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Unexplained Differences in the FDI Receipts of Middle East and North Africa

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Abstract

In this paper, we investigate the impact of regional stereotyping on inward-FDI by introducing well known elements of economics of race and gender in the labor market.We use the Oaxaca decomposition to explore differences in FDI inflows between developing regions of the world. Our analysis spanning 94 developing countries from 6 different regions of the world over the years 1990-2002 shows there are ongoing and significant regional differences in the FDI flows, even after controlling for well know determinants of FDI location choice. The MENA region exhibits unexplained, adverse differences compared to all other regions except for Sub-Saharan Africa.

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"Oh, East is East and West is West, and never the twain shall meet,
Till Earth and Sky stand presently at God's great Judgment Seat."

Rudyard Kipling

This paper embarks on the observation that East and West have indeed met when the foreign direct investment (FDI) inflows in Latin America and South East Asia are considered. Yet, they have not in the past and are not likely to in the very near future when it comes to the Middle East and the entire Africa.

In 2004, 44% of the FDI inflows were into developing countries. Compared to the 25% in 1980, this is a significant increase in the share of world FDI inflows hosted by developing countries. Within developing countries, the lion share goes to the Latin America and East Asia. The Sub-Saharan Africa and the Middle East and North Africa (MENA) lack far behind. For example, the share of MENA in foreign direct investment stocks in developing countries was only 7.5% and in foreign direct investment inflows was 7.8% in year 2004. Among all 335,338 foreign affiliates in developing countries, only 14,274 of them operate in the Middle East and North Africa.

Is there really a potential for FDI flows to the MENA region? The answer is not at all no. The United Nations Conference on Trade and Development (UNCTAD) has started benchmarking inward FDI performance and potential, ranking countries by how they do in attracting inward direct investment in early 1990s. In all the years these indices were calculated, at least half of the countries in the MENA region exhibited high FDI potential but performed very poorly when it came to attracting FDI from abroad.

Thus, it is inevitable to ask the question why the MENA region houses such surpris-

ingly low levels of foreign investments. Note that this paper is not the first one posing this question. Collier and Gunning (1999) and El-Naggar (1990) pointed out the role of property rights, the tax system, the rule of law, and economic freedom in mobilizing both foreign and domestic capital for growth and development. Meon and Khalid (2004) investigated whether the quality of institutions limited the MENA's integration in the world economy and their results suggested that the impact of an improvement in the quality of institutions might result in a sensitive increase of FDI inflows and manufactured exports.

Kamaly (2002) found economic growth and the lagged value of FDI/GDP as the only significant determinants of FDI flows to the MENA region using a dynamic panel model which covered the period 1990-1999. He did not consider the institutional factors that affect FDI flows to the region. Onyeiwu (2003), on the other hand, considered both institutional and macroeconomic determinants and explored whether the stylized determinants of FDI affected FDI flows to the MENA region differently. He compared MENA countries with other developing countries by using panel regressions covering the period 1975-1999. His findings pointed out the importance of improvements in trade openness and corruption/bureaucratic red tape, whereas the rate of return on investment, infrastructures, economic growth, and inflation were found to be insignificant for FDI inflows into the region.

Different from these studies, the current paper considers the possible role of stereotyping in the relative insignificance/infrequency of FDI in the Middle East and North

Africa. Oxford English Dictionary defines stereotypes as preconceived and oversimplified ideas of the characteristics which typify a person, situation, etc. or attitudes based on such preconceptions. Stereotypes are a result of a need to selectively perceive the environment. In our context, they help the firm to 'understand' and structure the complex world around it, because they are 'useful' simplifications. It is a way of forming expectations concerning certain groups of countries.

In this paper we ask how regional stereotypes impact FDI choices. To answer the question we introduce well known elements of economics of discrimination in the discussion. We draw upon the similarities between the labor market outcomes by race/gender and FDI outcomes by regions. In particular, we deal with "statistical" discrimination which helps us understand how differences between fairly similar developing countries can arise in inward-FDI outcomes.

The closest the FDI literature comes to in addressing this matter is in noting that cultural differences may be important for international business. Cultural distance is perceived as a transaction cost and thus firms will prefer to undertake investments in more culturally similar countries over comparable investments in more distant ones (Anderson and Gatignon, 1986; Buckley and Casson, 1998; Kogut and Singh, 1988). Very recently, Guiso, Sapienza and Zingales (2005) showed that lower levels of trust between two countries -arising from cultural differences based on cultural stereotypes- led to lower international economic exchange, portfolio investments and FDI. Yet, none of these studies had data on Middle East and North Africa since the data required was

bilateral in nature and did not and still do not exist for a number of countries in the MENA region.

