

## International Journal of Innovative Research in Science, Engineering and Technology

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# The Role of Foreign Investment in the ASE in Financing the Balance of Payments Deficit 2003-2016

Yousef Ali Mahmoud Al Hayek<sup>1</sup>, Somayya Khaer Allah Omar Alshareef<sup>2</sup>

Ph.D Student, Department of Commerce, Osmania University, India<sup>1</sup>

Master in Clinical Pharmacy, Jordan University of Science And Technology, Jordan.<sup>2</sup>

**ABSTRACT:** The aim of this study is to identify the effect of foreign direct and indirect investment in the Amman Stock Exchange on financing the deficit in the balance of payments in Jordan. Here, the Jordanian government had to adopt new and innovative economic policies to find alternative sources of finance to address the deficit and imbalances in the economy in order to bridge the gap between scarce local resources and the required investments. The Jordanian government is directed towards attracting foreign investments or multinational companies as a solution to the economic problem. Therefore, the importance of this research is to exemplify the efforts and policies adopted by the government of Jordan to improve the investment environment and attract more foreign investments to Jordan. The data for this study was collected by relying on the annual reports of the Jordan Investment Promotion Agency (JIC) which is located in Jordan, the Central Bank of Jordan reports and the Amman Stock Exchange reports for financial and statistical analysis over a period of time i.e. from 2003 to 2016

The data was analyzed through the statistical analysis program SPSS using a set of tests, including the test of multi linear regression analysis and the natural distribution of the hypothesis and the research was tested using R<sup>2</sup>. The application of the regression equation shows the effect of foreign direct and indirect investment on the balance of payments the study

$$\text{LnBOP}_t = \alpha_0 + \beta_1 \text{LnFDI}_t + \beta_2 \text{LnFII}_t + \varepsilon_t$$

The underlying motives behind FDI and FII are quite different. FDI is made to achieve some strategic objectives. FDI may be in the form of investment in equity, joint venture or establishing business units in host countries. On the contrary, FII is, usually, made in secondary market and the underlying motive behind FII is to gain on short-run changes in security prices. So, FII is comparatively more unstable and it may result in huge outflow of foreign currency. The results of the analysis clearly indicate that FII has negative impact on the BOP of the country As the FII flows have negative impact on the BOP; the regulatory framework relating to FII should be strengthened so that FII cannot give rise to deficit in BOP. Government policy towards FDI should be more encouraging so that more amount of FDI can be attracted to the country, while FDI has positive impact. Hence, the FDI contributes to positive balance of BOP account and thereby, helps in strengthening the currency value of Jordan.

The study recommends that the Jordanian government should provide facilities to encourage and attract foreign investment and facilitate investment of these companies in order to achieve the objectives of economic growth. There is a need to take necessary measures to implement clear and specific development economic policies to manage deficit financing and the development of methods of measurement and follow-up to achieve economic security. Hence, the state should consider bringing these investments to put these benefits in their calculations to work in their territories. If these investments are useful for their economy, they have to provide suitable environment for the investment of institutions depending on the political conditions, social security and legal organization. It needs

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integration to attract foreign investments such as tax exemptions and the establishment of free regions and achieving economic performance that eventually leads to high economic growth rate.

**KEYWORDS:** Amman Stock Exchange, Investment, balance of payments deficit

## I. INTRODUCTION

Investment is the tool and the means for economic development. It is the main engine of the development process. The phenomenon of economic integration has worked to merge the world into a single capital market and these investments in the economies of developing or developed countries intend to increase investments and raise the efficiency of one of the important foundations. It is one of the most important in resulting in high rates of economic as well as social growth along with increase in production

Investment is an economic activity originating from the national savings base whether it is owned by individuals, institutions, public or private enterprises in a developing country. Investment leads to increased production and therefore represents expenditure on the production of productive goods such as machinery, transport and new buildings. It also plays a vital role in economic development. Its importance lies in a number of issues, the most important of which are as follows: Increase in productivity and production which leads to increased national income and thus increasing the per capita income thereby improving the standard of living of the population, Provides job opportunities and reduces the unemployment rate, Increases rates of capital formation of the country, The country gets access to hard foreign currencies through the export of goods and thus it has positive impact on the balance of payments.<sup>1</sup>

Foreign investment plays a major role in the balance of payments and through the ability of these investments the flow of international capital and the competition between countries attracts much of these flows.

The subject of foreign indirect investment is one of the topics that have received wide attention by researchers as it represents one of the main forms of capital flows around the world. This type is also called Foreign Investment Portfolio (FPI) which is derived from foreign investment in investment portfolios.

The foreign investment in the securities portfolio relates to the movement of medium and long-term capital between the different countries of the world and the purchase of some securities of shares and bonds of institutions.

