Determinants of Arab Intraregional Foreign Direct Investments

Belkacem Laabas
Walid Abdmoulah

API/WPS 0905

Correspondence

Dr. Belkacem Laabas , The Arab Planning Institute, P.O. Box: 5834 Safat. 13059 Kuwait, Tel: (965) 24843130, Fax: (965) 24842935, E-mail: belkacem@api.org.kw.
Dr. Walid Abdmoulah , The Arab Planning Institute, P.O. Box: 5834 Safat. 13059 Kuwait, Tel: (965) 24843130, Fax: (965) 24842935, E-mail: walid@api.org.kw.

Determinants of Arab Intraregional Foreign Direct Investments

Belkacem Laabas
Walid Abdmoulah

Abstract

Arab countries, being incapable to significantly benefit from the surge of global FDI, seem to benefit more from intraregional FDI recently fuelled by the massive surpluses in oil producing countries. The need to understand the determinants of intra Arab FDI is highlighted using an augmented gravity model based on panel data of 17 Arab countries over the period 1998-2007. Basic gravity model explains part of the FDI variations, however when accounting for country heterogeneity the fit of the model increases considerably. Intra Arab FDI is very erratic and unevenly distributed between countries. Total bilateral trade and proximity in terms of distance, border and business language are very significant due to FDI concentration within GCC area. Investment freedom encourages FDI inflows, despite the fact that other aspects of economic freedom are negatively related to FDI inflows. This probably due to the fact that countries encourage foreign and Arab investments through specific laws. Likewise, infrastructure quality negatively affects Arab intraregional FDI likely because it is widely directed to infrastructure services and in countries with poor performance in this sector. Results are disappointing with regard to institutional variables likely due to similarities between source and host countries. Investment and fiscal treaties are not relevant and control of corruption was found to negatively related to investments. Investors, used to deal with corruption in their own countries, probably do not regard it as a severe constraint to investments. Inversely, quality of regulatory environment is shown to positively affect intraregional FDI, indicating what should be done in terms of improving business environment, controlling corruption and risks as well as deepening cooperation.

محددات الاستثمار الأجنبي المباشر البيني العربي

مُلخص

لفهم محددات التدفقات الاستثمارية العربية البينية المتزايدة جراء ارتفاع الفوائض النفطية، فإننا قمنا بتطوير نموذج جاذبية موسع لـ 17 دولة عربية للفترة 1998-2007. تشير النتائج أن متغيرات الجاذبية تفسر جزءا بسيطا من التغيرات في التدفقات الاستثمارية وترتفع قوة تفسير النموذج بشدة عندما يأخذ بعين الاعتبار عدم تجانس هذه التدفقات ما بين الدول وذلك لأن التدفقات البينية العربية غير مستقرة وموزعة بشكل غير متساو ما بين البلدان. كما أن المتغيرات التي تعكس القرب مثل المسافة والحدود المشتركة ولغة الأعمال تؤثر في هذه التدفقات وذلك نتيجة تركزها ما بين دول مجلس التعاون الخليجي. أن حرية البيئة الاستثمارية تزيد من تدفقات الاستثمار بالرغم من أن متغيرات الحرية الاقتصادية الأخرى مرتبطة سلبيا بهذه التدفقات. وهذا يرجع إلى تفاوت الإصلاحات ما بين قطاعات الاستثمار والأعمال والمال، ولوجود تشريعات خاصة موجهة لرجال الأعمال الأجانب. وكذلك الحال فإن نوعية البنية التحتية مرتبطة سلبا بالتدفقات الاستثمارية وذلك لتوجه هذه التدفقات بشكل مركز في قطاعات الخدمات والعقارات في الدول ذات البنية التحتية المتدنية من أجل النهوض بها. كما أن متغيرات البيئة المؤسسية لا تدل على وجود ترابط موجب ما بين الاستثمارات والتنمية المؤسسية في الدول المستقبلة وذلك لأن هذه الدول لها مستويات مؤسسات قد تكون أحسن من دول الأصل. نتائج التقدير تدل على عدم معنوية الاتفاقيات الاستثمارية والضريبية وذلك ربما لعدم تفعيلها. كما أن الفساد الإداري مرتبط سلبا بالتدفقات الاستثمارية وذلك لتفشيه بين الدول المستقبلة والدول الأصلية. بالمقابل وجد أن نوعية البيئة التنظيمية تؤثر إيجابا على تدفقات الاستثمار. هذه النتائج تدل على أن الدول العربية تستطيع رفع تدفقات الاستثمارات البينية من خلال تحسين بيئة الأعمال والتحكم في الفساد الإداري وتقليل المخاطر التي تثبط الاستثمارات.

