Foreign Direct Investment, Absorptive Capacity and Growth in the Arab World

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INTRODUCTION

Global Foreign Direct Investment (FDI) flows peaked in 2000, recording nearly USD 1.4 trillion of cross border FDI flows that year, but the volume of flows nearly halved in 2001 and 2002 following the global economic slump that started in 2001. This negative trend slowed down in 2003 however, and global FDI flows are widely expected to have regained the positive momentum in 2004[i]. The share of global FDI flows going to developing countries increased during the early and mid 1990s, but this trend was reversed with the onset of the Asian crisis in 1997. From 2000 onward, developing countries' share in global FDI has been on the rise again. Meanwhile, the record of FDI in Arab countries is poor and was modestly decreasing during the years of a general acceleration of FDI in the 1990s, stayed below flows to African countries relative to GDP during that entire period, and remain among the lowest in the developing world. The ratio of developing country FDI inflows that went to Arab countries fell during the 1990s. They only started to increase again very recently, during the onset of this century, and did not yet reach the levels of the late 1980s. More tellingly, FDI to the Arab region contributes only very modestly to gross fixed capital formation in the region, as the overall build-up of capital formation continues to be mainly financed by domestic public and private funds.

FDI has come to be regarded as a means to achieve economic development in its own right, with expected positive spillovers over and above those associated with domestically financed investments. The pace of economic development in South East Asia in recent decades has for example often been attributed – at least in part – to openness to and inflows of foreign direct investment. The question naturally arises as to whether the poor FDI performance constitutes an impediment to growth in the Arab world compared to other developing regions with better FDI records, and whether stronger financial incentives to attract FDI thus should be implemented as part of a development strategy for Arab countries. The answer clearly must depend on whether FDI can reasonably be expected to contribute to growth over and above other types of investment. The findings of the empirical literature aiming at identifying the impact of FDI on growth mainly show that there is no universal answer to the question of how FDI impacts growth in its host country. The impact of FDI depends on a multitude of factors, such as the level of technology used in domestic production in the host country, the level of education of the host country workforce, the level of financial sector and institutional development, etc. All these factors and more contribute to whether the host country in question can "absorb" and hence benefit from FDI. And this multitude of factors is impossible to capture in a single economic model or regression analysis. The empirical literature on this topic is, moreover, in its infancy, and is thus fragmented and thin. But it has nevertheless led to some tentative conclusions, which can provide an overall framework for thinking about the benefits of FDI as a means to development, and which may prove useful information for the formulation of a general strategy with respect to foreign direct investment in Arab countries.

The aim of this paper is to draw out the main conclusions from this nascent empirical literature, and, using selected measures of absorptive capacity for Arab countries, to evaluate what these conclusions imply for Arab countries, and hence whether these countries should expect to be gaining from increased foreign direct investment inflows over and above other types of investment. As the analysis will show, the answer turns out to depend on the specific measure of absorptive capacity we look at, and which particular Arab country we are evaluating, but an overall conclusion can be made: It is far from certain, and not even likely, that the average Arab country is currently in a position to benefit more from increasing FDI inflows than from other types of investment.

In order to shed light on this issue, we first give a brief introduction to the various hypothesized channels through which FDI may exhibit positive (or negative) externalities over and above other types of investment. We then look at the empirical evidence supporting these hypothesized externalities of FDI and their impact on growth, and take these empirical results to the data for Arab countries, to see what these data imply for whether Arab countries are in a position to yield positive spillovers from FDI inflows.

LIETERATURE REVIEW

Foreign direct investment can affect growth and development directly by contributing to gross fixed capital formation, and through several indirect channels which constitute the externalities associated with FDI. The direct channel does not favor FDI over other types of investment and would not in and of itself justify costly incentives for attracting FDI without providing the same incentives to domestic direct and foreign portfolio investment. Through the indirect channels, however, FDI is often argued to additionally affect various parts of the host economy, and in turn spur growth. We briefly introduce the main indirect channels below.