This investment gives the investor the right to share the profits of the companies that issued the shares. However, unlike direct investment, investors do not have control rights or participation in the management of these companies. In foreign indirect investment, investment takes two forms i.e. the purchasing of foreign shares of the company or giving loans to the company or the government in the form of bonds or treasury bills the foreign investor purchases. The foreign indirect investment is also the possession of securities of shares and bonds held by the investor in order to distribute risk and achieve a combination of investment to achieve short-term or long-term profits if there is an increase in long-term value.<sup>2</sup>

Foreign Direct Investment (FDI) is defined as the type of investment that occurs when a stable investor in the native country has an asset or assets in the receiving country with the intention of managing that asset or assets.<sup>3</sup> This means that there is a flow of capital for export. Foreign direct investment differs from investment in securities. The first involves the foreign investor's ownership of part or all of the investments in the project as well as participating in the management of the project with the national investor in case of joint investment. Also the transfer made by the foreign investor of a quantity of financial and technological resources expertise in the various areas to the host countries.

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While the second type of investment involves the acquisition of securities by individuals and legal persons without exercising any kind of supervision or participation in the organization and management of the investment project. Investment in securities is generally a short-term investment compared to foreign direct investment.<sup>4</sup>

Economic globalization can be defined as the liberation of existing economic relations between states from national policies, institutions and the conventions governing them by the automatic submission of new forces that were brought about by technical and economic developments which are restructured, organized and revitalized naturally throughout the world as a single unit.<sup>5</sup>

Economic globalization has received considerable attention recently, as it has become the basis of international conventions and under the control of some developed countries; the world economy is transformed into globalization. The world is transformed into a single global market where the capitalist system is restored to its dominance and national economies are linked to the world economy, trade liberalization, Services, capital and market opening. Economic globalization is meant to spread economic values such as economic freedom, opening up markets, leaving prices for supply and demand and above all non-intervention by governments in economic activity and linking the economy of developing countries to the global economy. This phenomenon reflects increased capital flow and allows capitalists to raise more money.<sup>6</sup>

The globalization of the universe and the accompanying development of means of communication and technology have resulted in a negative or positive impact on all countries. Economic globalization has received considerable attention recently, as it has become the basis of international conventions and under the control of some developed countries; the world economy is transformed into globalization. The world is transformed into a single global market where the capitalist system is restored to its dominance and national economies are linked to the world economy, trade liberalization, Services, capital and market opening. Economic globalization is meant to spread economic values such as economic freedom, opening up markets, leaving prices for supply and demand and above all non-intervention by governments in economic activity and linking the economy of developing countries to the global economy. This phenomenon reflects increased capital flow and allows capitalists to raise more money.<sup>7</sup>

Today, the networks of multinational companies are dominating a large and growing share of global marketing, technology and productive resources.<sup>8</sup>

It uses a multinational term or global companies to describe a company that operates in an integrated manner in a number of countries. The emergence of a new and radically different form of international trade has increased its business which has led to a significant increase in economic and political interdependence throughout the world. Multinational corporations have made their direct investments integrated i.e. from extracting raw materials through their classification process to distribute to consumers around the world. Today, the networks of multinational companies are dominating a large and growing share of global marketing, technology and productive resources.<sup>9</sup> A multinational company is one of the most important economic phenomena of the 20th century.<sup>10</sup>

## II. STUDY METHODOLOGY

The methodology of the study is based on descriptive analytical method in describing the phenomenon by explaining the concepts and clarifying the importance and fields of foreign direct and indirect investment and mentioning the economic determinants of foreign direct and indirect investment. The study also relies on the standard method to determine the effect of foreign direct and indirect investment on deficit financing in balance payments in Jordan.

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## III. PROBLEM OF THE STUDY

The problem of the study is the inadequacy and availability of local financial resources necessary for economic development and development in most Arab countries, forcing them to resort to foreign resources to bridge the gap in domestic resources, especially dependence on external foreign investment. Investments and capital transfers are the result of the problem of the lack of capital needed to achieve economic and social development along with the scarcity of foreign exchange. It is as well the failure of the policy of resorting countries to borrow from within or from the International Monetary Bank or international banks. There is also inadequacy in achieving the development adopted in developing countries in addition to the serious effects on the national economy due to the problem of indebtedness resulting in full dependence, most of the countries are unable to pay off their debts, difficulties, obstacles and political risks to foreign investment coming to these countries which may provide growth in the economies of these countries.

### The Importance of Study:

The Jordanian government had to adopt new and innovative economic policies to find alternative financial sources to address the deficit and imbalances in the Jordanian economy and to bridge the gap between scarce domestic resources and the required investments. The Jordanian government is directed towards attracting foreign investment or multinational companies as a solution. The economic problem is therefore the importance of research in the efforts and policies adopted by the Jordanian government to improve the investment environment and attract more foreign investment to the Jordanian economy. Therefore, the state that is considering bringing these investments should put these benefits in their calculations to work in their territories. If these investments are of interest to their economy, they should provide the investment environment for political, social, security and legal systems to attract foreign investments such as tax exemptions and the establishment of free zones to achieve economic performance that ultimately leads to a high rate of economic growth.