1. Introduction

Arab countries are facing daunting development challenges culminated in persistent high unemployment, volatile and elusive economic growth. Most countries are implementing reform policies that aim to accelerate growth, diversify the economy and consolidate the export base by encouraging more private investments albeit local or foreign[1]. The recent surge of Foreign Direct Investment (FDI) to developing countries due to global ramifications opened a window for developing countries to attract more funds in order to finance development. Most developing countries responded by offering even more liberal and attractive, profitable business environment. FDI flows to developing countries was even attracted by the wave of privatization of industrial public sector firms and the dismantling of barriers to entry in the services sector. Competition for global FDI is very tough and Arab countries did not manage well because global capital regards the region as "risk prone" and has a relatively bad business environment coupled with a slow reform pace, specially in the process of privatization and in lowering barriers to entry in the services sector. As such Arab countries attracted little investment and did not benefit from the global surge of FDI.

The spectacular increase of oil prices since the end of the nineties and the accumulation of considerable surpluses in the Arab oil rich countries spurred huge windfalls looking for safe and high return. Traditionally these surpluses are recycled in the global financial system as it happened during the oil price shocks of 1973 and 1979. Given the fact that this later oil shock coincided with low interest return in the global money markets, and very volatile equity markets as well as high scrutiny on funds from the regions imposed by the imperative to fight "global terrorism" and the fact that most Arab countries are reaching out for more FDI by offering more stable and better business environments than before. All these factors combined might encourage more intra Arab FDI flows.

This paper tries to understand what determine Arab intraregional FDI flows. Conventional wisdom based mostly on evidence from augmented gravity models stipulates that FDI flows are determined by market size, purchasing power, distance and factors of similarity, and probably more importantly the quality of the business and investment environment. The overwhelming literature on FDI in the region, surveyed in the next section, is based on total country flows. Most of the published work tries to understand either what economic and institutional factors determine total FDI inflows from the world to a particular country, or to study the impact of FDI inflows on economic activity. This paper depart from this strand of research by looking at intra Arab FDI flows and try to understand the motives for Arabs governments and businessmen investing within the region. A consistent database of FDI flows and a host of explanatory variables was compiled from 1998 to 2007. An augmented gravity model based on panel data for 17 Arab countries is used to benchmark intra Arab investment behavior. The results show that simple gravity model explains parts of the investments flows and

2

distance between countries is very relevant. As most investment flows goes from oil rich Gulf Cooperation Council (GCC)[2] countries to other Arab countries and also within GCC, a dummy variable was found very significant. Border and language dummies also explains part of the investment flows. A composite index for the quality of infrastructure was found to be negatively and significantly related with investment flows reflecting the fact that investment opportunities are more offered in countries that are in need to upgrade infrastructure. We found that total trade flows are strongly related to investment flows, however economic freedom is not a strong impediment to attracting FDI as most government have special regulations with regards to FDI. We tested a large strand of variables that reflect the quality of institutions and the regulatory framework. The picture that emerges that Arab investors do not particularly regards the region a risk prone probably because of home biased effect or have better knowledge of the region which leads them to assess risk differently.

