The Effect of Foreign Direct Investment on Domestic Investment: Evidence from MENA Countries

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ABSTRACT

The relationship between foreign direct investment (FDI) and domestic investment is a controversial issue in the economic literature. One of the main debates is whether FDI crowds in or crowds out domestic investment. On one hand, by creating spillover effects, FDI may lead to new or higher amounts of domestic investment where it would not be possible in the absence of FDI, thus have a "crowding in" effect. On the other hand, due to the loss of competitiveness of the domestic firms, increase in the level of interest or adverse knowledge spillovers, FDI carries a risk of crowding-out for domestic investment. In this paper, the relationship between FDI and domestic investment in the MENA region will be explored for the post-1980 period through panel data analysis. The data used for FDI and domestic investment are inward FDI flows to the region and gross capital formation, respectively. In addition to these main variables, control variables such as trade shares and gross domestic product together with their lagged values as instrumental variables are used in the panel analysis. Beyond analyzing the relationship for the whole region, MENA countries will be examined in specific groups according to their natural resource abundance.

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1. INTRODUCTION

Foreign direct investment (FDI) has grown in importance and spread rapidly through the world economy since the 1980s. Following the surge of the FDI to the developing economies and the rise of the economic existence and power of multinational corporations (MNCs) in these countries, the question whether it is to the interest of the receiving countries to devote their domestic resources to the MNCs and using FDI as a development strategy has been widely discussed. One major controversial issue on the effects of FDI on host country is whether FDI inflows crowd in or crowd out domestic investment. The impacts on domestic investment after opening up to FDI inflows may vary depending on the domestic investment environment and the previous trade regime of the host country. FDI could crowd out domestic investors those who cannot compete with more efficient and technologically more superior MNCs and had operated under a heavily protected trade regime for a long time. On the other hand, FDI could crowd in domestic investment by generating spillovers through the diffusion of new technologies and forward or backward production linkages.

In this paper, the relationship between FDI and domestic investment is examined for selected countries in the Middle East and North Africa (MENA) region for the period 1980-2008. Using dynamic panel GMM techniques, the model is estimated for three country groups; all selected countries, oil-rich and oil-poor countries. The data used for FDI and domestic investment are the share of inward FDI flows in GDP and the share of gross fixed capital formation (GFCF) in GDP, respectively. In addition to these main variables, some control variables such as the share of total trade in GDP and logarithms of GDP levels of countries are used in the analysis.

2. BACKGROUND

2.1 Theoretical Background

The emergence of FDI as a force for integration in the global economy dates back to the nineteenth century. Following a slowdown of international capital flows in the first half of the twentieth century, FDI started to grow in the post-war period due to the need for reconstruction of countries around the world. The 1970s witnessed lower FDI flows, but the trend for liberalization and globalization led to an increase of FDI after the 1980s. Still, the most significant rise in FDI flows took place in early 1990s; annual worldwide FDI flow rose to more than $200 billion after 1992, while it was about $55 billion in the early 1980s. This rising trend continued after the 1990s, except for a fall between 2000 and 2004, reached $1.97 trillion in 2007, starting from mid 2008 decreased due to the global economic crisis to $1.2 trillion in 2009, and recovered in 2010 and 2011 to $1.5 trillion (UNCTAD, 2012). According to A. Mody, the surge of the worldwide FDI flows after the 1990s "was a major transformation reflecting both the push of investors seeking high return opportunities and the pull from developing countries seeking needed investment and technology" (Mody, 2007: 3).

The academic discussion on the possible positive and negative impacts of FDI on the growth, productivity, domestic investment, employment structure, balance of payments, international trade flows and technology of the receiving country rarely created concerns on policy-makers on the potential risks of FDI inflows, and after the early 1990s "the use of locational incentives to attract FDI has considerably expanded in frequency and value" (UNCTAD, 2003: 203). Countries designed or implemented FDI-attracting policies in order to use their resources more effectively or to make use of the idle resources that are not

currently in use and with the motivation of improving the competitive structure of the domestic economy, creating employment, making use of higher technologies or reaching world markets. Still, countries usually had two concerns related to FDI they will welcome. The first was the fear that the amount, the type, and the use of transferred resources by FDI may benefit less than an alternative way of resource allocation. Secondly, they were anxious that the foreign firms operating in the country will have more bargaining power than the domestic firms (Dunning, 1981).