### Objectives of the Study:

- 1) This study aims to achieve the following objectives:
- 2) To identify the impact of foreign direct investment in financing the balance of payments deficit in Jordan.
- 3) To identify the impact of foreign indirect investments in financing the balance of payments deficit in Jordan.

### Scope of Study:

This study is applied in the Hashemite Kingdom of Jordan due to the positive role of foreign investment in influencing the financing of the balance of payments deficit, in addition to Jordan's interest in developing the financial sector, which necessitated the search for the reasons of growth of the financial sector through attracting investment during the period (2003 to 2016), depending on the availability of data.

### Study Society:

In light of the objectives of the study, the study community consists of the Amman Stock Exchange, the Central Bank of Jordan and the Investment Promotion Corporation.

### Study variables:

Depending on the literature of the study, the study variables are as follows:

Dependent variable is limited to the balance of payments in Jordan during the study period. Independent Variables are the volume of foreign direct and indirect investment.

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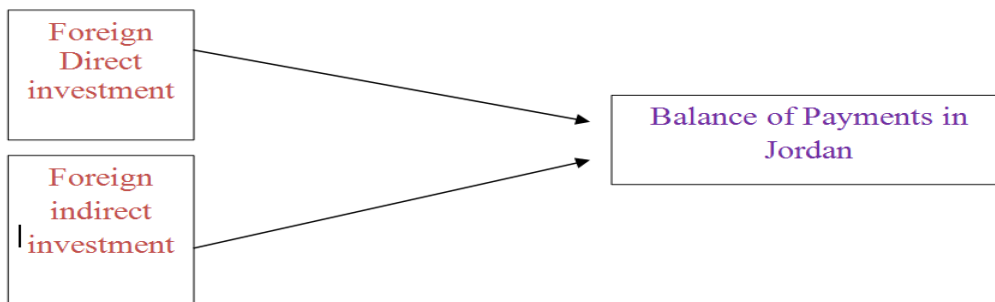
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## Study Model:

### Independent variables

### Dependent variable



## Data Collection and Duration:

The data for this study were collected by relying on the annual reports of the Jordan Investment Promotion Agency, the Central Bank of Jordan and the Amman Stock Exchange reports for the purposes of financial and statistical analysis, over a period of time from 2003 to 2016 using a set of statistical tests.

## Tools and Measures:

For the purposes of proving or denying the validity of research hypotheses, the first method of financial analysis will be based on the study of the trends (horizontal analysis) of the dependent variable and the independent variables. The statistical analysis will also be used to calculate the correlation coefficient (R), which determines the strength and nature of the relationship between independent and dependent variables, (R<sup>2</sup>), which shows the effect of the variable or independent variables on the dependent variable. In order to reach the goal of search, the Simple linear regression factor (B) is to study the effect of independent variables on the dependent variable, using the Statistical Package in Social Science (SPSS).

## Study Hypothesis:

First hypothesis:

H1: There is a statistically significant impact of foreign direct investment on the financing of the balance of payments deficit in Jordan.

H0: There is no statistically significant impact of foreign direct investment on the financing of the balance of payments deficit in Jordan.

The second main hypothesis:

H1: There is a statistically significant impact of foreign indirect investment on financing the deficit in the balance of payments.

H0: There is no statistically significant impact of foreign indirect investment on financing the deficit in the balance of payments.

## Previous Studies:

Foreign direct investment has an impact on the economies of both industrialized and developing countries. This is why many researchers at the global and local levels have undertaken studies on this relationship by economic growth in general and by the impact of foreign investments on the balance of payments in Jordan. Some of these studies are as such:

- 1) Hil Ajami Jamil study (2002) entitled "Foreign Direct Investment in Jordan - its size and determinants" was conducted as a statistical study on the factors affecting foreign direct investment and the efforts of the Jordanian government in attracting foreign investments. This is due to the unstable political and economic conditions in the