Starting by what we call the crowding channel, FDI by a multinational corporation may trigger an additional need for financing which could be sought in domestic capital markets, in order to complement the initial foreign direct investment. The potential additional domestic portfolio financing can be a positive externality leading to crowding in, but may also have negative financial crowding out effects on domestic investments when the supply of domestic financial resources are scarce[ii]. Along the same lines, when FDI brings in a product already produced in the local market, the foreign affiliate enters into a competitive position with domestic industry and may crowd out some of the demand for local investment. Notwithstanding issues of efficiency and competition, this will in isolation have a negative impact on domestic gross fixed capital formation. The reverse case of crowding in can also be true in case the FDI introduces a new product into the host economy and creates a demand for locally produced intermediate goods which did not exist before. Finally, in the case of scarcity of skilled labor in the host country, FDI may also draw skilled labor away from domestic industries, which will then lead to a negative impact on domestically owned economic activities, in turn inducing additional negative crowding-out effects on local investment. Whether the crowding channel leads to a positive or a negative spillover can thus not be determined a priori[iii].

We refer to the second channel as the linkages channel. FDI may play an important role in transferring new technology to the host economy, which in turn may lead to higher productivity and growth. This positive spillover in principle comes about through outsourcing and through interaction of the multinational corporation with local suppliers and customers and by imitation of technology and know-how by local competing producers. Since a multinational will be interested in protecting its competitive edge among firms in the same industry, but has an interest in improving the efficiency and product quality of upstream suppliers, the linkages channel should be expected to work through backward linkages in particular, rather than through horizontal technology transfers or even forward linkages[iv].

The third and final channel is the human capital channel. FDI can have a positive impact on human capital development through the training and transfer of skills, managerial know-how and expertise to local employees and staff of upstream suppliers[v].

The overall impact of FDI on the host economy hence depends on the relative quantitative importance of these potential spillovers. These three channels have more or less been the focus of the empirical literature presented below, and hence, these three channels will remain the focus of this paper. For the unambiguously positive linkages and human capital channels to work, a certain level of "absorptive capacity" of the host country in terms of level of technology of the host economy, educational level of the work force, level of infrastructure, financial and institutional development, etc., is now generally considered necessary. For example, a lack of financial development will prevent domestic and foreign firms from gaining financial resources for the desired technological upgrading which may be triggered by the linkages channel[vi]. Well functioning financial markets on the other hand will allow an efficient allocation of technology enhancing investments. Moreover, lack of sufficient schooling of the domestic work force may hinder the smooth transfer of skills from a multinational to the employees of downstream suppliers triggered by the human capital channel. The gap may simply be too wide to bridge. Thus, in lack of sufficient levels of absorptive capacity, and in cases where the crowding channel is negative, FDI may have a negative impact on growth in the host country. But if the level of absorptive capacity is sufficient for FDI to have positive spillovers through the linkages and skills channels, these latter channels may outweigh the crowding channel and lead to a positive impact of FDI on growth. In consequence, the benefit of attracting FDI to Arab countries cannot be determined by theory alone, but ultimately becomes an empirical question.

EMPIRICAL STUDIES IMPLICATIONS FOR THE ARAB COUNTRIES

Several empirical studies have been conducted with the aim of discerning the impact of FDI on host economies. These studies can be divided into two overall categories: those looking for an overall, or unconditional, linear effect of FDI on growth by including FDI flows in growth, technology or productivity regressions; and the studies which assume that the impact of FDI on growth is non-linear and depends on absorptive capacity. These studies most often interact the FDI term with some selected component of absorptive capacity. Four such components of absorptive capacity have been the focus of the larger part of the studies in the latter category, namely the technology gap vis-à-vis some benchmark developed country, the level of skills and education of the workforce, the development of the financial sector, and finally, the institutional development of the host country.