The rest of the paper is organized as follows. Section 2 presents Arab intraregional FDI trends over 1998-2007 period. In Section 3 we briefly survey the literature on FDI in the region and discuss gravity modeling. Section 4 highlights data sources and some summary statistics of the variables used in our empirical work. Empirical results are presented in Section 5 . Section 5 concludes.

2. <u>Arab intraregional FDI trends</u>

Global FDI witnessed a rapid increase during the last decade, however it is heavily unevenly distributed. According to UNCTAD database, by the end of 2007 total FDI inflows and outflows reached respectively 1833 and 1996 billions of US dollars (Table 1). This represent 160% and 190% increase over the last 10 years. America and Europe are the main recipient and source countries with more than 75% and 84% of inward and outward FDI in 2007. Asia comes third with an increasing FDI inflows of about 20%, although it provided only 14% of total FDI outflows. Although FDI inflows to Arab countries increased dramatically in recent years, from 5.5 to 72.4 billions of US dollars over ten years, they remain relatively very limited. Their proportion of global FDI inflows did not exceed 4% in 2007, which is slightly higher than that going to Africa or Oceania. Thus, the efforts undertaken to create a better business environment and overcome deficiencies aiming at enhancing their attractiveness remain far from complete. With regards to FDI outflows, Arab countries come far behind Europe, America and Asia. Their FDI outflows ranged erratically from -0.4% to a maximum of 2.16% in 2007.

Table1: Total FDI flows in US Dollars at current prices in millions (*in percentage*)

	1998	2000	2001	2002	2004	2005	2006	2007
World	705543.62	1398182.82	824444.78	625167.88	717695.50	958697.47	1411018.20	1833324.05
Arab counties	5548.58	5956.87	9325.53	8360.28	24706.47	45723.96	67568.48	72368.62
	0.79	*0.43*	*1.13*	*1.34*	*3.44*	*4.77*	*4.79*	*3.95*
Africa	9609.82	9670.99	19904.64	14592.12	18019.71	29459.47	45753.90	52982.23
	1.36	*0.69*	*2.41*	*2.33*	*2.51*	*3.07*	*3.24*	*2.89*
America	282811.48	479126.58	268106.10	154393.14	230656.08	208195.07	392466.28	467795.59
	40.08	*34.27*	*32.52*	*24.70*	*32.14*	*21.72*	*27.81*	*25.52*
Asia	103376.28	163763.88	126743.12	114032.11	189532.42	222627.35	289694.83	361315.52
	14.65	*11.71*	*15.37*	*18.24*	*26.41*	*23.22*	*20.53*	*19.71*
Europe	301542.50	730022.57	401369.62	323261.66	239682.67	531498.51	647911.56	925032.03
	42.74	*52.21*	*48.68*	*51.71*	*33.40*	*55.44*	*45.92*	*50.46*
Oceania	8203.53	15598.79	8321.29	18888.86	39804.61	-33082.92	35191.63	2198.68
	1.16	*1.12*	*1.01*	*3.02*	*5.55*	*-3.45*	*2.49*	*1.43*

Source: UNCTAD Database, Internet version available at: fttp://www.unctad.org/.

4

At the country level, Saudi Arabia and UAE are the largest host destinations among Arab countries both of them attracting more than 51% of total Arab FDI inflows in 2007. In fact Arab intraregional FDI is very concentrated and Gini coefficient was around 0.7 over the period from 1998 to 2007. These two countries in addition to Kuwait, Qatar and Bahrain account for more than 94% of FDI outwards in 2007 (Appendixes A and B). Table 2 presents Arab intraregional FDI flows over 1998-2007 period. It is worth to mention some notable findings by simply reading this table. On average, intraregional FDI flows account for 36 % of FDI inflows to Arab region. FDI inflows to Arab countries from outside the region still account for almost two third of the inflows. The low penetration of Arab FDI can be explained by a concentration within the GCC countries and a concentration of Arab investors on sectors that may have shorter return horizons such as services and real estate. In 2007 Arab investments in industry and agriculture accounted only for 18% of total Arab FDI. Arab FDI inflows are very erratic but tend to grow dramatically over the period, especially from 2001 to 2006. Greater intraregional FDI flows are certainly driven by the excess of domestic liquidity never reached before, resulting from high oil prices and repatriated Arab money since September 11. Thus, some Arab countries started to invest more intensively in other Arab countries, which offsets the low level of attractiveness of Arab countries in the eyes of large foreign investors. This new trend is of a great benefit to Arab countries especially those suffering from a low saving and investment rates. This can be viewed as a beginning that needs to be reinforced. That's why it is so important to try to bring more light on the economic, geographical and regulatory factors involved in the intraregional investment decision. Their analysis could then help address the gaps and strengthen the drivers of intraregional FDI.