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- region and GDP being the largest factor attracting foreign investment. The researcher recommended the need to provide the appropriate political and economic conditions to attract foreign direct investment.<sup>11</sup>
- 2) Study of the investment promotion institution in Jordan (2001), entitled "Investment environment in Jordan and Egypt", where the survey of the views of a random sample of (30) field investors who have established investment projects in Egypt and identified the reasons that prompted them to invest. 66.6% of the sample confirmed that the investment promotion laws in Jordan can be classified as excellent and good. . The study recommended the need to simplify the formal customs and improvement of tax and provide the necessary infrastructure for the establishment of projects and avoid the constant change in investment laws.
  - 3) In the Study of Sarmad (2003) entitled "Foreign Direct Investment in the Arab Countries and the Race of Competition". The researcher studied the phenomenon of foreign direct investment in the Arab countries and evaluated the positive and negative effects of these investments. Reached the conclusions The researcher stressed the importance of direct and indirect cost faced by a particular country, especially in the field of environmental pollution as a result of foreign investment.
  - 4) The study of Shari'ah (2006), "The Role of FDI in the Arab Manufacturing Movement", using the analytical descriptive method, concluded that foreign direct investment has a negative impact on the countries as a result of exploiting the economic resources available to them for foreign countries.<sup>12</sup>
  - 5) Ghassan Issa Al-Omari (2009) in his entitled "Moral dilemmas and their impact on the decline of the objectives of the operations of multinational companies" speaks about the problem of the study and the existence of the ethical dilemmas of multinational companies that intersect with their business and affect the decline in the objectives of their operations on one hand and the ethical practices that should be integrated with the objectives of their operations and achieve positive results for their work on the other. The impact on the decline in the objectives of the operations of multinational companies has reached the following highlights: Some multinational companies have carried out many immoral practices in their work and their environment by violating laws sometimes or circumventing them at other times and violating human rights polluting the environment. The study recommended companies to adopt institutional governance mechanisms and regulatory citizenship. The researchers also recommended conducting more analytical field studies in Jordan and the Arab world on the subject of the study. The study used descriptive research methodology.<sup>13</sup>
  - 6) According to Munther Jaber Mohammed (2009) entitled "The importance of the Jordanian government's efforts in economic reform and liberalization of trade exchange in attracting foreign investments to Jordan ", the Jordanian government has taken a number of measures and economic policies to address the internal and external challenges facing the Jordanian economy as a result of the lack of financial resources required to meet the needs of domestic demand, increase in population growth rates and increase in external indebtedness, which led to major structural imbalances in the Jordanian economy. Economic and Social Development were the new measures and policies of the Jordanian government for adoption of economic reform programs and their measures to meet demand, stimulate supply and stimulate domestic and foreign investment.<sup>14</sup>
  - 7) As per Ahmed Abdul-Aziz, Jassim Zakaria, Firas Abdul-Jalil Al-Tahhan (2011) entitled "Multinational Companies and Their Impact on Developing Countries", Multinational companies are the most expressive forms of globalization of the economy because of their enormous physical and human resources which extend to the various countries of the world. They diversify their activities to the production, trade, services, finance and international banking sectors in order to distribute risks and diversify profit sources. With a view to extending its influence and tightening its control over the business sectors of the world, taking advantage of the achievements of scientific and technological progress led to the decline of the role of the state in front of these companies. The phenomenon of world in the field of development, especially developing countries which are exploiting their natural resources and interference in their internal affairs and damaging their environment<sup>15</sup>.
  - 8) In the study of Abdullah, Habab al-Tom Sharafi, Abdul Azim Suleiman Mahal, there is the impact of inflation and exchange rate in the balance of payments. The study aimed to analyze the impact of inflation and exchange rate on the balance of payments in Sudan during the period 2002 to 2013. The study used the descriptive analytical method. The SPSS program reached a number of results, the most important of which is that the

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stability of inflation rates and exchange rate positively affected the balance of payments in Sudan and vice versa. The high inflation rates and the low exchange rate of the Sudanese pound negatively impacted during the study period. The study recommended that inflation be reducing through low inflation policies and deflationary policies by reducing public spending. It also recommended encouraging production to address balance of payments imbalances by increasing exports and reducing imports as much as possible. It also recommended stabilizing the exchange rate by providing foreign currency and by encouraging foreign capital to invest in Sudan.

- 9) The study of Hufbauer aimed at showing the effect of: economic openness, population and growth rate of output on the flow of foreign investment from Germany, America and Japan for the years 1980, 1985 and 1990. The study found that the population factor is the most important and influential factor. 1% increase in the population leads to the increase of foreign investment by more than 1%.<sup>16</sup>
- 10) The study of (Chung, 1995), entitled "The Role of Foreign Direct Investment in China in 1978" aimed at analyzing the size and structure of the distribution of foreign investment flowing to China and its impact on development during the period 1973-1993. There was a positive relationship between the rate of growth of foreign investments and a negative relationship between the rate of growth of domestic savings and the growth rate of foreign investments.<sup>17</sup>
- 11) The study of Balasubramanyam aimed at analyzing the impact of foreign direct investment on economic growth during the period (1970-1985) for a sample of (46) developing countries where these countries were classified into two groups: the first group followed the export policy and the second group is the countries that adopted the import substitution policy. The study reached resulted in understanding a positive role of foreign direct investment in the countries that followed the export policy countries that have pursued import substitution policy.<sup>18</sup>
- 12) This study of Sayek selin showed the relationship between inflation and foreign direct investment. The researcher pointed out that the increase of inflation by 3% in Canada will lead to a decrease in inflation, US foreign direct investment in Canada will decline by 2% and domestic US investment will increase by 1%. If Turkey's inflation rate increases by 7%, US investments in Turkey will drop by 1.9% and US domestic investment will increase by 0.3%.<sup>19</sup>
- 13) (Henrik H and John, R, 2006), "On the Causal Links between FDI and Growth in Developing Countries" found that the direction of one-way negative relationship of GDP to FDI is due to the fact that the state must increase GDP before attracting foreign direct investment. This means that foreign direct investment needs to provide appropriate conditions such as stability Political, financial market development and skilled labour to attract direct investment.<sup>20</sup>