But before summarizing the main conclusions of each of these strains of the literature, and evaluating their implications for Arab countries, a few comments on their methodological framework are in place. Most of the studies suffer from exactly the same shortcomings as the general empirical literature on growth. This means that there are problems of endogeneity or potential joint determination of explanatory and dependent variables. We have not seen any convincing use of instruments as of yet. It should be kept in mind, however, that it is possible to dismiss a positive significant correlation between growth and FDI as a causal relationship going from growth to FDI, while it becomes more difficult to dismiss a negative significant correlation as such. Endogeneity is therefore difficult to use as an argument to dismiss the latter types of empirical findings of the impact of FDI on growth. It should also be noted that data on foreign direct investment flows as well as measures of absorptive capacity are poor, which is likely to be a major reason for the often found ambiguity or lack of significant correlations in these studies[vii]. Finally, while unconditional studies of the effect of FDI on growth have been done for Arab panels, there have to our knowledge not been any purely Arab country studies conditioning the effect of FDI on absorptive capacity so far. We hence base our analysis below on the results of broader developing country panel studies.

Unconditional impact of FDI on growth

Studies which have sought to estimate the unconditional effect of FDI on growth (or some component or indicator of growth) find ambiguous and not very stable results. Some studies find zero or even negative correlations between FDI and growth, while other studies find a significantly positive

relationship. An example of the former type of study is van Pottelsberghe de la Potterie and Lichtenberg (2001) who conduct a panel regression analysis of growth in a broad panel of developing and developed countries. More interesting in the Arab world context is the study by Sadik and Bolbol (2001), who investigate the effect of FDI through technology spillovers on overall total factor productivity for Egypt, Jordan, Morocco, Oman, Saudi Arabia and Tunisia over a 20-year period. They find that FDI has not had any manifest positive spillovers on technology and productivity over and above those of other types of capital formation. On the contrary, there are some indications that the effect of FDI on total factor productivity has been lower than domestic investments in some of the countries over the period studied, indicating a possibly dominating negative crowding out effect.

But other studies find a positive unconditional effect of FDI on growth. Examples include and Blomström and others (1994)[viii], Li and Lui (2005), and Haddad and Harrison (1993). The latter study uses industry level survey data on Moroccan firms to link the productivity of Moroccan firms with the firm specific degree of foreign ownership as well as the degree of foreign ownership of the sector to which the firm belongs. They find a higher overall level of productivity of firms with higher degree of foreign ownership, and also find that firms in sectors with a higher ratio of foreign ownership have higher levels of productivity, independently of the firm specific degree of foreign ownership. However, these results might just reflect that foreign direct investment flows to sectors and firms with higher overall productivity. Haddad and Harrison note that it is not possible to show that the presence of foreign direct investment should have accelerated the growth rate, and not just the level, of productivity in domestically owned firms in sectors with higher degree of foreign ownership.

It thus seems that while there might be a level effect of FDI on GDP, the average Arab country has not in the recent past been benefiting from FDI inflows in terms of growth. But the results of the literature are ambiguous, and this ambiguity has recently been argued to be due to a misspecification of the estimating equation. More specifically, the relationship between FDI and growth is likely to be non-linear due to the role played by absorptive capacity in determining the sign and size of the impact. Many developing countries may in fact not have reached the necessary levels of absorptive capacity. And indeed, as we will see below, some studies have found that FDI affects growth only when a certain level of absorptive capacity is reached.

Conditioning on absorptive capacity

The technology gap

In addition to estimating the unconditional impact of FDI on growth, Blomström and others (1994) also study the FDI effect conditional on the technology gap of the host country. They do this by splitting their sample of developing countries into two halves, one sub sample of low income countries and one sub sample of not-so-low income countries, and find FDI to be growth enhancing only in the latter group. Blomström and others do not proceed to determine the exact threshold level of GDP however, and the marginal income level at which the two sub groups were split is not disclosed. More specific conclusions to this effect are reached by Li and Liu (2005), also mentioned above. Li and Lui look at the influence of the technology gap on the growth effects of FDI in developing countries, using the ratio of the gap between US GDP and host country GDP relative to host country GDP as proxy for the technology gap. They include FDI interacted with the proxy for the technology gap in their growth regression and find a significantly negative parameter estimate for this interaction term along with a positive parameter estimate for the pure FDI term. This is then taken to imply that the lower the level of technological development of the host country, the smaller (or more negative) is the impact of FDI on growth. The results imply a threshold value for the technology gap of 12.6, above which FDI is no longer beneficial for the recipient country.