Beyond these concerns, there is also a debate on whether FDI crowds in or crowds out domestic investment. According to the crowding in hypothesis, FDI is supposed to "crowd in" domestic investment as incoming FDI would lead to new or higher amount of domestic investment where it would not be possible in the absence of FDI. Since Romer's (1993) paper on endogenous growth model, it has been widely accepted that the introduction of new goods to the economy has an important role on development. Thus FDI is assumed to contribute to the capital formation of the host country through introducing new goods and technologies.

The question whether FDI inflows crowd in or crowd out domestic investment is answered by examining the effect on gross fixed capital formation, which is comprised of foreign and domestic investments in physical capital. If there is one dollar increase in gross fixed capital as a result of a one dollar increase in FDI, this means that domestic investment remains unchanged and FDI's influence is neutral. If this one dollar increase in FDI leads to more than one dollar increase in total capital formation, "crowding in" occurs through the stimulation of domestic investment. If, on the contrary, one dollar increase in FDI decreases the total capital formation or if the increase in total investment becomes smaller than the increase in FDI, "crowding out" occurs (Agosin and Machado, 2005).

Crowding in of domestic investment as a result of receiving FDI generally occurs when foreign investment generates spillovers to the domestic economy. As Borenzstein et al.

(1998) argue, such spillovers occur because foreign investments lower the costs of adopting new technologies, which in turn enhances the rate of growth. FDI may also generate demand for specialized inputs, thus increasing the marginal productivity of investments in those inputs.

Gallagher and Zarsky (2007) classify the channels for the crowding in effect as follows. There may be backward linkages that are formed through the provision of inputs to foreign investors by local firms. Forward linkages can be formed as a result of the provision of goods and services by foreign firms in order to be used as efficiency-enhancing inputs by domestic industries. Crowding in may occur due to knowledge spillovers from multinational firms to domestic firms that gain access to new technologies and tacit knowledge. Finally, multiplier effects can be observed when FDI enters the host country. An example of such effects could be that foreign investors raise the number of people employed in the host country thereby increasing local spending on domestically produced goods and services, which is favorable for domestic investors.

On the other hand, crowding out of domestic investment might occur in several ways. Domestic firms may not be as competitive as foreign investors since foreign companies may be more efficient or may form oligopolies and sell at cheaper prices than domestic firms. Multinational firms usually have access to global product and capital markets whereas domestic firms have to rely on domestic markets. Foreign investors may raise interest rates when they borrow on domestic financial markets, which results in the crowding out of domestic firms. Furthermore, foreign investors can bring about adverse knowledge spillovers if they start "hiring domestic entrepreneurs and skilled workers away from domestic firms" (Gallagher and Zarsky, 2007: 25). If FDI enters the sectors in which domestic producers were operating, FDI may take advantage of the investment opportunities that were only available to domestic producers prior to the foreign investments (Agosin and Machado, 2005: 151).