Table 2: Arab Intraregional FDI outward (US Dollars at current prices in millions)

	1998	2000	2001	2002	2004	2005	2006	2007
Total Intraregional FDI	2193.2	2271.532	2447.4	2912.34	5898.5	38006.7	17573.7	15959.6
Intraregional FDI to total Inflows to the region	39.53	38.13	26.24	34.84	23.87	83.12	26.01	22.05
Intraregional FDI to total Outflows of the region	-	99.13	373.73	94.89	83.68	329.41	78.39	36.92

Source : Authors calculations From UNCTAD database.

3. Modeling Arab Intraregional Investment Flows

Most of the empirical research work on FDI to the region was carried out on total country inflows using panel data models. Bilateral investment flows within or outside the region is grossly neglected probably because the lack of easily accessible data . Most of the published work looked at the determinants of FDI and what explains the relatively low attractiveness of the region of foreign investments. Other papers looked at the impact of FDI on growth and economic development. The picture that emerges from this research is not clear cut and the implications for a policy receipt is even more fuzzy. For example Onyeiuw (2008) found that FDI inflows to the MENA region are not related investments in human capital and in technology. Given

the difficulty of measuring human capital and technology in the region due to serious data limitations it is very difficult to conclude that these factors are not relevant to FDI. For Sekkat and Varoudakis (2004) trade and exchange liberalization, infrastructure availability and sound economic and political conditions help increase FDI. However this does not answer why the region is not FDI attractive despite good macroeconomic framework and progress in liberalization in certain Arab countries. Arab Mediterranean countries engaged in Euro Med agreements in order to bolster trade and FDI. In fact as pointed out by Ouali (2006) the establishment of a free trade area with the EU probably would not boost FDI as European companies have no more pressure to enter Southern markets in the absence of trade barriers, and also in the context of an expanding Union to the East where competition for FDI is even tighter, and as pointed out by Martin (2000) such partnership agreements have no special provision for FDI which may create investment diversion not induce it. However Favara (2006) argued that weak FDI and strong imports from Europe and low exports to Europe is due to the lack of reforms not to trade and investment substitution. In fact Arab countries aiming to attract European FDI should learn form East European experience in terms of regulations and use investment diplomacy as a tool to attract more FDI (Zukrowska et al , 2006).

The question that FDI attractiveness is related to having strong infrastructure needs some clarification. Most countries looking for more FDI are also hoping that it contributes to the economic and social development of the country by investing in infrastructure projects. However, multinationals allocate FDI to regions where return is highest which is heavily impacted by the quality of infrastructure. Sekkat (2002) found a positive relation between the quality backbone services and FDI inflows to some Middle East and North Africa (MENA) countries. The real question is then how to boost investment in infrastructure in order to make the country more FDI attractive. First countries should direct their resources to invest in infrastructure and operate reforms in the services sector in order to attract private investment. Also, countries could encourage investing in infrastructure through modern mode of finance that establish a partnership between public and private sector such as BOT and BOOT projects.

Many authors argued the importance of stable macroeconomic environment in attracting FDI. Kamaly (2006) found that FDI response to macroeconomic fundamentals is very sluggish stressing the long term impact of macroeconomic policy. Also Jallab et al (2008) found that macroeconomic stability is essential to translate the impact of FDI on economic growth. Nicet-Chenaf (2007) also found that FDI exerts a positive impact on growth although through employment and value added and less through spillover effects of technological transfers.