In this paper we use the Oaxaca decomposition to explore differences in FDI inflows between developing regions of the world. In doing so we bypass the necessity of using bilateral FDI data. We use the standard FDI data from UNCTAD database that have been widely used in many studies of the determinants of multinational activity and add data on location specific attributes from World Development Indicators (WDI) database. We also added armed-conflict data from the Department of Peace and Conflict Research at Uppsala University and the Departments of Sociology and Political Science and Geomatics at the Norwegian University of Science and Technology.

Our analysis spanning 94 developing countries from 6 different regions of the world over the years 1990-2002 shows there are ongoing and significant regional differences in the FDI flows, even after controlling for well know determinants of FDI location choice. The remaining negative effects faced by the MENA region and Sub-Saharan Africa indicate that either we are omitting some key variables from the specification used that are relevant motives for FDI, and/or there are substantial "unexplained" constraints in FDI receipts among different regions of the world.

We do emphasize that our results appear to be very robust. We carefully correct for both country-pair specific autocorrelation as well as heteroscedasticity in our econometric analysis. We considered different cuts of the data (with respect to openness, country risk, GDP per capita) and our results did not change.

The paper proceeds as follows. Section 1 presents an overview of some facts about FDI in the MENA region. Sections 2 and 3 lay out a basic methodology for decomposing FDI differences between regions followed by an estimation of a simple model of regional FDI differences whose results are reported in Section 4. The last section concludes and discusses directions for future work.

1 An overview of facts about FDI in MENA

In the past two decades, the relative importance of multinational corporations has grown. About one quarter of world trade is intra-firm; for U.S. trade, it is above one third. About 80 percent of U.S. exports are connected to MNCs. A widely used measure of the scope of multinational activity is flows of foreign direct investment. The average annual growth rate of FDI flows over the last 15 years exceeds 17 percent. In contrast, world trade has expanded by about seven percent and world output has risen about 4.8 percent on average over this time period (UNCTAD, World Investment Report 2005 and earlier years).

From 1980 to 2004 the share of developing countries in world FDI inflows has increased from 16% to 45%. When the growth of FDI inflows is taken into consideration, wide differences across developing regions draw attention. FDI inflows into Latin America and East Asia have shown a considerable increase from 1980 to 2004; a 15 fold increase for the former and an astounding 40 fold increase for the latter. FDI inflows into MENA, Sub-Saharan Africa and West Asia have demonstrated almost no change in

1980s and modest increases in 1990s compared to the leader regions. Eastern Europe, after the fall of Berlin Wall has attracted increasing levels of FDI. Figure 1 shows these flows from 1990 to 2002. FDI stocks in these regions have followed a similar pattern in the recent years as shown in Figure 2. Latin America and East Asia have been the leaders and the other regions dropped behind.

A more meaningful statistic that we can look at is the ratio of inward FDI stock to GDP. This ratio can be interpreted as a broad indicator of the investment climate in the different regions of the world. Table 1 shows inward FDI stock/GDP ratio from 1980 to 2000 in 5 year intervals. One striking feature of this table is the overall increase of the ratio from 5-6% range in early 1980s to 25-30% range in year the 2000. Notice from Table 1 one of the poorest regions in the world, Sub-Saharan Africa, attracted substantially more FDI with respect to its size than the MENA region during the past two decades. FDI stocks of the Middle Eastern countries -excluding North Africa- have demonstrated the lowest growth rate among all other developing regions considered in this study. When investigated closely, it is easily seen that the distribution of FDI in the MENA region is not uniform either. Much of the flows is concentrated in a few countries such as Saudi Arabia, Egypt, Tunisia, Bahrain, and Morocco. Libya, Kuwait, and Yemen are the least recipients. A list of countries and regions used in this study are given in Table 2.

Yet another set of statistics that we can examine in this context is supplied by UNCTAD (UNCTAD, World Investment Report 2005 and earlier years). Two indices

are calculated in this regard: One is the inward FDI performance index which ranks countries by the FDI they receive relative to their economic size and the other one is the inward potential index which captures several factors (apart from market size) expected to affect an economy´s attractiveness to foreign investors. Then an evaluation matrix is constructed by using these indices. *Front-runners* are countries with high FDI potential and performance. *Above potential* group involves countries with low FDI potential but strong FDI performance. *Below potential* group is composed of countries with high FDI potential but low FDI performance. *Under-performers* are countries with both low FDI potential and performance.