2.2 FDI in the MENA Region

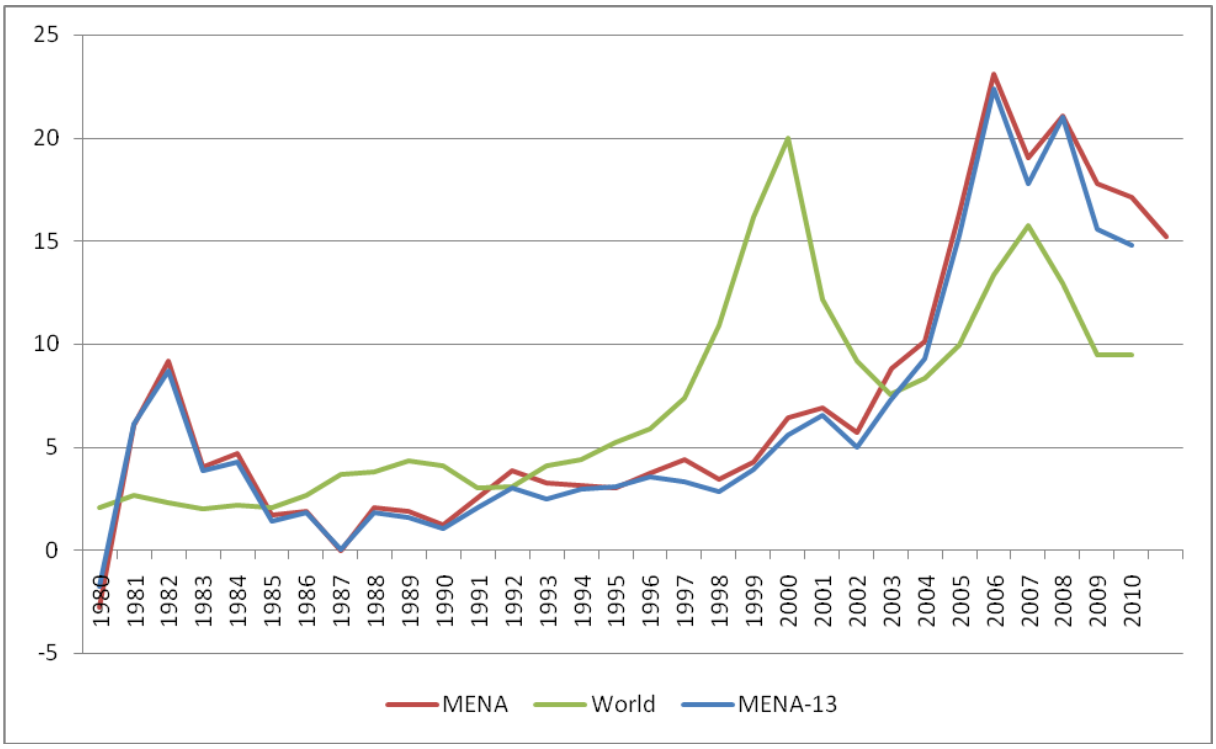
Before 2000, the MENA region had attracted only a small part of the global FDI flows to developing countries. The connection of the region with global investment and production chains was insufficient and the role played in the region's economies by FDI and by trade in parts and components was very limited (Iqbal and Nabli, 2004). FDI inflows to the MENA countries fluctuated around $4 billion in the 1980s, then showed an upward trend in the 1990s, but the value did not exceed $10 billion before the year 2000. During the 1990s, the FDI represented an average of 0,9% of the GDP in MENA countries, against 2,5% in African countries, 3,8% in Eastern Asia and 4,5% in Latin America (Sekkat, 2004).

However in the 2000s, FDI inflow to the MENA region rapidly surged from $8.7 billion in 1999 to $62.3 billion in 2005 and to a record-high $125.2 billion in 2008, then due to the crisis a fall to $70 billion in 2011. This sharp increase in the FDI has mainly been related to the favourable business climate, open investment framework and rising investment opportunities in the region and the rise in investment demand and infrastructure expenditures caused by the high economic growth due to high oil prices. At the peak point of FDI to the region, in 2008, Saudi Arabia ($38.2 billion), Turkey ($19.5 billion) and the UAE ($13.7 billion) were the top three destinations in the region for FDI inflows in 2008. In 2011, this ranking did not change with $16.4 billion, $15.9 billion and $7.8 billion respectively.[1] Saudi Arabia and the UAE have received large amounts of FDI, mainly in energy and construction projects, and the increase in FDI to Turkey reflects mainly large-scale divestments and private sector mergers and acquisitions deals in the form of privatization (Siddiqui, 2009).

[1] All FDI data depend on UNCTAD FDI database (2012)

The following graphs present the FDI patterns in the entire MENA region, selected MENA countries and the world. Figure 1 shows the FDI inflows as a share of GFCF in the world, the whole MENA region and 13 MENA counties analyzed in this study[2], since 1980.

