# Policy, market size, trade openness & natural resources endowment impact on foreign direct investments; A Meta-analysis of MENA Oil Producing Countries

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## **Keywords:**

Foreign Direct Investments, Market Size, Trade Openness & Natural Resources

#### **Abstract**

**Purpose:** To assess the impact of policy, market size, trade openness & natural resources endowment on foreign direct investments in MENA countries. **Methods:** Meta-analysis has been incorporated that has combined data from multiple studies. It has systematically assessed the results of previously conducted researches for obtaining accurate results. The study has incorporated incomplete and unbalanced data from 17 MENA countries between the years 1960 and 2012.

The data was obtained from World Development Indicators, World Bank, and Energy Information Administration. **Results:** The results have identified that oil reserves have a negative influence on FDI inflows. Trade openness was positive and significant at 5%. Similarly, the impact of market size, measured as GDP constant, was also positive and significant at 10%. **Conclusion:** It has been evaluated that market size, trade openness, and natural resource have a positive impact on foreign direct investments among MENA countries. **Originality Statement:** The study is based on certain factors for assessing their impact on FDIs. Such originality has a closer relevance to assess market size, trade openness and natural resources among oil producing countries.

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### Introduction

Foreign Direct Investment (FDI) is considered as a significant source for funding capital projects in the economies of different countries. FDI is defined as the capital that is provided by an investor for acquiring long-term interest in the venture (Bekhet & Al-Smadi, 2014; Mottaleb & Kalirajan, 2010). FDI is responsible for the constitution of largest source of capital flows, and has gained significant importance as compared to trade. FDI has decreased due to unstable economic climate over the period 1980-2003, mainly after 9/11 incident. However, there was approximately 450% increase in the real world FDI flow (Abbott and De Vita, 2011). It also plays a significant role in economic growth of the developing countries that have limited capital investment and resources, which greatly influence their economy. Specifically, FDI generates increased levels of productivity through stimulation of economic growth, technology, capital, and skills (Mottaleb & Kalirajan, 2010). In developing countries, FDI is favored as it results in higher exports, substitution of bank loans, rich source of finance, and access to international markets and currencies.

The higher levels of productivity can be achieved through stimulation and economic growth by attracting maximum inflow of FDI. The technological advancements, capital, and skills also contribute to achieve high productivity level (Mottaleb & Kalirajan, 2010). The maximum inflow of FDI within a country renders various positive outcomes. For instance, it facilitates access to technological advancements and skills, entry to global markets, and respond to different market opportunities through FDI from multinational enterprises (MNEs). FDI is encouraged in developing countries by providing incentives to MNEs. This initiative is usually taken by the policymakers within the country, and it positively affects the host

countries by the establishment of different companies or plants within the country (Bekhet & Al-Smadi, 2014; Denisia, 2010).

Various researches have been conducted to evaluate the determinants of FDI, role of firm heterogeneity in affecting choice of foreign entry mode, and growth enhancing effects of FDI (Mottaleb & Kalirajan, 2010; Bekhet & Matar, 2013). However, limited attention has been given to the exchange rate regimes that influence the flow of FDI between different countries. Therefore, this study has investigated the influence of various factors including policy, market size, trade openness, and natural resources endowment on FDI.

Many countries solved problems of modernization of national economies by means of foreign direct investments (FDI). Foreign investments have played a certain role in economic growth of many countries of Asia, Latin America, and Africa. FDI does not only change the technological profile of national economies. They allow to receive modern corporate management, stable tax payments to generate a segment of the national market of qualitative production and to receive an export gain. Foreign investments as a resource are limited, segmented on the countries considering risks; therefore, between the states there is a competition for their flow. The so-called investment climate became a competition, which conditioned the entry and exit of the capital (percentage and no percentage incomes), presence of natural and labor forces, a tax press, preferences from the state, home market capacity, currencies volatility, etc.

So, developing economy actively uses FDI in reception of modern technologies. For countries with natural resources (for example, oil-extracting), it is a certain exchange of "the natural factor" on a hi-tech profile of those branches, which can make a diversified national economy portrait.