## Theoretical Framework

The balance of payments represents the basic and structured record of all economic transactions between governments, citizens and local institutions of a country with a representative of a foreign country during a given period, usually one year. This also includes:

1. Current Account: This account includes two types of balances i.e. (a) the trade balance which is called Trade Visible that includes all exports and imports of goods only (b) Service Balance which includes services transactions.
2. Account Transfer Unilateral: Includes donations, grants, gifts, assistances and any other transfers, whether official or private.
3. Capital Account (and capital operations): The capital movement is comprised of two types: (a) Long-term capital: Over one year, such as long-term loans, direct investments, buying securities (shares and bonds) or

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selling them from and abroad. (b) Short-term capital: These are not more than one year, such as foreign currencies, bank deposits and short-term securities.

4. The balance of gold and foreign exchange is the balance in which net financial and monetary transactions are reflected in the previous accounts.
5. A paragraph of error and errors: This paragraph is used for the purpose of balancing the balance from a mathematical point of view.

### Surplus and Deficit in the Balance of Payments:

The parties of the current account balance are rarely equal and there may even be surplus and revenues that may exceed payments or there may be a deficit (due to increased payments on revenues).

First: The surplus in the balance of payments results in the existence of a foreign exchange surplus in the State in which it acts in one of the following ways:

- a) It is Increase required making its demand for foreign goods and services.
- b) This surplus is lent to or invested in a foreign country
- c) A reserve of its reserves of gold and foreign exchange.

Second: Balance of Payments deficit the state using the following policies to address short-term balance of payments deficits.

- a) There is an attempt to attract deposits from abroad. The disadvantage of this policy is that the state may have to pay high interest on loans and depositors may withdraw their money suddenly, exposing the country's banking system to danger.
- b) In the long run, the state may resort to using these policies. With the devaluation of the currency, national exports appear to be cheaper for foreign buyers. In contrast, foreign goods become more expensive so they tend to buy more from local sources and buy less from abroad, which will increase exports and reduce imports.<sup>21</sup>

### Considerations taken by the Jordanian government to attract foreign investment:

- 1) The nature of the economic system adopted by Jordan, where Jordan adopts an economic system based on the free economy.
- 2) Jordan's accession to the World Trade Organization .
- 3) Harmonization with the economic changes emerging in the international arena.
- 4) The difficult and complex economic conditions experienced by most third world countries, including Jordan, to encourage foreign investment, and create a balance between population growth and economic growth rates in the country.
- 5) Jordan's initial and urgent desire to integrate into the global economy, This goal can only be achieved by opening up to foreign investment.
- 6) Jordan's urgent need to support some international institutions and organizations to build its economy to open their doors to foreign investment.
- 7) Jordan aims to encourage the private sector to play a leading role in serving the Jordanian national economy, in the development process in general and in ways that are far from bureaucratic.
- 8) To obtain modern technology and bring in advanced expertise in the fields of industry so that Jordan can join the developed world.<sup>22</sup>

### The efforts of the Jordanian Government in Economic Reform:

The adoption of economic and economic reform programs is a set of measures aimed at removing distortions in the economic structure and achieving economic performance that ultimately leads to a high rate of economic growth. Jordan's new economic policy has focused on the following: Liberalization of foreign trade, revitalizing domestic and



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foreign investment, trying to reduce the relative importance of external debt to GDP, Creating the appropriate environment for the economic activities of the private sector.<sup>23</sup>

### Ten Reasons to Invest in Jordan

First: The strategic location. Second: a stable political environment. Third: Free economic market. Fourth: Exemptions to encourage investment. Fifth: Access to global markets. Sixth: Availability of free zones and industrial cities. Seventh: Availability of qualified and competitive human resources. Eighth: Infrastructure and communication system at a high level. Ninth: Attractive Investment Environment. Tenth: Availability of modern means of life.<sup>24</sup>

### Balance of Payments and Foreign Direct and Indirect Investments:

Table 1  
Balance of payments and foreign direct and indirect investments received by Jordan for the period (2003-2016).