What does this mean for Arab countries? Taking the Li and Lui measure of the technology gap at face value (we will critique it below), this can be directly evaluated by comparing Arab countries appropriately measured output gaps with the mentioned threshold level found by Li and Lui (2005). Technology gaps for Arab countries are given in Table 1.

Table 1 Technology Gaps for selected Arab countries vis-à-vis the US[a], Selected years between 1990 and 2003

	1990	1995	2000	2003
More Diversified Arab Economies				
Algeria	14.86	17.62	18.75	17.57
Egypt, Arab Rep.	25.92	25.80	25.08	24.60
Jordan	16.36	16.28	18.75	18.47
Lebanon	14.19	8.98	10.03	9.97
Morocco	18.95	21.17	22.17	20.52
Sudan	115.19	107.15	101.12	92.66
Syrian Arab Republic	39.74	33.58	39.02	39.36
Tunisia	13.34	12.80	11.85	11.11
West Bank and Gaza	..	17.49	21.00	36.93
Yemen, Rep.	95.08	98.44	97.28	96.98
GCC Countries				
Bahrain	2.12	1.73	1.85	..
United Arab Emirates	0.33	0.62	0.67	..
Saudi Arabia	2.34	2.54	3.07	..
Oman	3.68	3.89	4.36	..
Kuwait	..	0.88	1.52	..
Selected Regions				
Middle East & North Africa	13.39	13.59	14.48	..
Sub-Saharan Africa	43.44	49.65	54.98	54.60
Latin America & Caribbean	7.08	6.78	7.33	7.83
Developed countries	0.04	0.04	0.06	0.06
World	4.20	4.34	4.60	4.62

Note: Countries in grey are countries below the threshold in 2000.
a: The technology gap is computed as the difference between US GDP per capita and country specific GDP per capita as a ratio of country specific GDP per capita. All data are measured in constant US 1995 dollars. Source: Own calculations based on data from World Development Indicators, 2004. The World Bank.

Starting with the more diversified Arab countries in the top panel of the table, only two of these, Lebanon and Tunisia, stand out as being below the Li and Lui threshold and are likely to gain from FDI inflows according to their level of technology. The data also show that these two countries only started being able to gain in the mid 1990s, prior to which they exceeded the threshold technology gap vis-à-vis the US. All other more diversified Arab countries are according to these estimations not in a position to gain from FDI inflows. In particular, Yemen and Sudan seem to have a substantial amount of technological upgrading to do before FDI should be considered as a means of further development. When turning to GCC countries in the second panel of Table 1, the picture looks very different, with all the countries figuring below the threshold level. All GCC countries should thus according to the Li and Liu estimations be in a position to be able to reap positive externalities from FDI inflows[ix]. Caution should be shown here in interpreting these results. GDP per capita might not be a good proxy for technological absorptive capacity, this might be particular the case in the context of Arab countries. Oil revenues in GCC countries account for a very large part of total GDP, but do not imply any particular level of technology.

A similar point, but with the opposite implication, can be made for those of the more diversified economies which are highly dependent on transfers from abroad, such as Lebanon. The GNP of Lebanon is substantially greater than GDP due to large amounts of foreign earnings by the

Lebanese expatriate community being transferred back to family members, and these transfers may also at least partly affect the level of technology in the country (implying that Lebanon might be even more in a position to gain from FDI than implied by the data). But devising a measure which adjusts properly for oil revenues or transfers from abroad is not straightforward. Non-oil GDP per capita for GCC countries would not be correct, since the oil part is at least partly determining technology levels through available resources for the acquisition of technology. More research on how to account more appropriately for the technology gap in so-called rent economies is therefore warranted.

