FDI</td>
<td>5.385</td>
<td>.502</td>
<td>.885</td>
<td>10.726</td>
<td>.000</td>
</tr>
</tbody>
</table>

a Dependent Variable: GDP

As shown in table (4), the parameter refers to the tendency which increasing FDI by 1 JD leading to increase GDP by 5.385 Jordan dinars. It is clear that by applying the linear regression equation, it was possible to derive the following equation:

\[ \text{GDP} = (2870.517 + 5.385 \times \text{FDI}) \]

Since the P-value equals \(0 < 0.05\) we reject H0 which concludes that there is no relationship between Direct Foreign Investment and Gross Domestic Product and accept the validity of the model, where \(R^2 = 0.885\), and the ‘FDI’ explains about 89% of the variation in the ‘GDP’. Thus the model fits the present data. Since the P-value = 0 < 0.05, we reject H0 which indicates that there is no relationship between Direct Foreign Investment and Gross Domestic Product and accept that the model needs the constant.

6. Conclusion

In light of present data analysis, the study reached many results, the most prominent one is that Jordan has relied on the orientations of the private sector foreign investment to advance economic development and a breakdown of production and hold basic changes, consecration because of that some cases like endemism of regional economic activities appeared which explained by the spatial correlation between the size of the market and the reserves of available
resources, So Jordan is one of the developing countries, with economies in light of population and weak capitalizing.

Besides, the successive Jordanian developmental plans adopted on FDI in the adoption and establishment of project planning to make a positive impact on reducing the disparities between regions to be for this investment positive returns such as establishment of activities in environments and locations that can be invested despite the high rates of unemployment and poverty in Jordan, which needs a further investigation in order to illustrate the impact of FDI in the operation of national labor force and the amount of compensation get at the regional level or province as well as the brigade level.

The government should attract more FDI because FDI has a lot of characteristics, avoiding foreign government pressure for local production, circumventing trade barriers, hidden and otherwise, capability to increase total product capacity. Also, the government should provide more incentives and facilities for investments in a logical way, and not against the national benefits.

The adaptation to new technology with economic variables improves the data base to facilitate the cooperative with their partners. They must increase the quality of local products to make sure it can compete in the outside markets. Encouraging local investors to invest in their countries which will impact on the local economic positively is recommended. The study recommends researchers to study the impact of FDI on the operation of the Jordanian workforce and how much get from profitability.

References


Arab fishers Company, (1997). Foreign direct investment in Arab countries, research presented to a seminar incentives granted to foreign direct investment in the Arab States 1997, the Arab Institution for Investment Guarantee Corporation. Jeddah, Kingdom of Saudi Arabia.


Momani, B. (1987). American politicization of the International Monetary Fund, Department of Political Science, University of Waterloo, Canada.

Ornelas, E. (2004). Free Trade Agreements and The Multilateral Trading system, Department of economics, University of Georgia. Georgia, USA.


### Appendix A

Appendix (A): Gross Domestic Product & Direct Foreign Investment, 1976-2009 (Million JDs)

<table>
<thead>
<tr>
<th>Year</th>
<th>FDI</th>
<th>GDP</th>
<th>Year</th>
<th>FDI</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>*5.3-</td>
<td>567.3</td>
<td>1993</td>
<td>*23.8-</td>
<td>3,884.2</td>
</tr>
<tr>
<td>1977</td>
<td>8.0</td>
<td>690.4</td>
<td>1994</td>
<td>2.0</td>
<td>4,357.4</td>
</tr>
<tr>
<td>1978</td>
<td>40.1</td>
<td>795.4</td>
<td>1995</td>
<td>9.5</td>
<td>4,714.7</td>
</tr>
<tr>
<td>1979</td>
<td>18.7</td>
<td>982.5</td>
<td>1996</td>
<td>11.0</td>
<td>4,911.3</td>
</tr>
<tr>
<td>1980</td>
<td>24.0</td>
<td>1,164.8</td>
<td>1997</td>
<td>256.3</td>
<td>5,137.4</td>
</tr>
<tr>
<td>1981</td>
<td>100.0</td>
<td>1,448.7</td>
<td>1998</td>
<td>220.1</td>
<td>5,609.9</td>
</tr>
<tr>
<td>1982</td>
<td>42.2</td>
<td>1,649.9</td>
<td>1999</td>
<td>111.0</td>
<td>5,778.1</td>
</tr>
<tr>
<td>1983</td>
<td>24.8</td>
<td>1,786.6</td>
<td>2000</td>
<td>648.4</td>
<td>5,998.6</td>
</tr>
<tr>
<td>1984</td>
<td>55.0</td>
<td>1,909.7</td>
<td>2001</td>
<td>194.3</td>
<td>6,363.7</td>
</tr>
<tr>
<td>1985</td>
<td>17.7</td>
<td>1,970.5</td>
<td>2002</td>
<td>169.1</td>
<td>6,794.0</td>
</tr>
<tr>
<td>1986</td>
<td>16.2</td>
<td>2,240.5</td>
<td>2003</td>
<td>388.3</td>
<td>7,228.8</td>
</tr>
<tr>
<td>1987</td>
<td>28.0</td>
<td>2,286.7</td>
<td>2004</td>
<td>665.1</td>
<td>8,090.7</td>
</tr>
<tr>
<td>1988</td>
<td>16.8</td>
<td>2,349.5</td>
<td>2005</td>
<td>1,409.0</td>
<td>8,925.4</td>
</tr>
<tr>
<td>1989</td>
<td>*1.0-</td>
<td>2,425.4</td>
<td>2006</td>
<td>2,516.2</td>
<td>11,093.1</td>
</tr>
<tr>
<td>1990</td>
<td>26.7</td>
<td>2,760.9</td>
<td>2007</td>
<td>1,861.7</td>
<td>12,590.6</td>
</tr>
<tr>
<td>1991</td>
<td>*8.4-</td>
<td>2,958.0</td>
<td>2008</td>
<td>2,008.5</td>
<td>16,111.5</td>
</tr>
<tr>
<td>1992</td>
<td>28.9</td>
<td>3,610.5</td>
<td>2009</td>
<td>2,009.0</td>
<td>17,815.6</td>
</tr>
</tbody>
</table>

Source: Department of Statistics, 2009

*Negative values*