Figure 1: The share of FDI inflows in MENA, MENA13 and World



Source: Own calculation from World Bank, World Development Indicators and UNCTAD, FDI Database

In Figure 1, it is observed that the share of FDI inflows in GFCF follows a similar path in the whole MENA region and the selected MENA countries. The share has a decreasing trend between 1982 and 1987, whereas as it exhibits a gradually increasing trend after 1987. The sharp increase takes place after 2002, which is the year recorded as the turning point of FDI flows to the region. When the share of FDI inflows in GFCF is analyzed in the world, it

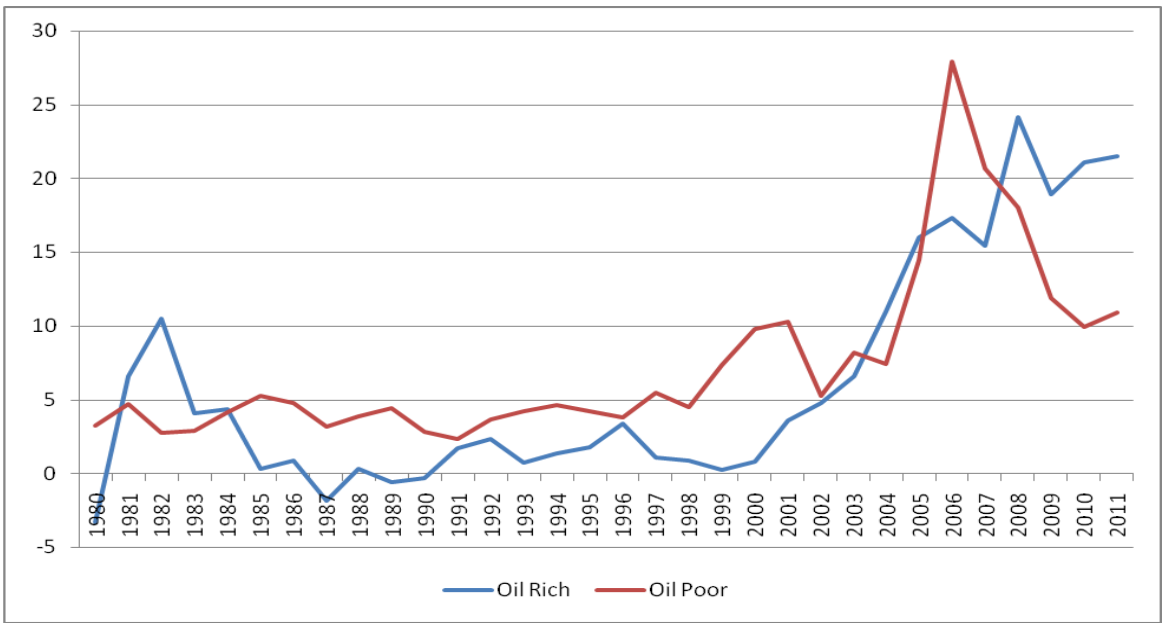
[2] Algeria, Bahrain, Egypt Arab Republic, Iran Islamic Republic, Israel, Jordan, Kuwait, Morocco, Saudi Arabia, Syrian Arab Republic, Tunisia, Turkey and the United Arab Emirates.

is apparent that there is little fluctuation until 1997. The share of FDI in the GFCF rises sharply between 1997 and 2000, from 7% to 22% within three years. This trend is followed by a fall until 2004, and then by another increasing trend from 2004 to 2007, where the share has reached 18.7% in 2007. The share of FDI in GFCF fell worldwide after the global crisis and currently recorded around the late-1990s level. The comparison of the MENA and MENA13 to the world statistics end up with the conclusion that the share of FDI in GFCF in MENA and MENA13 lies above the world share between 1981 and 1985. However this situation reversed between 1985 and 2004. After 2004, the figure indicates that the share of FDI inflow in GFCF in MENA and MENA13 exceed the world values.

After presenting the trends in the MENA region in comparison to the world patterns, Figure 2 provides the share of FDI inflows in GFCF for selected oil-rich[3] and oil-poor[4] countries. It is observed that the pattern of oil-rich countries starts with an increase between 1980 and 1982, followed by a decrease between 1982 and 1987. Between 1987 and 2000, a fluctuating pattern is recorded. The most striking change takes place in 2000 and the FDI share starts to increase dramatically from then on. Turning to the oil poor countries' pattern, it is observed that the percentage of FDI inflows in GFCF does not change strikingly between 1980 and 1988. After 1990, an increasing trend is observed until 2001, followed by a decrease from 2001 to 2002. 2004 is the year that the share of FDI inflows in GFCF starts to increase sharply. Comparison of the two patterns points out that the percentage share of FDI inflows in GFCF in oil poor countries is higher than that of oil rich countries. The exceptions for this observation are 1981-1984 and 2003-2005 periods.