The present study focused on the analysis of influence of macroeconomic and natural factors, as policy, market size, trade openness and natural resources on FDI flow. The study has shown high correlation of the first group of these factors and FDI and low to the second. The object of research is the MENA countries during 1960–2012. Research leans against World Bank statistics, International Energy Agency, and modern scientific researches. It suggested that positions and article conclusions are correct and it is possible to agree with them.

FDI significantly contributes towards the promotion of competitiveness among local firms. In MENA countries, the introduction of FDI may help in building strong association with different countries, international corporations, and international monetary agencies. It would also help in advancement of new technologies by gaining expertise in managing production, transport, market expansion, communication network, and employment. Likewise, in MENA countries, the access to natural resources and foreign direct investment is considered as a significant factor.

The flow of foreign direct investment in MENA countries is resource seeking. Therefore, the study has aimed to analyze the policies, market size, trade openness, and natural resources endowment, which have impact on foreign direct investments among the MENA oil producing countries.

#### **Theoretical Framework**

FDI is considered as an important factor that is positively associated with achievement of global strategic targets and market opportunities through multinational enterprises (Denisia, 2010). It not only benefits the country through increase in the amount of capital in host country, but it also imposes spillover effects that are beneficial for the host developing countries (Bekhet & Matar, 2013).



Figure 1: Theoretical Framework representing Benefits of Foreign Direct Investment

Figure 1 has described the features of foreign direct investment, which includes the introduction to new processes, easy access to markets, effective international production networks, efficient employee training and new jobs, advanced managerial skills and transfer of technology. It is important to investigate the association between FDI and its determinants in the developed host countries. A bi-directional casual association has been found between short-run and long-run FDI inflows and employment in manufacturing sector (Wong & Tang, 2010; Bekhet & Al-Smadi, 2014). Moreover, a study conducted by Sethi et al. (2003) investigated the association between FDI inflow and its determinants by using wages, political stability, gross national product, economic stability, and cultural influence as independent variables. The results revealed that all the independent variables are positively associated with flow of FDI within the country. There are various reasons that guard the entrance of firms into a particular market including:

- Resource related factors
- Market related factors
- Seeking efficiency

The major factor for restrained FDI flow can be related with financial and economic instability within the host country. This instability induces an uncertainty within the country, which may distort the perception of investors towards future profitability (Bekhet & Al-Smadi, 2014). The main attraction of FDI within a country is the industrial sector, private enterprises, and industrial free zones. The agricultural, transport, health, tourism, and building sectors are also responsible for attracting maximum FDI inflow. The understanding of FDI trends and its determinants is necessary, as it is an important part of investment. The examination of relationship between flow of FDI within the country and its determinants including unemployment rates, economic freedom, and per capita income revealed significant association between FDI and its determinants (Pearson et al., 2012).

The relationship between FDI and its determinants prevailing in host countries has been investigated by Seetanah and Rojid (2011). The study evaluated the determinants of FDI including, economic openness, market size, TAX, labor cost and educational level; however, the results showed positive association between the determinants of FDI and its flow within the country. Another study conducted by Kok and Ersoy (2009) investigated different determinants of FDI in the developing countries. The study utilized fixed effect model for the analysis of FDI determinants including; total debt, trade, inflation, and electric power consumption. However, the results depicted positive association between the determinants, excluding the electric power consumption and inflation rate. The electric power consumption and inflation were investigated to impose negative impact on the FDI inflow (Kok & Ersoy, 2009).

The MENA countries can attract maximum foreign investment by MNEs (Multinational Enterprises) through advancement in technology, gaining new expertise in management, expansion of markets, production benefits, and efficient communication networks. The flow of FDI within a country related to natural resource-rich countries is mostly comprised in the natural resource sector. Moreover, the exploration of natural resources in a country needs a large capital and cash inflow (Asiedu & Lien, 2011).

As far as the features of FDI inflows are concerned in the MENA regions, the regional cross border investments are of great importance. Since 2000, FDI has served as the main factor of regional economic integration. It has been strengthened much rapidly than trade and it is cross-cutting the regions in a manner that trade has never been organized and managed. The development and growth has been pronounced specifically since the year 2005, but it has been observed highly irregular. During the past years, the massive excesses in oil producing countries accumulated in the sovereign wealth funds. More than one-third part in the region was intra-MENA concerned with FDI.