Many papers looked at the impact of quality institutions on FDI flows. Bad institutions and governance are thought to deter FDI and increase the risk averse of investors. Marani (2006) using World bank governance indicators developed by Kraay et al (2005) found that institutions play a significant role in investment attractiveness of countries. Alessandrini (2000) concentrated on

the role of legislation and regulation that directly manage FDI inflows. Sarisoy et al (2007) argued that FDI type (vertical or horizontal) depends of political regime. He found that autocracies are likely to receive relatively more vertical FDI, whereas democracies are more likely to receive more horizontal FDI.

In this paper we try to explain inter-Arab investment flows[3] using an augmented gravity model based on both standard gravity variables (distance, income and population, congruity and other dummies) of both sending and receiving countries, as well as on a set of variables specific to cross border investment flows using panel data of 17 Arab countries[4] covering 10 annual periods from 1998 to 2007.

The gravity model was initially introduced in economics by Tinbergen (1962) and first tested by Pöyhönen (1963) and Linnemann (1966) by analogy to Newton's law of gravity, became the work horse of applied trade analysis because of its generally good fit to bilateral trade and investment flows. Over the years the research agenda concentrated on improving the parameters estimation of the model and giving it a theoretical grounding and extended it to include a large array of variables that are thought to affect trade and investment flows[5] Major improvements concentrated on increasing parameters efficiency in the presence of strong heterogeneity in the data and the absence of trade between some countries[6]. There is a vast theoretical and empirical literature on the gravity equation for trade and investment. Theories based on different foundations, including endowment and technological differences, increasing returns to scale, and "Armington" demands, all predict a gravity relationship for trade flows. See, for example, Anderson (1979), Helpman and Krugman (1985), Helpman (1987), Feenstra (2002), and, Anderson (1979), Bergstrand (1985), Davis (1995), Deardoff (1998), and Anderson and van Wincoop (2003), Haveman and Hummels (2001), Feenstra, et al (2001), and Eaton and Kortum (2001). The New Trade Theory (Helpman 1987; Bergstrand 1990) as well as various other models, including Ricardian, Heckscher-Ohlin, and models of monopolistic competition with increasing returns to scale and product differentiation (Evenett and Keller 2002) provided theoretical foundations for taking into account further determinants.

Country heterogeneity is better handled by panel data methods which have the advantage that they permit more flexible types of heterogeneity. This can be readily controlled for by means of country-pair and time effects both fixed and random. In early applications the absence of trade between some countries was ignored in the estimation because log linearization of the model is not defined for zero trade. This of course truncated the sample and introduced selection bias if the zeros are not randomly distributed, which is often the case. To overcome this problem some authors added a constant number to zero values arguing that it does not affect the quality of the estimation problems[7]. Others applied truncation methods in order to account for observation censoring[8] in order to produce efficient estimates of the parameters. Some authors developed full maximum likelihood of the gravity model using a Poisson distribution of the errors[9]. The simplest method is to keep the log linearization while keeping zero flows in the data. This can be achieved by using the inverse hyperbolic sine function[10] originally proposed

by Johnston (1949) which is equivalent to the log function and in the same time defined for zero. This method does not truncate or eliminate low values of the dependent variable (Kritjansdottir, 2005) so it minimizes substantive changes to the distribution of the variable. In this paper we use this function in order to obtain a linear model. The matrix of inter Arab investment flows is very sparse and no investment flows represent more than two third of the total flows. We also compare the results with a model of investment decision by formulating a limited dependent Logit model.