In the 2002-2004 matrix, for example, Egypt, Syria and Yemen were the underperformers, Morocco was above potential, Bahrain, Jordan, Lebanon, Qatar and United Arab Emirates were the front runners and Algeria, Iran, Kuwait, Libya, Oman, Saudi Arabia, Tunisia and Turkey were below potential. In almost every year the matrix was constructed at least half of the MENA region countries showed up in the below potential group. This is an interesting result in the sense that at least half of the countries in the MENA region has high FDI potential but perform poorly when it comes to attracting FDI from abroad. In what follows we shed some light on this puzzle by estimating a simple model of regional FDI differences.

2 A simple model of regional differences in FDI

The beginning of the modern economic analysis of discrimination can be traced back to the Gary Becker's doctoral dissertation (1957) which was based on taste discrimination. Much of the literature in labor economics has evolved from this seminal study. Taste discrimination helped labor economists understand how differences between equally skilled men and women or blacks and whites can arise in the labor market. In essence, prejudice was modeled as a "taste" for discrimination. As interesting as it sounds, this strand of discrimination literature is less relevant for our purposes and therefore we will not consider that type of discrimination here. We will make use of the concept of statistical discrimination.

The idea behind statistical discrimination in the labor literature is simple and elegant. Firms have limited information about the skills and turnover propensity of applicants, which creates incentives for firms to use easily observable characteristics such as race or gender to statistically discriminate among workers. Note that the firm engages in such an act if these characteristics are correlated with performance after controlling for all other information available to firm. It is important to highlight that statistical discrimination is not specific to labor market. One well known example is the common practice of statistical discrimination by insurance companies when setting insurance premiums.

We argue that this type of discrimination may also be applicable to the regional distribution of FDI flows around the globe. As competitive firms, multinational corporations can use statistical discrimination through stereotypes to fill in the information

gaps that arise when the MNC cannot perfectly predict the risks and rewards associated with entry into a foreign market. Note that there is a distinction between stereotypes and generalizations. For example, generalizations bring together a series of observations relating to an area or group in a simplified way. It is a generalization, for example, to say that most athletes are healthy, but this does not imply that all athletes are. Stereotypes, on the other hand, ascribe certain characteristics invariably to an entire group.

One way to explore differences in FDI inflows between developing regions of the world and the role of stereotypes in influencing these flows is to decompose it into "explained" and "unexplained" components. Suppose that FDI inflows to individual country i in group 1 at time t can be written as

$$FDI_{1it} = \beta_{1t} X_{1it} + \mu_{1it}$$

and FDI inflows to individual country j in group 2 at time t can be written as

$$FDI_{2jt} = \beta_{2t} X_{2jt} + \mu_{2jt},$$

where β_{1t} and $\beta_{2t}$are defined so that $E(u_{1it}|X_{1it}) = 0$ and $E(u_{2jt}|X_{2jt}) = 0$.

The difference in mean FDI flows for year t can be written as

$$FDI_{1t} - FDI_{2t} = (X_{1t} - X_{2t})\beta_{1t} + (\beta_{1t} - \beta_{2t})X_{2t},$$

where FDI_{rt} and X_{rt} represent the mean FDI inflows and control characteristics for all countries in group r in year t. The first term in this decomposition, which has come to

be known as the Oaxaca decomposition after Oaxaca (1973), represents the "explained" component. This is due to average differences in traditional determinants of FDI location choice. The second term is the "unexplained" component which represents differences in estimated coefficients, in other words, differential due to discrimination.

Note that the validity of the measure of discrimination obtained from the Oaxaca decomposition depends largely on whether all dimensions of the problem at hand are considered in the estimations. In our context, if there are FDI location determinants which are left out of the regressions, then the error terms will be correlated with the included controls and the β coefficients will be affected, which in turn will cause an overestimation of discrimination. On the other hand, it can also be argued that defining discrimination as the FDI inflow differential between observationally equivalent regions underestimates the effect of discrimination, since discriminatory barriers can affect the control variables, Xs in the potential host countries.

Location choice of the multinational corporation has been studied extensively in the foreign direct investment literature. This choice is driven by a number of motives such as market seeking (to satisfy local demand or to export markets in other countries), raw material seeking (firms in oil, mining, plantation, and forest industries), production efficiency seeking (to utilize the factors of production in other countries that are under-priced relative to their productivity) and knowledge seeking (to gain access to technology or managerial expertise). Therefore, the location choice is affected not only by the firm's own ideas, capabilities and strategies but also by its assessment of the investment climate

-the set of location specific factors shaping the opportunities and incentives- in different locations. From contract enforcement to the frequency of bribes paid, from labor regulations to the customs procedures many developing countries are not very different from each other according to the recent surveys of the World Bank. However, there are puzzling differences among these countries when it comes to the direct investments that they get from abroad.