Year	Jordan Balance of Payments (in millions)	Foreign direct investment (in millions)	Foreign indirect investment (in millions)
2003	6564.3	314.2	281.1
2004	7827.5	578.8	380.3
2005	7519.6	1257.8	1562.2
2006	9837.6	2282.5	1995.1
2007	9705.4	1301.3	2825.3
2008	14737.7	2005.7	4219.6
2009	12341.2	1713.3	2135.4
2010	12937	1172.1	1036.6
2011	15325.2	1043.0	555.8
2012	15829.8	1099.3	322.9
2013	16486.6	1382.2	939.5
2014	17783.5	1546.7	362.7
2015	10370.5	1136.2	981.7
2016	14653.9	1092.6	666.5

Source: Annual Report of the Central Bank of Jordan for 2009.<sup>25</sup>

### Analytical Framework of the Study:

At the outset, behaviour of the three variables viz., BOP, FDI and FII has been studied by using charts and descriptive statistics. Next, the impact of FDI and FII on financing the deficit in the Balance of Payments (BOP) has been analyzed by constructing a regression model wherein natural log values of BOP is dependent variable and natural log values of FDI and FII are independent variables. The following regression model has been used in the study.

$$LnBOP_t = \alpha_0 + \beta_1 LnFDI_t + \beta_2 LnFII_t + \varepsilon_t$$

In the above equation,  $LnBOP_t$  is natural log values of BOP;  $\alpha_0$  is the constant in the regression model;  $LnFDI_t$  is natural log values of FDI and  $\beta_1$  is its estimate;  $LnFII_t$  is natural log values of FII and  $\beta_2$  is its estimate;  $\varepsilon_t$  is error term. The properties of Classical Linear Regression Model (CLRM) have been established by testing the normality, autocorrelation and heteroscedasticity of the residuals.

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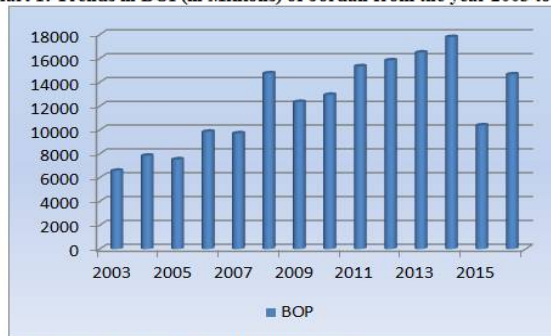
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## IV. RESULTS OF THE ANALYSIS

Chart 1: Trends in BOP(in Millions) of Jordan from the year 2003 to 2016



Source: Data Compiled from Central Bank of Jordan

Chart 1 shows the trends in BOP of Jordan from 2003 to 2016. Till the year 2007, the BOP was less than 10000 millions. In the year 2008, unprecedented increase in the BOP was witnessed and it was followed by fall in BOP in the years 2009. Though, there was an increase in BOP in the year 2010, it was marginal. From the year 2011 to 2014, continuous rise in BOP can be observed. However, the year 2015, had witnessed phenomenal fall in BOP and it reached to 10,000 million and it was followed by substantial rise in BOP in the year 2016. The BOP in the year was more than 14,000 millions.

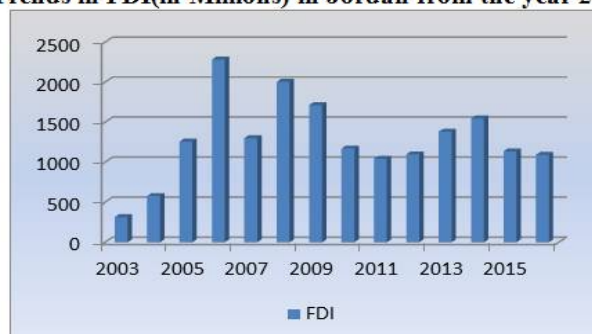
Table 1: Descriptive Statistics of BOP(in Millions) [N=14]

Mean	12,279.986	Skewness	-0.145
Median	12,639.100	Kurtosis	-1.357
Std. Deviation	3,651.816	Minimum	6,564.300
Coefficient of Variation(CV)	28.893	Maximum	17,783.500

Source: Data Compiled from Central Bank of Jordan

Table 1 shows the descriptive statistics of the Balance of Payments (BOP) of Jordan from the year 2003 to 2014. The descriptive statistics reveal that average BOP is 12,279.986 millions and standard deviation is 3,651.816 millions. The CV value discloses that ratio of standard deviation to mean is 28.89 percent. Skewness of the distribution of BOP is negative which highlights that majority of the observations are greater than the mean value. Kurtosis of the distribution of BOP values is platykurtic. Minimum BOP was reported in the year 2003 and maximum value was reported in the year 2014.