# Methodology

Meta-analysis approach has been used, which has combined the data from multiple studies. It has systematically assessed the results of previously conducted researches for obtaining accurate results. The theoretical base for association between FDI and its determinants depend on the institutional dimension, location dimension of Dunning, and new theory trade. Moreover, the study has incorporated incomplete and unbalanced data from 17 MENA countries (Table 1.A Appendix) between the years 1960 and 2012. The study has utilized the rate of inflation of consumer prices in percentage, as it is considered among significant control variables for FDI inflow (Onyeiwu & Shrestha, 2004).

The trade openness was measured as the sum of exports and imports and expressed in percentage of real GDP to assess the impact of trade opened on FDI. The annual data was obtained from different sources including; World Development Indicators, World Bank, and Energy Information Administration. The macro-economic variables used as determinants of FDI are market size, inflation, real interest rate, economic growth, and real exchange rate. The analysis of the study is carried out by adopting FDI inflow regression approach as a function of independent variables. The occurrence of natural resources within a country has been used to analyze the investment profile, which helped in evaluating the effect of natural resources and investment profile on FDI inflow.

The model of international capital redistribution (*V.Leontieff model*), characterizes functioning of two groups of the countries, which includes developed and developing, donors and recipients. Communication of the countries has been carried out not only by means of a trade turnover, but also by mutual flows of investments. With reference to the developed and emerging economy, it is reduced to two parities that include the principles of the multiplier and accelerator. The combination of these principles allows defining influence on GDP investments, norm of accumulation (investment), and gain (accelerator) investments. Two models for the donor and the recipient to define streams, volumes of investments.

The second method used was the *P. Welfens and P. Jasinski*, which estimates the influence of FDI on GDP considering the saved up foreign capital, sizes of export, degree of development of market institutes, weight of the import goods in GDP, scales and a level of development of local fixed capital, labor.

The third model reflects the interaction of local and foreign investments, their mutual influence, cooperation, and division of labor. The model allows to consider weight, a role of foreign sector in a branch, which is divided in several indicators, including volume and rates of manufacture, the relation of rates of foreign and local manufacture, share FDI in a total volume of investments, a gain of foreign and local investments, a share of investments in GDP, elasticity of rates of increase of GDP.

## **Results and Discussion**

The study has used baseline estimation model and econometric methodology, which was completely based on the literature review. Empirical models were formulated to address the main objectives effectively. A major macroeconomic variable determinant was included in regards of FDI for developing and developed countries, which included market size. The study has further extended the empirical model by including natural resources and investment profile; therefore, it can be said that the focus of this research is twofold. Initially, the study has analyzed the significance of natural resources, while controlling other variables; and secondly, the study has also analyzed the effects of natural resources on foreign direct investment. Based on such aspects, the study has modeled FDI inflows as a function of trade openness and natural resources, as presented in equation 1.

FDIIN 
$$_{it}$$
 =  $\alpha_o$  +  $\beta_1$ TRADE  $_{it}$  +  $\beta_2$  NATURAL RESOURCES  $_{it}$ 

In the above equation, FDIIN is net inflows as a percentage of (GDP) gross domestic products and is the dependent variable. The independent variables are TRADE as % of GDP in the natural logarithm form; and Natural Resources that employ five measures, which are:

- The share of fuel in total merchandise exports in natural logarithmic form
- Oil rents % GDP
- Oil production in thousands of barrels per day
- Oil reserves in billions of barrels per day
- Oil production in millions of barrels per day relative to oil reserves in millions of barrels per day

In accordance with the findings, fuel is used as the measure of natural resources; however, oil rents are used as the alternative measure of natural resources in models 3 and 4. The study has measured the impact of market size on FDI. The study has measured that there was a positive and significant relationship at 1% in models 1 and 2; similarly, it was also positive and significant at 5% in models 3 and 4. Such findings have supported by the past studies, conducted by Hisarciklilar et al, (2014) and Asiedu, (2013). Thus, MENA countries with large markets size have the capability to attract more FDI.