Education of the workforce

UNCTAD (1999) conducts an analysis of the impact of FDI on growth in developing countries, and finds that FDI is only significantly positive when entered in interaction with the number of years of schooling. Lu and Liu (2005) also find a positive interaction between years of schooling and FDI on the effect on growth, adding to an overall positive direct effect. Borensztein and others (1998) find more detailed results along the same lines. They study the growth effects of FDI inflows in a panel of developing countries and show that FDI does indeed contribute to economic growth over and above other forms of capital formation, but only when the effect is made conditional on the level of human capital development of the host country in question. More specifically, Borensztein and others find that FDI has a positive impact on growth when the average years of secondary schooling of the male population above 25 years of age exceeds the threshold of 0.52[x,xi]. What do these findings imply for the benefits of FDI in the Arab world? There are widespread differences when it comes to educational levels of Arab countries, and data on this is not widely available. Only for a small selection of Arab countries does data on average years of male secondary schooling exist. These data are listed in Table 2, and show that all Arab countries for which data are available have exceeded the threshold at least since 1980.

Table 2 Average years of secondary schooling of male population above 25 for selected Arab countries[a]

		1980	1990	2000[b]
Selected Arab Countries				
	Kuwait	4.82	6.11	7.21
	Bahrain	3.89	5.18	6.37
	Jordan	4.16	6.78	8.39
	Egypt	3.09	4.90	6.34
	Algeria	2.24	3.95	5.74
	Syria	4.28	5.91	7.10
	Tunisia	2.83	4.06	5.14
	Iraq	2.71	4.47	5.43
	Average	3.50	5.17	6.47
Average All Arab Countries		2.14	3.33	4.34
Sub-Saharan Africa		2.81	3.45	4.45
Latin America and the Caribbean		4.3	5.13	5.86
South Asia		3.63	4.59	5.44
Developing Countries		3.94	4.86	5.74
Advanced Economies		8.98	9.69	10.06
World		6.31	7.03	7.28

a: Source: Own calculations according to formula used in Borensztein et al. (1998), based on data from Barro and Lee (2000).

b: Note that the numbers for 2000 are based on preliminary estimates

Table 2 also shows that the average level for Arab countries[xii] exceeds the average for developing countries. While of the GCC countries only Kuwait and Bahrain were included in the sample, this conclusion is very likely to extend to the rest of the Gulf countries, where educational levels of nationals is rather high. It is more uncertain that Arab countries such as Yemen and Sudan, with lower levels of per capita income and development, have reached this threshold, but more detailed country specific information on the level of education in all Arab countries would be needed to make this calls.

As is generally the case when using proxy measures as indicators of a specific aspect of development, a caveat is also in place here. As often pointed out in the literature, the average years of schooling is a measure of quantity rather than quality of education. Thus, for example, if a high fraction of secondary education in Arab countries is religious schooling exclusively, these statistics may not give an accurate picture of the level of absorptive capacity of FDI implied by the educational levels in the Arab world. Unfortunately, there are currently no good measures of the level of quality or content in education which could be compared across countries. Hence, country specific evaluations relying on sound judgment must be conducted when evaluating whether a given Arab country is currently likely to be able to benefit from skills transfers from FDI from more advanced countries.

Financial development

Other studies have found indications that FDI may have a positive effect on growth when the host country's financial market development has reached a certain degree of development. An example is Durham (2004), who studies the impact of FDI on growth in a broad panel of countries, investigating the interaction between FDI and a list of factors suspected of determining the level of absorptive capacity. The two factors which come out significant are financial sector development and institutional development. We return to the latter below. Regarding the former, Durham measures financial market development by total stock market capitalization relative to GDP. Four Arab countries are included in the study, namely Algeria, Egypt, Jordan and Tunisia. According to his results, only Jordan scores high enough on stock market capitalization to potentially benefit from FDI though sufficiently developed financial markets. Since the four above mentioned Arab countries have some of the highest stock market capitalizations of the Arab world, this means that according to this measure, no other Arab countries would have surpassed the threshold for sufficient financial market development to benefit from FDI[xiii].

The financial sectors of Arab countries are highly bank based, so this conclusion is to be expected when using a market based measure of financial market development. And the conclusion does change when bank based financial sector development measures are used. For example, Hermes and Lensink (2003), also conducting a broad country panel study, find that a certain degree of host country development of the financial system, measured as domestic credit to the private sector provided by the banking sector, is an important prerequisite for FDI to have a positive effect on the host economy. Their results imply that domestic credit provided by the banking system should exceed 12 percent of GDP for the host country to be able to absorb the potential technology diffusion of FDI. Sadik and Bolbol (2003) carry out a similar analysis using only Arab countries in their panel data set, but investigating the implications of 4 different measures of financial sector development. They find that when the banking sector credit to the private sector is above 13 percent of GDP, FDI will start benefiting the host economy.