Chart 2: Trends in FDI(in Millions) in Jordan from the year 2003 to 2016



Source: Data Compiled from Central Bank of Jordan

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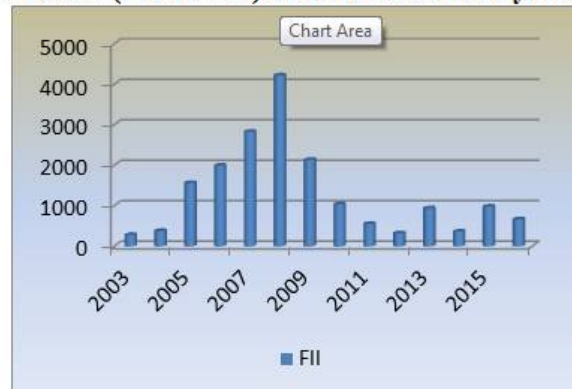
Chart 2 shows the trends in FDI from the year 2003 to 2016. The FDI was very low in the year 2003. Moderate increase in FDI can be observed in the year 2004. But, the years 2005 and 2006 witnessed unprecedented increase in FDI. In the year 2006, it crossed 2,000 millions. The year 2007 witnessed substantial fall in the FDI to 1301 millions which was marginally more than that in 2005. In the years 2008, FDI flow was closer to 2000 millions. But the year 2009 experienced considerable fall in FDI. However, still it was more than 1500 millions. From the year 2010 to 2012, it was closer to 1000 millions. Considerable increase in FDI flows can be observed in years 2013 and 2014 followed by considerable decline in the same in the years 2015 and 2016.

Mean	1,280.407	Skewness	0.143
Median	1,214.950	Kurtosis	0.579
Std. Deviation	510.100	Minimum	314.200
Coefficient of Variation	41.985	Maximum	2,282.500

**Source: Computed from Data Compiled from Central Bank of Jordan**

Table 2 shows the descriptive statistics of the Foreign Direct Investment (FDI) to Jordan from the year 2003 to 2014. The descriptive statistics reveal that average FDI is 1280.407 millions and standard deviation is 510.10 millions. The ratio of standard deviation to mean is 41.985 percent. Skewness of the distribution of FDI is positive which highlights that majority of the observations are lower than the mean value. Kurtosis of the distribution of FDI values is platykurtic. Minimum FDI was reported in the year 2003 and maximum value was reported in the year 2016.

**Chart 3: Trends FII (in Millions) in Jordan from the year 2003 to 2016**



**Source: Data Compiled from Central Bank of Jordan**

Chart 3 presents the trends in FII flows to Jordan from the year 2003 to 2016. The FII flows were very low in the years 2003 and 2004. From the year 2005 to 2008, there was exponential rise in the FII flows. However, in the year 2009, there was substantial fall in the same and decreasing trend was continued till 2012. Though, the years 2013 and 2015 had witnessed considerable rise in FII flows, it was less than 1000 millions only. The years 2014 and 2016 experienced considerable decline in FII flows.

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Statistic	Value	Statistic	Value
Mean	1,304.621	Skewness	1.478
Median	960.600	Kurtosis	1.999
Std. Deviation	1,146.003	Minimum	281.100
Coefficient of Variation	119.301	Maximum	4,219.600

Source: Computed from Data Compiled from Central Bank of Jordan

Table 3 shows the descriptive statistics of the Foreign Indirect Investment (FII) to Jordan from the year 2003 to 2014. The descriptive statistics disclose that average FII is 1,304.621 millions and standard deviation is 1,146 millions. The ratio of standard deviation to mean is 119.30 percent. It clearly indicates that deviations in FII flows are greater than that of FDI. Skewness of the distribution of FDI is positive which highlights that majority of the observations are lower than the mean value. Kurtosis of the distribution of FII values is platykurtic. Minimum FII was reported in the year 2003 and maximum value was reported in the year 2008.

### Comparison of the trends in FDI and FII

**Chart 3: Comparison of Trends in FDI and FII (In Millions)**

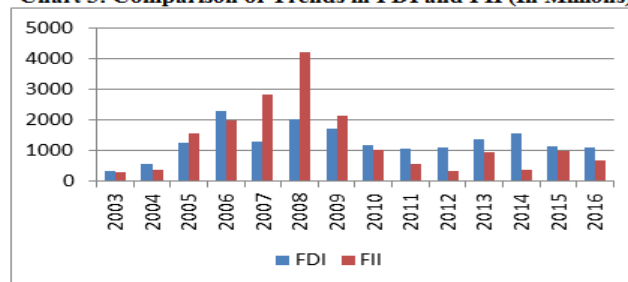


Chart 3 shows the comparison of trends in FDI and FII. In the years 2003 and 2004, FII flows were less than FDI flows. However, the difference was marginal in the year 2003. In the year 2005 and 2009, FII flows were moderately higher than the FDI flows. In the year 2006, FII flows are moderately lower the FDI flows. In the years 2007 and 2008, the FII flows substantially higher than the FDI flows. From the year 2010 to 2016, FII flows were lower than the FDI flows. However, the years 2012 and 2014 had witnessed substantial difference in the flows of FDI and FII.