The standard gravity model assumes that investment flows I_{ijt} from country i to country j in period t could be explained the distance[11] D_{ij} and output in sender countries Y_{it}, receiver country Y_{jt} and also by their respective populations N_{it} and N_{jt}. The model is usually expressed in multiplicative form which simplify the process of linearization:. This model is usually extended to include congruity and proximity dummy variables DUM_{ij} to account for factors that facilitate trade and investment between countries such as border, language, colonial history, trade and investment treaties and conventions and trade blocks. This gravity model is augmented by a host of institutional and governance and policy induced variables in order to account for the quality of the investment environment that affect investment decisions. In order to simplify notation we represent the vector of gravity variables by X^1_{ijt} and the vector of variables capturing the quality of investment environment by X^2_{ijt}. The list of variables used in this paper for both matrices are given in Table 3. The model is linearized as follows:

$$Sinh^{-1}(I_{ijt}) = \alpha_{ij} + \beta_1 Sinh^{-1}(X^1_{ijt}) + \beta_2 Sinh^{-1}(X^2_{ijt}) + \beta_3 Dum_{ij} + v_{ijt}$$

v_{ijt} is a heteroskedastic disturbance term with an expected conditional mean equal to one. Based on Haussman test it is common to treat α_{ij} as fixed, which is equivalent to allowing each country pair to have its own dummy variable. However, due to introduced multicollinearity, cross section fixed effect does not permit to include distance in the model.

There is vast literature, both theoretical and empirical, on the determinants of FDI. Eaton and Tamura (1994), provide an early application of the gravity model to FDI. In this literature gravity model is widely used for explaining bilateral FDI[12]. Martin and Rey (2004) proposed a theory of the gravity equation for bilateral investment flows. The common arguments for applying the model to FDI flows are based on the empirically observed complementarities between trade and FDI flows (Portes and Rey, 2005) and the notion that information asymmetries among other costs will increase with distance. Ghosh and Wolf (1999) proposed that trading relationships in addition to creating short run financial relationships also create long run supply and demand channels through which domestic enterprises can acquire foreign capital. Trading relationships provide information about host countries through growing familiarity, thereby reducing information costs of investing

(Guerin, 2006). Calvo and Mendoza (2000) and Goldstein and Razin (2002) emphasize the importance of fixed costs in making international investment decisions. Information costs are part of these fixed costs (Ghosh and Wolf, 1999). A second argument made is based on familiarity effects that cause investors to favor countries that are closer and more similar to their own countries in terms of cultural affinity and linguistic characteristics. De Menil (1999) found that the gravity model accounted well for FDI flows among European countries This has been explained by a type of home bias due to the geographical proximity as well as similar languages and institutions. The finance literature offers some explanation for the home bias puzzle. Gehrig (1993) and Kang and Stulz (1997) derive home bias from asymmetric information between local and foreign investors. Tesar and Werner (1995) explain investment biases by "language, institutional and regulatory differences and the cost of obtaining information about foreign markets". They suggest that geographical distance is an important consideration in international portfolio allocation decisions. Likewise Coval and Moskowitz (1999) suggest that "economic distance" is the right concept for explaining investment bias. Martin and Rey (2004) develop a fully micro-founded general equilibrium model with optimizing agents and endogenous market capitalization. They were able to derive a gravity equation from their theory of asset trade.

GDP size and GDP per capita are believed to give an indication of market size. The impact of GDP per capita on inward FDI is theoretically ambiguous. This is because high GDP per capita reflects both high purchasing power of consumers and high real wages. However empirical studies generally show GDP per capita to have a positive, although not always significant, impact on inward FDI. If FDI is increasing in market size, then both population and GDP could be expected to have positive signs. Both source and host country GDP are always estimated to be positive. However, source and host country population is almost always estimated to be negative. The level of development (measured by GDP per capita) is generally highly correlated with infrastructure Wheeler and Mody (1992) find that infrastructure of the developing countries is more important than market size. This may suggest that FDI flows to developing countries is vertical (endowment determined). The level of development of a country is a likely determinant of inward FDI, for several reasons. A large difference in GDP per capita between the source country and the host may reflect a difference in factor endowments, hence justify both trade and FDI between the two countries. Second, if foreign firms are mainly interested by market access, then they will be attracted by both the size of the host country and by the purchasing power of its inhabitants, because high GDP per capita generally means some ground for product differentiation and higher profits. GDP per capita is also a measure of productivity and of real wages. Low GDP per capita entails low labor costs, which will act as an attraction factor.