It is almost impossible to reflect the host of nearly unquantifiable social, political and institutional factors that can affect FDI, or such economic and competitiveness factors as market access, the strength of local suppliers and the perceptions of individual MNCs. These determinants have been discussed at length in the literature on foreign direct investment which is too vast to be addressed here at length (Markusen (2002), Feenstra (2003 Chapter 11) and citations therein). Using insights from this literature, in what follows we discuss the controls that we use in our regressions. The variables that define the characteristics of the countries and their expected signs in our regressions are reported in Table 3.

To account for the geographical distribution of FDI inflows across developing countries we focus a number of motives. *First*, market seeking investment is undertaken to satisfy local demand. Since ultimate aim of this type of investment is to access local markets and serve them within, market size (GDP) and market growth (GDPG) of the host economy are considered as the important determinants of the market seeking investments. We use GDP as an indicator of the market size with the expectation that

relatively big markets attract more FDI. We also use the rate of GDP growth over the previous 10 years as a proxy for expected economic growth. Both of these variables are expected to exert a positive influence on FDI flows.

Second, production efficiency seeking investment is undertaken by firms adopting vertical fragmentation strategies. Different from the market seeking investment, this type of investment is conducted mainly to serve the home and third country markets. Main attractors of this type of investment are trade openness (OPEN), coastal location (SEA), unskilled labor (GDPC), the level of agricultural activity (AGR) and physical infrastructure (TEL). We employ trade volume (exports + imports) as a share of GDP as an indicator of trade openness and expect a positive sign. Coastal access is measured by a dummy variable which takes the value of 1 if the country has access to sea and 0 if landlocked. We expect a positive sign for this variable. GDP per capita is used as an indicator of the availability of high-level skills. Production efficiency seeking FDI targets countries with cheap but reasonably productive labor forces. Therefore the expected sign of GDPC is ambiguous. We measure the level of agricultural activity by the share of agricultural value added in GDP. It may signal either a lower level of industrial development and lack of business services (investment deterring) or lack of potential competition (investments attracting). Therefore, the sign of this variable is also ambiguous. We use the average number of telephone lines per 1,000 as an indicator of modern information and communication infrastructure and expect a positive sign.

Third, other mainstream determinants include a variety of investment climate mea-

sures. Social and political stability, control of corruption, government effectiveness, contract enforcement, and regulatory quality facilitate investment climates in the host countries. We use country risk (ICRG) a composite indicator capturing some macro-economic and other factors that affect the risk perception of investors. The variable is measured in such a way that high values indicate less risk[1]. We also use the previous FDI stocks (FDIS) as a broad indicator of the attractiveness and absorptive capacity for FDI and the investment climate. Finally, distance to armed-conflict is an important deterrent of FDI and must be included in our study. As an indicator of this measure we use a dummy variable CONF which takes the value of 1 if the country is involved in a major armed-conflict and 0 otherwise. A major armed-conflict is defined as at least 1000 battle-related deaths in a given year.

3 Econometric considerations and data

The data used in this paper are in panel form. Preliminary tests indicated that both autocorrelation and heteroscedasticity were present. Thus, we use Prais-Winsten regression with panel corrected standard errors. We report results from regressions where the autocorrelation coefficient is assumed to be different for each observational unit (country). The variance-covariance matrix is computed under the assumption that the disturbances are heteroscedastic and contemporaneously correlated across units, where each pair of cross-sectional units has their own covariance. For each element in the co-

[1]We ended up not using ICRG in our regressions because it was highly correlated with our conflict measure.

variance matrix, all available observations that are common to the two units contributing to the covariance are used to compute it, given that the panel is unbalanced.

We have an unbalanced panel because not all data are available for all years of the sample period. Hence, when there is a gap, we limit ourselves to using post-gap information. In other words, if 1993 is available, 1994 is missing, and 1995 onwards is available, the data for this country starts in 1995. One of the robustness checks uses a larger number of observations, although a minimum of five must still be imposed in order to allow for the computation of the autocorrelation coefficients for all country pairs.