What do these results imply for the level of absorptive capacity of Arab countries regarding financial market development? As a generalization, Arab countries are lacking behind other developing countries in terms of financial market development (see Sadik and Bolbol (2003) for a more detailed discussion), have relatively poorly developed financial markets, with credit to the private sector dominated by a fragmented and inefficient banking sector, and with not even a handful of countries with notable stock markets. As noted above, when stock market capitalization is used as a measure of financial development, only Jordan seems to be able to benefit from FDI.

However, most Arab countries are found to currently exceed the threshold levels of financial sector development according to the bank based indicator.

Table 3 shows data for domestic credit given by the banking sector for the Arab countries for which data was available. According to this measure, only Sudan and Yemen currently have insufficiently developed financial systems for the positive effects of the linkages channel to outweigh negative crowding effects of FDI.

Table 3 Financial depth: Domestic credit provided by banking sector in % of GDP[a]

	1990	1995	2000	2003
More Diversified Arab Economies				
Algeria	74.5	48.7	31.9	35.2
Egypt	106.8	81.8	99.5	117.2
Jordan	117.9	93.2	89.3	90.3
Lebanon	132.6	87.3	183.3	186.9
Libya	104.1	108.4	57.8	..
Morocco	60.1	79.5	92.1	83.0
Sudan	20.4	11.1	8.1	11.9
Syria	56.6	48.1	25.9	30.0
Tunisia	62.5	71.4	73.2	74.2
Yemen	60.6	42.2	5.2	4.8
GCC Countries				
Bahrain	-1.0	42.6	48.1	..
Kuwait	..	103.6	83.9	..
Oman	16.6	29.2	36.9	..
Qatar	33.3	61.0	40.0	..
Saudi Arabia	52.7	64.0	62.8	..
UAE	34.7	47.5	43.0	..
MENA	70.4	65.1	65.7	69.9
Sub-Saharan Africa	56.6	80.8	75.0	49.9
South Asia	48.8	43.5	51.1	54.6
Latin America & Caribbean	59.0	39.6	39.6	45.6
Europe & Central Asia	..	32.0	35.3	38.0
World	139.0	156.8	183.9	115.0

a: Source: World Development Indicators, 2004, World Bank.

This leads to the tentative conclusion that Jordan seems to be financially sufficiently developed for benefiting from FDI inflows, while Sudan and Yemen are below the threshold of financial sector development. For all other Arab countries, the measured degree of financial sector development is highly sensitive to the measure used, and therefore difficult to firmly conclude on. Again, country specific studies of the development of the financial sector would be needed to make a call on it is sufficiently developed for allowing the absorption of positive FDI spillovers into the domestic economy.

Institutional Development

Returning to the study of Durham (2004), he additionally interacts the FDI term with institutional proxies, with very interesting results. He uses an index for the regulation of business, an index for the protection of property rights and an index of corruption as institutional indices. The two former

are found to significantly influence the impact of FDI on growth. More specifically, the business regulation index, which is discrete in nature and ranges from 1 to 4, is found to have a threshold value of just over 3, which implies that only four out of 32 countries in the sample pass the threshold. The property rights index is also discrete and takes on values from 1 to 5. This index is found to have a threshold value of just over 3, implying that 11 out of the 32 countries pass the threshold.