[3] Algeria, Bahrain, Iran, Kuwait, Saudi Arabia, Syria and the United Arab Emirates
[4] Egypt, Israel, Jordan, Morocco, Tunisia and Turkey

Figure 2: The share of FDI inflows Oil Rich and Oil Poor Countries



Source: Own calculation from World Bank, World Development Indicators and UNCTAD, FDI Database

3. LITERATURE REVIEW

Studies concerning the effects of FDI on domestic investment have found results in both negative and positive directions. For example, Bosworth and Collins (1999) and Hecht, Razin and Shinar (2002) provide evidence for similar samples of developing countries that the effect of FDI inflows on domestic investment is significantly larger than either portfolio equity or loan inflows. Borensztein et al. (1998) test the effect of FDI on economic growth in a framework of cross-country regressions utilizing data on FDI flows from industrial countries to 69 developing countries for the period 1970-1990 and find results implying that FDI 'crowds in' domestic investment.

De Mello (1999) analyzes the impact of FDI on capital accumulation, output and total factor productivity growth in the recipient countries using panel data for both OECD and non-OECD country samples for the period 1970-1990. He finds "no time series evidence of linear

endogenous growth derived from FDI" for the OECD sample (de Mello, 1999: 137). He highlights that FDI has a twofold effect on growth. It is supposed to foster growth through capital accumulation in the recipient country due to "the incorporation of new inputs and foreign technologies in the production function of the recipient country". On the other hand, it stimulates knowledge transfers through labor training, skill acquisition and the introduction of new organizational forms, management techniques and so on.

Agosin and Mayer (2000) investigate the extent to which FDI in developing countries crowds in or crowds out domestic investment based on panel data for the years 1970-1996. They claim that if FDI crowds out domestic investment or fails to contribute to capital formation, then the benefits for recipient developing countries should be questioned. The econometric analyses conducted in this paper reveals that crowding out effect dominates in Latin America while the crowding in effect is the norm for Asia (and weaker in Africa) between 1970 and 1996.

Using a similar country set, Agosin and Machado (2005) test for crowding out or crowding in effects for the time period 1971-2000. They employ two ways of testing the relationship; one that uses current and lagged values of the growth rate and that takes FDI as an explanatory variable of domestic investment and one that uses a proxy for the difference between actual and full capacity output. They detect that FDI displaced domestic investment (crowding out) in Latin America and that FDI led to one-to-one increase in total investment in Africa and Asia in the chosen time period (which means that it did not have any impact on domestic investment in Africa and Asia). They observe crowding out of domestic investment in Africa in the 1990s.

Misun and Tomsik (2002) analyze whether FDI crowded in or crowded out domestic investment in the Czech Republic, Hungary, and Poland in the 1990s by using a model of total investment that introduced, from the point of view of the recipient country, foreign direct

investment as an exogenous variable. They find that there was evidence of a crowding out effect in Poland (1990-2000) and a crowding in effect in Hungary (1990-2000) and the Czech Republic (1993-2000).

Lipsey (2000) finds a negative coefficient when he looks at the impact of the inward FDI flow ratios of the preceding five-year period on the capital formation ratios in developed countries (OECD countries except Greece, Turkey, Iceland and Ireland) for the years 1970-1995. He stresses that we would find a positive coefficient if FDI inflows were providing financing for capital formation.

Apergis et al. (2006) analyzes the dynamic linkages between FDI and domestic investment and their study is the first that tries to explain this relationship by panel cointegration techniques. They use annual data for 30 countries from America, Asia, Europe and Africa for the years 1992-2002, and detect a two-way causality between FDI and domestic investment as a result of the bivariate causality tests and cointegration between FDI and domestic investment for all the chosen country groups as a result of the multivariate cointegration tests. The bivariate model reveals evidence in favor of a positive long-run relationship, whereas long-run relationship is evident for Asian and African countries and not evident for American and European countries in the multivariate model. This shows that crowding out effect becomes dominant when American and European countries are considered. These findings are parallel to those of De Mello (1999) for a group of developed countries and of Lipsey (2000) and Agosin and Mayer (2000) in terms of their results for Latin America as mentioned above.