The study has also developed fixed effect results, which have been presented in Table 1. It has been evaluated that the main significant variables were included as oil production, which was at 5% in the first model and had a negative impact. Such findings were in contrast with Dunning's (1980) hypothesis,

which explained that oil resources usually attract natural resource-seeking FDI. However, the extracted outcomes were in line with Asiedu and Lien (2011) that explained that energy reserves in MENA countries are dominated by state-owned entities. The findings have further indicated that the oil reserves are commonly used as a proxy for natural resources. These results have identified that oil reserve is the second common approach as a proxy for natural resources that has a negative influence on FDI inflows. Rogmans and Ebbers (2013) have suggested that oil-rich countries did not encourage foreign direct investment in MENA countries. However, such countries have better financial resources and foreign currency, which is preferred through contractual arrangement and licensing as compared to share foreign investment in terms of natural resources.

Table 2 presents the random-effects GLS without any interaction between investment profile as a proxy for institutional quality and oil as a proxy for natural resources. It has been evaluated that trade openness was positive and significant at 5%. The findings have suggested that countries with higher GDP are associated with increased FDIs. A diverse range of past studies have supported such outcomes (Blonigen, 2005; Hisarciklilar et al. 2006). The results have confirmed that natural resources and trade openness are the main determinants of FDI in MENA countries. Similarly, different types of natural resources have been observed in the study. The findings also suggested that diverse effects were noted on foreign direct investment in regards of natural resources among MENA countries.

The Durbin-Wu-Hausman Test, which was used in the study, allowed the comparison of the models of different hypotheses estimated by different methods. A zero hypothesis-model factors are erogeneity along with the external factors, which are predetermined. Alternative are endogenous; whereas, the internal factors essentially influence economy development, industrial-technological, commercial activity.

| Regressor                      | (1)       | (2)       | (3)       | (4)                                     | (5)                                     | (6)       |
|--------------------------------|-----------|-----------|-----------|---|---|-----------|
|                                | 2.210*    | 0.507     | 1.240     | 0.429                                   | 0.754                                   | 0.390     |
| Ln TRADE                       | (0.070)   | (0.791)   | (0.314)   | (0.827)                                 | (0.509)                                 | (0.848)   |
| OIL (production)               | -0.002**  | -0.0004   |           |   |   |           |
|                                | (0.045)   | (0.239)   |           |   |   |           |
| OIL (reserves)                 |           |           | -0.046    | -0.016*                                 |   |           |
|                                |           |           | (0.105)   | (0.066)                                 |   |           |
| OIL (relative_production)      |           |           |           |   | -109.99                                 | -105.63   |
| :                              |           |           |           |   | (0.316)                                 | (0.338)   |
| Ln GDP                         | 5.953**   | 5.441**   | 5.575**   | 5.138**                                 | 5.384**                                 | 5.132**   |
|                                | (0.027)   | (0.013)   | (0.031)   | (0.010)                                 | (0.033)                                 | (0.012)   |
| INFLATION                      | 0.0787*   | 0.088**   | 0.0713    | 0.083**                                 | 0.067                                   | 0.077**   |
|                                | (0.086)   | (0.027)   | (0.118)   | (0.025)                                 | (0.148)                                 | (0.028)   |
| INFRASTRUCTURE                 |           | -0.0360   |           | -0.028                                  |   | -0.051    |
|                                |           | (0.687)   |           | (0.745)                                 |   | (0.601)   |
| HUMAN CAPITAL                  | 0.039     |           | -0.047    |   | -0.046                                  |           |
| (Education)                    | (0.313)   |           | (0.247)   |   | (0.255)                                 |           |
| INSTITUTION                    | 0.213     | 0.120     | 0.206     | 0.107                                   | 0.214                                   | 0.103     |
| (Investment profile)           | (0.397)   | (0.585)   | (0.431)   | (0.616)                                 | (0.429)                                 | (0.636)   |
| CONSTANT                       | -147.26** | -132.54** | -135.30** | -124.94**                               | -129.98**                               | -125.04** |
|                                | (0.024)   | (0.013)   | (0.029)   | (0.011)                                 | (0.031)                                 | (0.013)   |
| Collinearity diagnostics (VIF) |           |           |           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |           |
| TRADE                          | 3.17      | 2.43      | 3.16      | 2.40                                    | 2.91                                    | 2.22      |
| OIL (production)               | 2.21      | 2.25      |           |   |   |           |
| OIL (reserves)                 |           |           | 1.90      | 2.05                                    |   |           |
| OIL (relative production)      |           |           |           |   | 1.16                                    | 1.04      |
| GDP constant                   | 3.47      | 3.28      | 3.06      | 2.84                                    | 2.09                                    | 1.65      |
| INFLATION                      | 1.56      | 1.45      | 1.52      | 1.45                                    | 1.49                                    | 1.45      |
| INFRASTRUCTURE                 |           | 1.54      |           | 1.55                                    |   | 1.60      |
| HUMAN CAPITAL                  | 1.85      |           | 1.88      |   | 2.12                                    |           |
| (Education)                    |           |           |           |   |   |           |
| INSTITUTION                    | 1.67      | 1.62      | 1.70      | 1.64                                    | 1.71                                    | 1.63      |
| (Investment profile)           |           |           |           |   |   |           |
| Mean VIF                       | 2.32      | 2.09      | 2.20      | 1.99                                    | 1.91                                    | 1.60      |
|                                | .=        |           |           |   |   |           |
| N. Observations                | 194       | 266       | 190       | 262                                     | 189                                     | 261       |
|                                | '         |           |           |   |   |           |
| N. Countries                   | 14        | 15        | 14        | 15                                      | 13                                      | 14        |
| F test                         | 4.59**    | 20.14***  | 10.31***  | 13.84***                                | 5.04***                                 | 16.51***  |
|                                | (0.0102)  | (0.000)   | (0.0003)  | (0.0000)                                | (0.0085)                                | (0.0000)  |
| Hausman test                   | 11.29*    | 16.25**   | 6.92      | 11.98*                                  | 13.68**                                 | 27.43**   |
| Hudshidh cese                  | (0.0797)  | (0.0125)  | (0.3285)  | (0.0625)                                | (0.0334)                                | (0.0001)  |