Table 4 Regulatory Quality for Arab countries, 2002[a]

	Regulatory Quality
More Diversified Arab Economies	
Algeria	-0.54
Egypt	-0.45
Iraq	-2.31
Jordan	0.1
Lebanon	-0.47
Libya	-1.59
Morocco	0.02
Syria	-0.97
Tunisia	-0.02
Yemen	-0.6
GCC Economies	
Bahrain	0.96
Kuwait	0.3
Oman	0.62
Qatar	0.15
Saudi Arabia	0.08
United Arab Emirates	0.97

Note: Countries in grey are countries below the threshold of –0.84 in 2002.
a. Source: Kaufman, Kraay and Mastruzzi, 2003, Governance Matters III: Governance Indicators for 1996-2002. World Bank Working Paper. Data available at www.worldbank.org/wbi/governance/govdata2002/

The implications of these findings for whether Arab countries can expect to gain from FDI are not straightforward, due to lack of reliable data. The data used by Durham is not available for Arab countries, precluding a direct classification of Arab countries according to their institutional absorptive capacity[xiv]. Moreover, we were not able to locate another good measure of protection of property rights which is comparable across countries. However, a measure of regulatory quality, which should be capturing some of the same features of Durham's measure of business regulation, is available from the World Bank, and is shown in **Error! Reference source not found.**

In order to compare these data with Durham's findings, we note that Durham finds four countries in his sample to pass the threshold for business regulation[xv]. Of these four, Argentina has the lowest score in the World Bank measure of regulatory quality, of –0.84 in 2002. Now, if we use this level of regulatory quality as a threshold level, above which countries should be in a position to reap positive externalities from FDI, we have a means of classifying Arab countries according to at least regulatory quality. According to this threshold, only three countries, Iraq, Libya and Syria, are found not to pass the threshold[xvi]. All other Arab countries are found to have sufficiently high levels of regulatory quality to be in a position to gain from FDI.

A warning is again in order. Measures of regulatory quality are fraught with imprecision, measurement error and bias, and furthermore, we have only been able to evaluate one little aspect of institutions, namely regulatory quality, for Arab countries. Clearly, more country specific research is called for.

Implications for Arab Countries

Three points emerge from the above survey of the findings of the empirical literature. First, the literature suggests that FDI in and of itself is no guarantee for stronger economic growth. In fact, FDI can have, and has occasionally been found to have, negative effects on growth in a host country due to negative crowding effects outweighing potentially positive externalities.

Second, the Arab world as a group does not currently seem to be benefiting substantially from FDI, given the low level of current FDI and the findings of general Arab country studies not conditioning on absorptive capacity discussed under point 0 above.

The third point is that given the substantial intra-regional differences between Arab countries, the general lack of positive externalities from FDI in the Arab world does not preclude that some Arab countries may currently be benefiting from FDI, and that other Arab countries would be in a position to do so with small investments in absorptive capacity. Disregarding the findings for Iraq, the analysis of Arab country data conducted in this section implies that countries which may be currently benefiting include the GCC countries, plus Lebanon and Tunisia. All other Arab countries, on the account of at least one of the four types of absorptive capacity analyzed above, may not be currently gaining from FDI. In particular, Sudan, Syria and Yemen all fail on more than one of the four measures of absorptive capacity, implying that these three countries still have some way to go before being able to gain from attracting further FDI. But it is important to keep in mind that this conclusion is based on GDP data which may overestimate technology gaps due to oil revenues, education data which does not take into account quality of education, financial sector development data which assumes that banking sector credit is as relevant as stock market capitalization, and institutional data which only captures a small corner of institutional quality. More country-specific research on the impact of FDI in Arab countries is clearly called for to clarify which specific countries fall into which of these groups. It is in this respect important to keep in mind that cross country comparable data on different measures of absorptive capacity are scarce, and what is available is likely to be imprecise and potentially misleading. Country specific research may hence prove to yield the most interesting result if conducted on sector or industry levels using micro and survey data rather macro data.

CONCLUSIONS

While a multitude of theories suggest that FDI may have a host of positive externalities that domestically financed investment does not posses, more recent research indicates that host countries need to have attained a certain level of absorptive capacity for the host country to be able to garner these positive externalities. Moreover, short of this level of absorptive capacity, FDI may even exhibit negative externalities. On this background, we have analyzed data on four different aspects of absorptive capacity –technology gaps, educational levels, financial sector development and institutional development– for Arab countries with the purpose of gaining some insight into whether Arab countries might be in a position to gain from FDI over and above domestically financed investment. A tentative result of this analysis is that other than GCC countries and possibly Lebanon and Tunisia, Arab countries are not likely to posses the absorptive capacity to gain from FDI. This conclusion is very sensitive to the absorptive capacity measures used, however, and more country specific research is needed to establish more robust conclusions.