The data used includes 94 countries from 6 different developing regions of the world between years 1990-2002. We use the standard FDI data from UNCTAD database that have been widely used in many studies of the determinants of multinational activity and add data on location specific attributes from World Development Indicators (WDI) database. We also added armed-conflict data from the Department of Peace and Conflict Research at Uppsala University and the Departments of Sociology and Political Science and Geomatics at the Norwegian University of Science and Technology. A list of countries under six main developing regions -MENA, SUB-SAHARAN, E. EUROPE, LATIN, W. ASIA and E.ASIA- is given in Table 2. Summary statistics are given in Table 3.

4 Results

Tables 4, 5a and 5b report the results. Table 4 shows the results from running a Prais-Winsten regression as outlined above. Columns (1) and (3) report regressions of FDI

inflows on region dummies, without including any further control variables. Columns (2) and (4) include controls for previous FDI stocks, market size and potential, skill, level of agricultural activity, infrastructure, involvement in major armed conflict, coastal access and a time trend[2]. Columns (3) and (4) report the same regressions after omitting the outliers from the sample[3].

In columns (1) and (3), coefficients of all the region dummies are negative and statistically significant, which points out that all five regions -MENA, SUB-SAHARAN, E. EUROPE, LATIN and W. ASIA- have received lower FDI inflows compared to the E. ASIA both with and without China in the sample. When control variables are added to the model (columns (2) and (4)), the negative effect of being in certain regions of the world either becomes less significant or turns positive. More specifically, coefficients of LATIN and E. EUROPE turns positive but lose statistical significance once the controls are added. In other words, being located in Latin America or in Eastern Europe does not affect the FDI inflows in any way different from being located in East Asia. The coefficient of W. ASIA becomes less negative and significant after the addition of the controls (column 2) and once the outliers are omitted (column 4) this coefficient loses its significance, pointing out that being located in W. ASIA does not disadvantage the FDI receiving country in this region.

On the other hand, even though the effect of being located in the MENA region and

[2]OPEN is not included in the regressions because of the high degree of multicolinearity it exhibited. However, in the robustness checks the data is divided into two parts as low and high trade opennes and qualitatively no significant changes in the results are observed.

[3]China, Hong Kong, Brazil and Mexico are the biggest FDI receivers among all developing countries.

Sub-Saharan Africa gets smaller once the controls are added, they are still negative and statistically significant. Considering the statistical significance of almost all the included controls and the good fit of the regressions, this result can be interpreted as suggestive evidence for the existence of unexplained differences among E. ASIA and MENA or SUB-SAHARAN.

All control variables except for SEA have the expected signs and are statistically significant. Being involved in a major armed-conflict negatively affects FDI as expected, however, it is only significant at 10% significance level.

We also conduct a number of robustness checks where we divide the data by trade openness, market size, country risk and GDP per capita. The results which are not reported here for brevity but available upon request, indicate no major changes in the core results.

Tables 5a and 5b use the Oaxaca decomposition discussed in the previous section to decompose changes in FDI inflows in years 1990-2002 after excluding the outliers. We look at MENA vs. all other developing countries, MENA vs. SUB-SAHARAN, MENA vs. LATIN and MENA vs. E. ASIA. The top row of the table shows the differences in the FDI between these five regions. The second and third rows decompose this into the share due to differences in country characteristics and differences in coefficients. The rest of the rows report the detailed breakdowns.

Two general patterns are easily observable. *First*, when the MENA region is compared to all other developing countries, Latin America and East Asia, MENA gets 43%,

126% and 306% less FDI inflows, respectively[4]. Only with respect to Sub-Saharan Africa, it receives higher FDI flows. *Second*, the total difference due to characteristics point out that the MENA indeed receives 50% more FDI than all other developing countries, 65% more than Latin America and 130% more than Sub-Saharan Africa. Only with respect to East Asia it receives 40% lower FDI due to country characteristics. The negative difference due to paramaters are so big that it overshadows the positive difference due to country characteristics. In other words, unexplained differences dominate the potential the region has to offer.

In the lower echelons of the unexplained differences reported in the bottom half of the Tables 5a and 5b, it is clear that a large share of the coefficient effect comes from the market size. In other words, returns to market potential are considerably lower in this region. This might be a problem for countries in the MENA in attracting FDI. Moreover, intercept term has also demonstrates big negative values which is typically interpreted as ongoing discriminatory constraints. However, trend coefficient is positive in all comparisons pointing out a gradual improvement in discrimination over time. There are also higher returns to coastal access compared to all other regions.

These results taken all together can be considered as suggestive evidence for ongoing and significant regional differences in the FDI flows, even after controlling for well know determinants of FDI location choice.

[4]The dependent variable, FDI stocks, GDP, GDP per capita enter the regressions in logarithmic scale.