There are also several individual country studies related to the topic. Examining firm entry and exit behavior in Belgian manufacturing industries during the years 1990–1995, Backer and Sleuwaegen (2003) suggest that “import competition and foreign direct investment discourage entry and stimulate exit of domestic entrepreneurs”. But they

emphasize that, as a result of "learning, demonstration, networking and linkage effects between foreign and domestic firms", the crowding out effect may be weakened moderated or even reversed in the long-run because he stresses that FDI will have positive effects of FDI on domestic entrepreneurship in the long-run. Harrison and McMillan (2003) find evidence that FDI crowds out domestic investment as foreign firms finance their investment by borrowing in the host country, thus increasing the host country's interest rate, by using a micro level database of firms in Côte d'Ivoire. Kim and Seo (2003) analyze the dynamic relationship between inward FDI, economic growth and domestic investment in Korea for the period 1985-1999. They employ a vector autoregression model and the innovations accounting techniques and find that FDI has no significant effect on economic growth; economic growth appears to influence the future level of FDI significantly and highly persistently; and that FDI does not crowd out domestic investment in Korea. An interesting finding is that an increase in domestic investment appears to crowd out the inflow of FDI. Titarenko (2006) conducts an econometric analysis of the total investment function of Latvia for the period 1995 – 2004. He follows the approach described in Agosin and Mayer (2000) and regresses total investment on the lagged values of FDI/GDP, investment/GDP and growth of GDP and finds the estimates for their coefficients using Least Squares. The paper displays evidence that FDI crowds out domestic investment in Latvia.

4. MODEL

4.1. Data and Methodology

In this section, the data and methodology used to estimate the relationship between FDI and domestic investment in the MENA region are presented. Due to the lack of recent data in some countries, the analysis is limited to the period 1980-2008. 13 countries, among

which seven of them are classified as oil-rich[5] and six are classified as oil-poor[6] countries, are analyzed. The selection of the countries is constrained by the data limitations to obtain a panel data set as balanced as possible.

Three different estimations are executed using the panel Generalized Method of Moments (GMM) technique. The first estimation is performed for all 13 countries, whereas the other two estimations are performed by classifying the countries as oil-rich and oil-poor. The reason of such a classification is the presumption that the direction of the effect of FDI on domestic investment would differ in oil-rich and oil-poor countries.

The following model is estimated for each of the three cases:

$$GFCFSHR_{it} = \alpha_0 + \alpha_1 FDISHR_{it} + \alpha_2 TRDSHR_{it} + \alpha_3 LNGDP_{it} + \alpha_4 IV_{it} + u_{it}$$

where GFCFSHR, FDISHR, TRDSHR and LNGDP are the share of gross fixed capital formation in GDP, the share of inward FDI flow in GDP, the share of total trade volume in GDP and the natural logarithm of GDP respectively. Gross fixed capital formation is used as proxy to domestic investment which is widely used in the literature. For the FDI variable, inward FDI flows are taken into account, as the effect of yearly FDI inflows to the host country is to be analyzed. Moreover, flow variable rather than the stock variable is selected since the effect of FDI entering each year is important in terms of analyzing its effect on domestic investment. Total trade volume is the sum of exports from and imports to the country. Except GDP, the share of each variable in GDP is included as explanatory variable to avoid the biases potential to arise from different GDP levels of countries. IV is the instrumental variables vector. Interest rate is accepted as a determinant of domestic investment; however it is not included as an explanatory variable into the model. Interest rate

[5] Algeria, Bahrain, Iran, Kuwait, Saudi Arabia, Syria and United Arab Emirates.
[6] Egypt, Israel, Jordan, Morocco, Tunisia, and Turkey.

is excluded as an explanatory variable following the vast literature finding insignificant effects on domestic investment (Agosin, 2005). All data is reported in million dollars and the data except FDI flow are obtained from the World Development Indicators of the World Bank, where the source of the FDI flows is UNCTAD FDI statistics database.