 Table 1: Inward FDI Percentage of GDP, Panel Analysis, Country Fixed-Effects (Model Model Based on Correlation Matrix). Impact of Oil Production, Oil Reserves, and Oil Relative Production

| Regressor                                       | (1)                                       | (2)   | (3)                                       | (4)                                       | (5)  | (6)   |
|---|---|---|---|---|--|---|
| Ln TRADE  | 2.638**<br>(0.044)                        | 1.466                                       | 2.256*<br>(0.074)                         | 1.354                                     | 3.548**                                    | 2.40*                                       |
| OIL (production)                                | -0.001*<br>(0.099)                        | (0.388)<br>-0.0006<br>(0.158)               | (0.074)                                   | (0.427)                                   | (0.016)                                    | (0.098)                                     |
| OIL (reserves)                                  | (0.033)                                   | (0.130)                                     | -0.0370<br>(0.112)                        | -0.027**<br>(0.029)                       |  |   |
| OIL (relative_ production)                      |   |   |   |   | -161.03<br>(0.209)                         | -98.01<br>(0.299)                           |
| Ln GDP  | 4.640**<br>(0.011)                        | 3.003***<br>(0.009)                         | 4.019***<br>(0.009)                       | 2.88*** (0.003)                           | 1.404***<br>(0.000)                        | 0.564<br>(0.161)                            |
| INFLATION                                       | 0.071*<br>(0.0.088)                       | 0.088** (0.018)                             | 0.063<br>(0.117)                          | 0.083**<br>(0.012)                        | 0.054<br>(0.165)                           | 0.072**<br>(0.024)                          |
| INFRASTRUCTURE                                  |   | 0.0297<br>(0.708)                           |   | 0.040<br>(0.611)                          |  | 0.010<br>(0.870)                            |
| HUMAN CAPITAL (Education)                       | -0.093<br>(0.321)                         |   | -0.029<br>(0.329)                         |   | -0.009<br>(0.597)                          |   |
| INSTITUTION<br>(Investment profile)<br>CONSTANT | 0.285<br>(0.313)<br>-118.88**<br>(0.010)  | 0.292<br>(0.258)<br>-78.91**<br>(0.013)     | 0.298<br>(0.320)<br>-103.21***<br>(0.009) | 0.258<br>(0.301)<br>-75.21***<br>(0.007)  | 0.437<br>(0.214)<br>-50.04***<br>(0.001)   | 0.384<br>(0.173)<br>-25.51*<br>(0.094)      |
| N. Observations                                 | 194                                       | 266   | 190                                       | 262                                       | 189  | 261   |
| N. Countries                                    | 14  | 15  | 14  | 15  | 13   | 14  |
| Wald Chi2<br>Hausman test                       | 30.13***<br>(0.000)<br>11.29*<br>(0.0797) | 26.61***<br>(0.0002)<br>16.25**<br>(0.0125) | 34.85***<br>(0.000)<br>6.92<br>(0.3285)   | 48.74***<br>(0.000)<br>11.98*<br>(0.0625) | 47.46***<br>(0.000)<br>13.68**<br>(0.0334) | 36.37***<br>(0.0004)<br>27.43**<br>(0.0001) |