5 Conclusion and directions for future work

Although the purchasing power is limited and technological and human resources are scarce in the MENA region, investment opportunities exist in such areas as the extraction and processing of natural resources; tourism; manufacturing; and export-oriented production of labor-intensive and/or natural resource-intensive manufactured products. However, these opportunities might be dismissed easily by company executives due to the negative image of the region. The news media reports are dominated by accounts of war, civil unrest, and economic disorder. While such problems undoubtedly exist in some MENA countries, it is wrong to lump all MENA countries together in a single negative stereotype. To assess the investment potential, each opportunity needs to be evaluated on its own merits.

Stereotypes are incomplete and inaccurate beliefs that are based on homogenizing, distorting and over-generalizing certain characteristics possessed by the members of a group. In this paper, we investigated the impact of regional stereotyping on inward-FDI in the MENA region by introducing well known elements of economics of race and gender in the labor market.

We used aggregate data covering 1990-2002 period for 94 developing countries from 6 different regions of the world. Our analysis showed there are ongoing and significant regional differences in the FDI flows, even after controlling for determinants of FDI location choice. The MENA region exhibited unexplained, adverse differences compared to all other regions except for Sub-Saharan Africa. This negative effect faced by the MENA

region indicates that either we are omitting some key variables from the specification used that are relevant motives for FDI, and/or there are substantial "unexplained" constraints in FDI receipts among different regions of the world.

So what id the punchline? Trade and foreign direct investment are needed in the MENA region as engines of growth and dynamism according to the MENA Development Report (2003) by World Bank. "With more trade and investment, countries in the region will be able to achieve faster growth, reduce poverty, create more jobs, and improve the knowledge, skills, and the productivity of their workforce." FDI alone cannot solve the underlying problems facing the region. However, it can play a more important part than it currently does in the development process of the countries located in this region.

There is certainly need for further research on this topic. Relying only on the Oaxaca measure of discrimination has potential for the abuse and misuse. In this delicate matter, we believe that a more in-depth analysis should be in due course, which brings us to a discussion of future work. We plan to extend this paper in a couple of directions. *First*, this paper did not offer a theoretical analysis. Despite being simple, the regression results reported in this paper can serve as useful insights in writing a theoretical model of statistical discrimination in FDI location choice. *Second,* after completing the model of statistical discrimination, we are planning to use the test of statistical discrimination provided Altonji and Pierret (1997). The situation they consider can be adopted as follows: (i). Being from a certain region of the world is negatively related to the profitability of the MNC; (ii). The relation between regional origin and the profitability of

the MNC does not vary with experience; and (iii). The MNCs learn over time. The relation between FDI and regional origin will not vary with experience if the MNCs statistically discriminate against members of certain regions of world. If MNCs do not statistically discriminate, then the FDI gap will widen with experience in the region.

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Table 1: Inward FDI Stock as a % of GDP by Host Region and Economy

Region/economy	1980	1985	1990	1995	2000
World	5.0	6.8	8.4	9.4	18.3
Developed countries	4.9	6.3	8.2	8.9	16.3
Developing countries	5.4	8.9	9.8	12.2	26.2
Middle East	0.1	8.2	6.5	8.2	9.1
Bahrain	2.0	10.9	13.0	41.1	74.1
Iran	3.2	3.7	2.2	2.1	2.4
Iraq	-0.1	-0.1	-0.1	-0.2	-0.1
Jordan	3.9	9.6	15.3	9.2	26.8
Kuwait	0.1	0.2	0.2	0.4	1.7
Lebanon	0.5	1.5	1.9	1.3	6.8
Oman	8.1	12.0	16.2	15.6	12.6
Qatar	1.1	1.5	1.0	5.5	10.8
Saudi Arabia	-8.0	17.7	13.8	12.8	8.9
Syria	0.0	0.2	3.0	17.1	33.3
Turkey	12.9	13.8	7.4	8.8	9.6
UAE	1.4	1.8	2.2	4.2	2.0
Yemen	3.7	4.5	3.7	15.0	15.7
North Africa	8.7	10.2	13.3	15.9	17.3
Algeria	3.6	2.6	2.5	4.0	6.7
Egypt	9.9	16.4	25.6	19.7	17.7
Libya	5.0	1.8	2.4	2.5	1.4
Morocco	15.2	24.2	13.9	17.3	26.5
Sudan	0.4	0.6	0.4	1.2	12.1
Tunisia	38.2	58.5	62.0	60.8	60.0