The ratio of trade (exports plus imports) to total GDP is used as an indicator for the degree of integration of a country in the world economy, which we assume to have an impact on gross fixed capital formation. In the literature, there are other variables such as government consumption, schooling, financial depth, inflation rate and institutional quality that were used to estimate gross fixed capital formation. Since we are concerned with the crowding out/in effect of FDI in this study, we did not intend to explain GFCF with all its possible determinants. Instead we used trade shares and logs of GDP levels of the selected countries together with their FDI shares.

Turning to the methodology, all models are estimated by GMM, which is a more robust method to deal with the specific characteristics and problems of data. One of the reasons using GMM is the relatively less strict assumptions it imposes on the distribution of data and data generating process (Blundell and Bond, 1998). Moreover, the assumption that explanatory variables are strictly exogenous may be relaxed with the use of GMM technique. GMM estimators appear to be robust to heteroscedasticity and autocorrelation. Since it allows for the inclusion of instrumental variables, it is easier to get rid of the endogeneity problem through instrumental variable estimation. However it is very difficult to find the most suitable instruments available. This problem is usually addressed in the related literature (Arellano and Bond, 1991). An optimal instrument would be a variable which is highly correlated with GFCFSHR but not with the error term in these regressions. Yet, after several trials, we have tried to control for the endogeneity problem by using the first three lags of FDISHR, LNGDP and TRDSHR as instruments.

Cross sectional fixed effects is specified due to the heterogeneity inherent in all three models. The unobservable fixed effect, α_0, captures country specific heterogeneity in the equation above.

Assuming that there is contemporaneous correlation between cross-sections, white cross section weights are used as GMM weights. The data are used in level form, which was proved to reduce heteroscedasticity in most GMM applications.

4.2. Results

The GMM estimation results for three groups of countries we specified as MENA13, oil-poor MENA and oil-rich MENA are outlined below in Tables 1, 2 and 3.

Table 1: Panel GMM Estimation Results (MENA13)

Dependent Variable: GFCFSHR
Method: Panel Generalized Method of Moments
Sample: 1 377
Periods included: 29
Cross-sections included: 13
Total panel (unbalanced) observations: 370
White cross-section instrument weighting matrix
Instrument list: C FDISHR LOG(GDP) TRDSHR

	Coefficient	Std. Error	t-Statistic	Prob.
FDISHR	-0.149900	0.072375	-2.071164	0.0391
LOG(GDP)	-0.021816	0.004293	-5.081512	0.0000
TRDSHR	0.096309	0.014321	6.724878	0.0000
C	0.384029	0.042018	9.139646	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.409823	Mean dependent var	0.230499
Adjusted R-squared	0.384815	S.D. dependent var	0.052874
S.E. of regression	0.041471	Sum squared resid	0.608832

Table 2: Panel GMM Estimation Results (Oil Poor MENA)

Dependent Variable: GFCFSHR
Method: Panel Generalized Method of Moments
Sample: 1 174
Periods included: 29
Cross-sections included: 6
Total panel (balanced) observations: 174
White cross-section instrument weighting matrix
Instrument list: C LNGDP TRDSHR FDISHR

	Coefficient	Std. Error	t-Statistic	Prob.
LNGDP	-0.014330	0.005288	-2.709947	0.0074
TRDSHR	0.093174	0.023288	4.000897	0.0001
FDISHR	0.085230	0.114927	-0.741601	0.0594
C	0.313483	0.049849	6.288691	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.316641	Mean dependent var	0.231166
Adjusted R-squared	0.283508	S.D. dependent var	0.046895
S.E. of regression	0.039695	Sum squared resid	0.259984

Table 3: Panel GMM Estimation Results (Oil Rich MENA)

Dependent Variable: GFCFSHR
Method: Panel Generalized Method of Moments
Sample: 1 203
Periods included: 29
Cross-sections included: 7
Total panel (unbalanced) observations: 196
White cross-section instrument weighting matrix
Instrument list: C LNGDP TRDSHR FDISHR