 Table 2: Inward FDI Percentage of GDP, Panel Analysis, Country Random-Effects (Model Model Based on Correlation Matrix). Impact of Oil Production, Oil Reserves, and Oil Relative\_Production

| Regressor                                  | (1)        | (2)       | (3)               | (4)                | (5)               | (6)              |
|--|------------|-----------|-------------------|--------------------|-------------------|------------------|
|  | 2.305*     | 1.357     | 2.089             | 1.281              | 3.656**           | 2.38             |
| Ln TRADE                                   | (0.069)    | (0.421)   | (0.112)           | (0.460)            | (0.020)           | (0.112)          |
| OIL (production)                           | 0.001      | -0.001*** |                   |                    |                   |                  |
| Oll (magazines)                            | (0.574)    | (0.007)   | 0.024             | -0.030             |                   |                  |
| OIL (reserves)                             |            |           | (0.418)           | (0.010)            |                   |                  |
| OIL (relative production)                  |            |           | (0.416)           | (0.010)            | 181.96            | -48.31           |
| OIL (Telative_ production)                 |            |           |                   |                    | (0.506)           | (0.782)          |
| Ln GDP                                     | 4.312***   | 3.366***  | 4.004***          | 3.053***           | 1.411***          | 0.610            |
| EII ODI                                    | (0.006)    | (0.000)   | (0.004)           | (0.001)            | (0.000)           | (0.155)          |
| INFLATION                                  | 0.073*     | 0.084**   | 0.073             | 0.0824**           | 0.055             | 0.072**          |
|  | (0.089)    | (0.031)   | (0.101)           | (0.026)            | (0.169)           | (0.025)          |
| INFRASTRUCTURE                             |            | 0.022     |                   | 0.036              |                   | 0.011            |
|  |            | (0.767)   |                   | (0.641)            |                   | (0.867)          |
| HUMAN CAPITAL                              | -0.031     |           | -0.032            |                    | -0.009            |                  |
| (Education)                                | (0.279)    |           | (0.273)           |                    | (0.592)           |                  |
| INSTITUTION                                | 0.482      | 0.205**   | 0.459             | 0.231              | 0.454             | 0.385            |
| (Investment profile)                       | (0.167)    | (0.557)   | (0.177)           | (0.507)            | (0.212)           | (0.188)          |
| INTERACTION3                               | -0.0002    | 0.00003   |                   |                    |                   |                  |
| (Investment profile*production)            | (0.219)    | (0.446)   |                   |                    |                   |                  |
| INTERACTIONA                               |            |           | 0.006             | 0.0003             |                   |                  |
| INTERACTION4                               |            |           | -0.006<br>(0.129) | -0.0003<br>(0.882) |                   |                  |
| (Investment profile*reserves) INTERACTION5 |            |           | (0.129)           | (0.002)            | -55.55            | 0.10             |
| (Investment profile*relative               |            |           |                   |                    | -55.55<br>(0.388) | -8.10<br>(0.848) |
| production)                                |            |           |                   |                    | (0.300)           | (0.648)          |
|  | 111 61444  | 06 27**   | F2                | 70.00*             | E 0 70 444        | 26.54            |
| CONSTANT                                   | -111.61*** | -86.27**  | -52.55***         | -78.69*            | -50.79***         | -26.54           |
|  | (0.006)    | (0.002)   | (0.004)           | (0.003)            | (0.002)           | (0.101)          |
| N. Observations                            | 194        | 266       | 190               | 262                | 189               | 261              |
| N. Observations                            | 194        | 200       | 190               | 202                | 109               | 201              |
| N. Countries                               | 14         | 15        | 14                | 15                 | 13                | 14               |
| Wald Chi2                                  | 27.90***   | 220.48*** | 52.70***          | 144.68***          | 100.69***         | 432.33***        |
|  | (0.0002)   | (0.000)   | (0.0000)          | (0.0000)           | (0.0000)          | (0.0000)         |
| Hausman test                               | 21.47***   | 15.56**   | 12.26*            | 9.68               | 15.20**           | 27.72***         |
|  | (0.0031)   | (0.0164)  | (0.0923)          | (0.2072)           | (0.0188)          | (0.0001)         |