Source: UNCTAD

Table 2: List of countries

MENA	Latin America	Sub-Saharan	East Asia	West Asia	Eastern Europe
Algeria	Argentina	Angola	China	Afghanistan	Albania
Bahrain	Bolivia	Cameroon	Hong Kong	Armenia	Belarus
Egypt	Brazil	Chad	Indonesia	Azerbaijan	Bulgaria
Iran	Chile	Congo	Korea	Bangladesh	Czech Rep.
Iraq	Colombia	Côte d'Ivoire	Malaysia	Georgia	Estonia
Jordan	Costa Rica	Ethiopia	Philippines	India	Hungary
Kuwait	Dominican Rep.	Ghana	Singapore	Kazakhstan	Latvia
Lebanon	Ecuador	Kenya	Thailand	Kyrgyzstan	Lithuania
Libya	Guatemala	Mali	Viet Nam	Nepal	Moldova
Morocco	Honduras	Mozambique		Pakistan	Poland
Oman	Mexico	Namibia		Sri Lanka	Romania
Qatar	Nicaragua	Niger		Tajikistan	Russian Fed.
Saudi Arabia	Panama	Nigeria		Turkmenistan	Slovakia
Sudan	Paraguay	Senegal		Uzbekistan	Slovenia
Syria	Peru	Sierra Leone			Ukraine
Tunisia	Uruguay	Somalia			
Turkey	Venezuela	South Africa			
UAE		Tanzania			
Yemen		Uganda			
		Zimbabwe			

Table 3: Variables and Summary Statistics

Variable	Description	Expected Sign	Mean	Median	Standard Deviation
FDI	Inward FDI flows (1995 prices)		1713	249.3	5288
FDIS	FDI stocks (1995 prices)	+	1119	1803	3332
GDP	GDP (1995 prices)	+	7051	1432	14510
GDPC	GDP per capita (1995 prices)	?	2679	1378	4088
GDPG	GDP growth (previous 10 years)	+	35.15	35.14	41.31
AGR	Agricultural value/GDP	?	19.83	16.78	13.49
OPEN	Trade volume/GDP	+	75.26	65.25	41.66
TEL	Telephone mainlines (per 1,000 inhabitants)	+	108.6	70.81	121.4
SEA	Sea access (1= coastal, 0=landlocked)	+	0.766	1.000	0.424
CONF	Major conflict (1=involved, 0=not involved)	-	0.087	0.000	0.282

Table 4: Prais-Winsten Regression Results:

	All Sample		Sample w/o Outliers	
	(1)	(2)	(3)	(4)
MENA	-3.778***	-1.243***	-3.585***	-0.869***
	(0.350)	(0.397)	(0.336)	(0.368)
SUB-SAHARAN	-4.479***	-1.407***	-4.287***	-1.268***
	(0.259)	(0.326)	(0.255)	(0.321)
E. EUROPE	-2.598***	0.544	-2.407***	0.021**
	(0.473)	(0.471)	(0.458)	(0.486)
LATIN	-2.228***	-0.015	-2.177***	0.246
	(0.203)	(0.322)	(0.192)	(0.317)
W. ASIA	-4.707***	-0.936***	-4.512***	-0.591
	(0.505)	(0.401)	(0.491)	(0.408)
Controls:				
FDIS		0.521***		2.650***
		(0.150)		(0.422)
GDP		0.563***		0.487***
		(0.072)		(0.070)
GDPC		0.851***		0.891***
		(0.225)		(0.213)
GDPG		0.009***		0.009***
		(0.002)		(0.002)
AGR		-0.080***		-0.082***
		(0.011)		(0.011)
TEL		0.004***		0.002**
		(0.001)		(0.001)
SEA		0.266		0.245
		(0.264)		(0.257)
CONF		-0.328*		-0.325*
		(0.204)		(0.201)
Number of obs.	1,107	887	1,055	835
R^2	0.86	0.90	0.86	0.90
Wald χ^2	871.8	5708	701.5	770.7
Prob $> \chi^2$, p-value	0.000	0.000	0.000	0.000

Notes: Standard errors in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% level, respectively. All regressions include a constant and a time trend (not reported). Regressions correct for first-order autocorrelation where autocorrelation coefficients are estimated separately for each country pair. Covariances vary across country pairs. Outliers are China, Hong Kong, Mexico and Brazil. See the text for details.