**Table 4: Impact of FDI and FII on the BOP of Jordan**

Parameter Estimation [OLS Method] - DV : LN(BOP)					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
LN_FDI	0.679517	0.173789	3.910004	0.0024	1.92
LN_FII	-0.277064	0.100651	-2.752725	0.0188	1.92
Constant	6.466661	0.901990	7.169329	0.0000	
Model Summary					
R-squared	0.581625		Log likelihood		2.635784
Adjusted R-squared	0.505557		F-statistic		7.646106
S.E. of regression	0.226134		Prob(F-statistic)		0.008291

Source: Computed from Data Compiled from Central Bank of Jordan

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Table 4 shows the results of regression analysis carried out under the framework of ordinary least squares (OLS). BOP with natural log values is taken as dependent variable and natural log values of FDI and FII are the predictors in the model. The results indicate that FDI has significant positive impact ( $p < 0.05$ ) while FII has significant negative impact ( $p < 0.05$ ). The coefficient value of FDI is 0.6795 which indicates that 1% increase in FDI leads to 0.6795% increase in BOP. The coefficient value of FII is -0.2771 which indicates that 1% increase in FII inflows leads to 0.2771% decrease in BOP.

The VIF values for both the predictors are less than '5' which signifies that there is no multicollinearity problem in the model. In other words, FDI and FII are not strongly correlated. The R-squared value is 0.58. It indicates that 58% of the variations in BOP can be explained by the present regression model. F-statistic of the regression model is 7.646 and it is statistically significant ( $p < 0.05$ ). It points out the significant predictability of the regression model.

**Table 5: Diagnosis of the Residuals Obtained from the OLS Regression**

Testing Normality of the Residuals			
Skewness	-0.69037	Jarque-Bera	1.186262
Kurtosis	2.643394	Probability	0.552594
Testing Autocorrelation in the Residuals- [ Breusch-Godfrey Serial Correlation LM Test:]			
F-statistic	1.770603	Prob. F(2,12)	0.2247
Obs*R-squared	3.953119	Prob. Chi-Square(2)	0.1385
Testing Heteroscedasticity in the Residuals- [Heteroskedasticity Test: Breusch-Pagan-Godfrey]			
F-statistic	1.596228	Prob. F(1,14)	0.2462
Obs*R-squared	3.149166	Prob. Chi-Square(1)	0.2071
Scaled explained SS	1.597484	Prob. Chi-Square(1)	0.4499

Source: Computed from Data Compiled from Central Bank of Jordan

The diagnosis of the residuals has been performed to ensure that the regression model maintains the properties of 'classical linear regression model (CLRM)' and consequently, it produces Best Linear Unbiased Estimate (BLUE).

Jarque-Bera test has been employed to test the normality of the residuals. The test results confirm statistically that the residuals are normally distributed ( $p < 0.05$ ). Breusch-Godfrey Serial Correlation LM Test results reveal that residuals are free from autocorrelation. Finally, Breusch-Pagan-Godfrey test results disclose that residuals are homoscedastic.

As all the three required properties of the CLRM are maintained for the residuals obtained from the OLS model, the estimates derived from the model are best, linear and unbiased. It highlights the better validity of the results.

## Final Findings

In the present study, a modest attempt has been made to examine the impact of FDI and FII flows in financing the deficit of the BOP of Jordan. For this purpose, BOP is regressed on FDI and FII. Results bring to light the fact that FDI has negative impact while FII has positive impact on the BOP. The validity of the results has been confirmed by the results of residual diagnosis test.

## IV. CONCLUSION

1. There is a statistically significant impact of foreign direct investment on the financing of the balance of payments deficit in Jordan. The FDI has positive impact. Hence, the FDI contributes to positive balance of BOP account and thereby, helps in strengthening the currency value of Jordan.

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2. There is no statistically significant impact of foreign indirect investment on financing the deficit in the balance of payments. That FII has negative impact on the BOP of the country.
3. The FDI contributes to positive balance of BOP account and thereby, helps in strengthening the currency value of Jordan.

### Recommendations:

1. The host countries should facilitate the investment of these companies in order to achieve the objectives of national economic growth.
2. All obstacles and difficulties faced by multinational corporations by governments must be overcome.
3. Multinational companies must be protected from political risks by holding agreements at the state or global level.
4. Host countries should benefit from the expertise of these multinational companies in many aspects of technology and economy.
5. Host countries must provide incentives and facilities to encourage and attract foreign investment.
6. The Jordanian government should undertake more promotional, marketing and promotional measures at home and abroad in a continuous and periodic manner, with the objective of introducing the environment, advantages and incentives available to Jordan in attracting foreign investment.
7. The importance of periodic review of the modernization and development of investment promotion laws in Jordan in particular is needed so as to suit the current situation of increasing its competitiveness in attracting foreign investments.

The study presented several recommendations based on the results of the study, the most important of which was that the government should support and encourage the establishment of industrial cities throughout the Kingdom, to give industrial export sectors customs and tax exemptions to increase their production. Conducting feasibility studies for new projects with a view to focusing on projects that serve the national economy is recommended, in addition to encouraging leading foreign companies in the field of manufacturing to open branches within the industrial cities in order to transfer advanced technology to the local industry.

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