But the analysis has made one point very clearly. There is absolutely no a-priori reason for Arab countries to expect the host of positive externalities that are usually argued to follow an increase in FDI inflows. There is hence no general economic rationale for implementing costly incentive

schemes, such as tax holidays, investment subsidies, export credits and other measures, favoring FDI on behalf of domestically financed investment. On the contrary, such policies may reduce overall welfare by resulting in wasted political as well as economic resources if the country in question does not have a sufficient level of absorptive capacity. Rather, Arab countries would benefit from implementing policies to improve on their capacity to absorb FDI, such that more benefits may be reaped from existing and future FDI stocks. An upgrade of the human capital stock through an improvement in the quality and quantity of education, an improvement of the functioning of the financial sectors, a strengthening the quality of business regulation are all policies that fall into this category. In turn, countries with sufficiently high levels of absorptive capacity would only gain more from their existing and future FDI stocks and inflows. For countries below the threshold level of absorptive capacity, policies to upgrade this capacity are very likely to attract more FDI on their own account, but only at a time when FDI flows are more likely to be associated with positive externalities due to the higher levels of absorptive capacity.

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ACKNOWLEDGEMENT

The views reflected in this paper are those of the authors and not necessarily those of the Economic and Social Commission for Western Asia. This paper has been reviewed, but not referred, and inclusion of this short version of the paper does not preclude publication of full research reports elsewhere. Longer version of this paper is currently under review by World Development.

NOTES

[i] Source: UNCTAD, World Investment Reports, various years.
[ii] If domestic investment which is crowded out is more productive than the investment which is replying it, then we have a negative crowding out effect. But the effect can obviously just as well be neutral or positive.
[iii] Note here, that the crowding channel may also be at work for other types of investments, such as public, private domestic or foreign portfolio investments, but is usually argued to be likely to be stronger for FDI.
[iv] This is well argued in Javorcik (2004).
[v] A potential fourth channel often discussed is the market opening channel. Multinational corporations may give host economies access to new markets through its established trade relations. Increased exposure to global markets may, in the best of cases, give incentives to increase efficiency and competitiveness in host-economy exporting industries. The market opening channel has not been dealt with in the empirical literature, and will therefore not be taken into account further in the following.
[vi] This argument is explained more carefully in Sadik and Bolbol (2003).
[vii] See for example Blomström and others (1994) for a discussion of data problems related to these types of studies.
[viii] But as Blomström and others (1994) split their sample countries into subgroups, the message becomes less clear, as we will return to below.
[ix] A little aside worth noting here is that the average technology gap for the Middle East and North Africa of 14.48 is just above, but nevertheless very close to the threshold level of 12.6, as opposed to the average for the Sub Saharan African region of 54.98. In the light of the Li and Liu estimations, this would imply that while the Sub Saharan African region attracts more FDI relative to their share of world GDP than the average Arab country, they are less likely to gain from these FDI inflows than Arab countries.
[x] As calculated using the formula given in Borensztein et al. (1998) based on data provided by Barro and Lee (2000).
[xi] These results are not undisputed however. A more recent study by Durham (2004) (more extensively discussed below) repeats the exercise carried out by Borensztein and others using a different panel of countries and different years, and does not find any significant interaction term between level of education and FDI.
[xii] This summary statistic is for Middle East and North African countries, and includes the data for Iran and Turkey in addition to Arab countries. It is taken directly from the Barro and Lee (2000) dataset.
[xiii] In fact, these countries plus Morocco are the only Arab countries for which stock market capitalization data is available, for the simple reason that stock markets are too recent and too insignificant in other countries to have available data accumulated. This is rapidly changing, however.
[xiv] Some general and descriptive information on the state of business regulation and protection of property rights can be found in Alessandrini (2000).
[xv] There countries were Argentina, Chile, Malaysia and Sri Lanka.
[xvi] The finding for Iraq is of course currently rather meaningless following the recent geopolitical developments there.