Table 5a: Decomposition of Regional FDI Differences

Specification	MENA vs All Other	MENA vs Sub-Saharan
FDI Inflow Difference	-0.428	1.181
Amount due to		
Characteristics	0.656	1.307
Coefficients	-1.083	-0.126
Differences due to Characteristics		
FDIS	-0.027	0.149
GDP	0.363	0.629
GDPC	-0.305	-2.900
GDPG	0.092	0.342
AGR	0.555	1.752
TEL	0.098	1.414
SEA	-0.109	-0.073
CONF	-0.011	-0.005
Differences due to Parameters		
FDIS	1.187	0.883
GDP	-31.37	-25.95
GDPC	-1.536	8.463
GDPG	0.468	-0.165
AGR	1.262	1.729
TEL	0.161	-1.044
SEA	29.59	29.48
CONF	-0.118	-0.135
Intercept	-0.803	-13.77
Trend	0.079	0.388

Table 5b: Decomposition of Regional FDI Differences

Specification	MENA vs Latin	MENA vs SE Asia
FDI Inflow Difference	-1.258	-3.063
Amount due to		
Characteristics	0.491	-0.402
Coefficients	-1.749	-2.661
Differences due to Characteristics		
FDIS	-0.038	-0.384
GDP	0.296	0.341
GDPC	-0.069	-0.055
GDPG	0.145	-0.346
AGR	-0.019	-0.0002
TEL	0.257	0.064
SEA	-0.034	0.000
CONF	-0.046	-0.023
Differences due to Parameters		
FDIS	1.197	1.166
GDP	-42.34	-10.32
GDPC	5.851	-7.354
GDPG	0.079	0.351
AGR	0.907	0.185
TEL	-0.399	0.828
SEA	29.49	29.23
CONF	-0.068	-0.117
Intercept	3.106	-17.42
Trend	0.426	0.785

Figure 1: Inward FDI Flows by Region (billions of $)

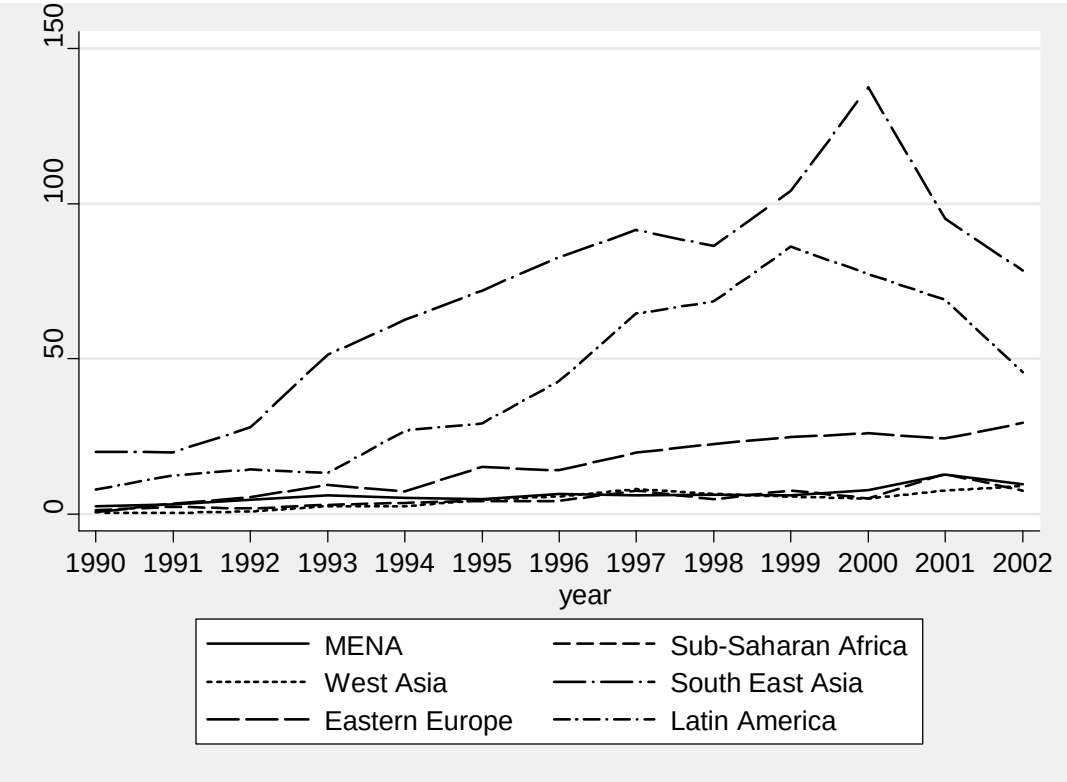

Figure 2: Inward FDI Stocks by Region (billions of $)