 Table 3: Inward FDI Percentage of GDP, Panel Analysis, Country Random-Effects (Model Based on Correlation Matrix). Impact of Oil Production, Oil Reserves, and Oil Relative\_ Production with Interaction

Table 3 presents oil production, which is relative to the oil reserves in regards of natural resources. The empirical outcomes have shown that oil production had negatively influenced FDI inward at 1%. However, trade openness was positive and significant at 5%. Increasing trade openness by 1% increased foreign direct investment in MENA countries by 2.30%. At the same time, the impact of market size, measured as GDP constant, was also positive and significant at 10%. Therefore, it can be said that market

size, trade openness, and natural resource have a direct impact on foreign direct investments among ME-NA countries.

The influence of natural resources changes in MENA countries on the inflow of FDI. The natural resources like oil reserves, oil production, trade, oil, GDP, inflation, infrastructure, institutions, and human capital may negatively influence the FDI inflow. The fuel exports are probable to attract the maximum FDI in MENA countries. The significant determinants in MENA countries, associated with FDI are trade openness, GDP, market size, inflation rate and investment profile. It is measured with the institutional quality and the type of resource examines the influence of investment profile on FDI. According to a study by Khayat (2017) there is negative association between the inward flows and fuel exports of FDI in MENA countries. The importance of natural resources has also been highlighted and it has been suggested that the liberalization policy measures must be implemented in MENA countries along with the implementation of privatization program.

## **SWOT Analysis**

Economic growth and macroeconomic stability are important and essential factors for the promotion of economic development. The most important indication for the corporate as well as foreign investors are those that influence their balance sheet directly, such as inflation, GDP, population growth and the toll of education.

| Strength   | Weaknesses                                     |
|--|--|
| • Investment in resources is a valuable opportu-   | Lack of safety and peace                       |
| nity for foreign investors                         | Low income per capita                          |
| There are favorable geographical locations in      | Weak financial sector                          |
| most regions                                       | Problems for foreign investors due to informal |
| The competition is relatively low in resident      | economy  |
| firms, so it is easier to promote the firm.        | •  |
| Opportunities                                      | Threats  |
| Central and local government can create oppor-     | Competition of neighboring countries           |
| tunities of foreign investors                      | Scarcity of economic stability                 |
| Foreign investors can invest in all sectors of the | Instability of safety and laws                 |
| economy  |  |
| Rebuilding infrastructure                          |  |

## Conclusion

This study has assessed the empirical determinants in regards of FDIs, using panel data from 17 MENA countries over the period 1960–2012. Findings have suggested that different types of natural resources have diverse range of impacts on foreign direct investment in MENA countries. Regarding the impact of explanatory variables, the findings have shown that trade openness and institutional quality are important determinants of IFDI, depending on the models used. Therefore, these results have suggested that natural resources undermine the positive effects of investment profiles on foreign direct investment flows.

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Appendix

Table 1.A: MENA Countries chosen for the study analysis

|  | MENA Countries       |
|--|----------------------|
| 17 MENA Countries that are recruited in the  | Algeria              |
| study to evaluate policy, market size, trade | Djibouti             |
| openness & natural resources endowment       | Egypt                |
| impact on Foreign Direct Investments         | Iran                 |
|  | Iraq                 |
|  | Jordan               |
|  | Kuwait               |
|  | Lebanon              |
|  | Libya                |
|  | Morocco              |
|  | Oman                 |
|  | Qatar                |
|  | Saudi Arabia         |
|  | Syria                |
|  | Tunisia              |
|  | United Arab Emirates |
|  | Yemen                |