	Coefficient	Std. Error	t-Statistic	Prob.
LNGDP	-0.034556	0.008704	-3.970062	0.0001
TRDSHR	0.097701	0.020785	4.700509	0.0000
FDISHR	-0.168436	0.087077	-1.934332	0.0546
C	0.511783	0.090971	5.625812	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.482128	Mean dependent var	0.229907
Adjusted R-squared	0.457070	S.D. dependent var	0.057780
S.E. of regression	0.042574	Sum squared resid	0.337140

Table 1 displays the regression results for the 13 MENA countries as a group. The key coefficient, that of the ratio of FDI inflows to GDP, is significantly negative for the chosen MENA countries reflecting a negative impact of foreign direct investment on gross fixed capital formation. In other words, in the 13 MENA countries that constitute a heterogeneous group, FDI occurs to be associated with reduced domestic investment. As such, crowding out of domestic investment reveals itself. Fry (1993) attributes a similar result to the reason that FDI inflow to these countries is simply a close substitute for other capital inflows. The negative impact could also reveal that the inflow of FDI has not actually created business opportunities for local investors and, instead, replaced them. This finding is consistent with many studies that we discussed earlier.

We also observe the negative effect of LNGDP and positive effect of TRDSHR. The negative sign of LNGDP shows that as GDP increases, GFCF share of GDP decreases. However, the impact is too small because the coefficient (- 0.021816) roughly leads to a minor decrease of in the share of GFCF in total GDP as GDP increases by 1%. This effect, though being very negligible, may stem from the slower convergence of GFCF to GDP, i.e., the nominator (GFCF) does not increase as much as the denominator (GDP).

On the other hand, the positive sign of trade share could be interpreted as the investment-stimulating effect of trade as a result of higher integration into the world economy.

Table 2 shows the results of GMM estimation for the 6 oil-poor countries (Egypt, Israel, Jordan, Morocco, Tunisia, and Turkey) of the MENA. The effect of FDISHR on GFCFSHR in these countries is significantly positive. However, the positive sign does not mean that FDI crowds in domestic investment in the oil-rich MENA. Since the coefficient is much lower than 1, crowding in does not happen. In other words, one dollar increase in FDI leads to a much smaller increase in total investment and “crowding out” occurs (Agosin and Machado, 2005).

As in the oil-rich countries, trade share in total GDP has an encouraging effect on GFCF shares while GDP has a negligible negative impact on domestic capital formation in the oil-poor countries.

Table 3 shows the results of GMM estimation for the 7 oil-rich countries (Algeria, Bahrain, Iran, Kuwait, Saudi Arabia, Syria and United Arab Emirates) of the MENA. The coefficient of FDISHR is again significant and negative. This induces that one dollar increase in FDI leads to a decrease in total capital formation and “crowding out” occurs (Agosin and Machado, 2005).

Again, trade share in total GDP has an encouraging effect on GFCF shares whereas GDP has a negative but small impact on domestic capital formation.

5. CONCLUSION

Over the past thirty years, FDI has increased dramatically, which is reflected in the world's share of FDI inflows in GDP. The MENA region exhibits a similar trend and has attracted higher levels of FDI especially in recent years. This study has aimed to show the impact of those trends in FDI inflows on domestic investment outcomes in the selected countries of MENA. The distinction of oil-poor and oil-rich MENA was made assuming that they demonstrate different characteristics in terms of attracting FDI.

Our analysis shows that FDI crowds out domestic investment in the region (specifically in the 13 countries chosen for analysis) as well as in the oil-poor and oil-rich countries of the MENA. The channels of this crowding out effect may be manifold. If FDI is directed to existing projects through privatization and does not create 'new' investment, crowding out may occur. FDI may also crowd out domestic investment when MNCs enter sectors previously dominated by state-owned firms (Mileva, 2008), which is quite relevant for the case of MENA. Besides, most MENA economies had been heavily protected against foreign investment and had not attracted an important amount of FDI until the 1990s. Thus domestic investors may lack the ability to compete with more efficient MNCs and crowd out. Still, this feature of the FDI inflow to the MENA needs further research, especially on the dynamics and the characteristics of domestic investment in the region.

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