In most applications distance and proximity variables matter for FDI. These variables account for various transaction and informational costs incurred when investing abroad. Distance variable in gravity models not only reflects physical distance but also the familiarity effect. The cost of

information gathering would likely increase with distance, as familiarity with the host country's investment opportunities, customs and culture decreases. FDI flows exhibit strong signs of geographical concentration (see for example Eaton and Tamura (1994) Ghosh and Wolf (1998). They found distance elasticities have a negative sign and concluded that FDI relationship is stronger with countries that are nearby. Ghosh and Wolf (1999) argued that trade linkages provide information about the host countries, Calvo and Mendoza (2000) also argued that fixed costs are important in international investment decisions, and several authors emphasize at least part of the information cost is fixed (Ghosh and Wolf, 1999Goldstein and Razin (2002)).

Theoretical literature mostly supports the view that institutional quality matters and that it should be positively related to inward FDI . However, empirical literature indicates that this is not yet a settled issue or a stylized fact. Poor institutions may bring additional costs to FDI. This can be the case of corruption for instance (Wei, 2000). Also due to high sunk costs, FDI is specially vulnerable to any form of uncertainty, including that stemming from poor government efficiency, policy reversals, graft or weak enforcement of property rights (Wheeler and Mody (1992), Wei (2000)). The impact of institutions on FDI has more recently been analyzed within the framework of gravity models. Levchenko (2004) suggests that institutional differences may be a source of comparative advantages. Aizenman and Spiegel (2002), by using a principal-agent framework argued that the share of FDI in total investment should be lower in countries with weak enforcement of property rights. However, "psychic closeness" would reduce either perceived uncertainty or learning costs about the target countries. If institutions are dependent on economic and social history, then one could observe more FDI, amongst countries displaying relatively similar institutions. Habib and Zurawicki (2002) have investigated the impact of institutional distance on bilateral FDI. Wheeler and Mody (1992) find that several risk factors such as bureaucratic red tape, political instability, corruption and the quality of the legal system are not significant explanatory factors for the location of US foreign affiliates. Wei (2000) finds that corruption significantly and adversely affects inward FDI. This result was later challenged by Stein and Daude (2001) who indicated that per capita GDP and corruption were highly collinear, so that leaving per capita GDP out of the estimated equation would lead to spurious results. They conclude that institutions do matter and that higher institutional quality positively affects inward FDI. Globerman and Shapiro (1999) and Haussmann and Fernandez-Arias (2000) argue that high quality institutions should have positive effects on both inward and outward. Egger and Winner (2006) studying the impact of corruption on FDI concluded that corruption is negatively and significantly related to FDI. Benassy-Quere, Coupet, and Mayer (2005) using multiple measures of institutional quality, find that higher quality institutions do matter and positively affect inward FDI. However when they examine institutional distance, they find that it is positively related to inward FDI. Before them Habib and Zurawicki (2002) studied the impact of institutional distance on bilateral FDI, using corruption as a measure, and they find a negative relationship, which means the greater the difference in institutional quality, the more likely inward FDI is.

4. <u>Highlights from the data</u>

Table 3 and Table 4 present variables sources and some summary statistics, respectively. The data include 15 host countries[13] and 17[14] source countries over 1998-2007 period. Thus, the number of observations is $(2 \times 15 \times 10) + (15 \times 14 \times 10) = 2400$. Variables in Table 3 go from variables involved in the basic gravity specification to those involved in the augmented one.

Table 3: Data sources

Variables		Source
gravity specifi	Intraregional FDI flows	Arab Investment & Export Credit Guarantee Corporation
	GDP, GDP per capita and population	World bank and IMF
	Distance, Border, Language	CEPII
Augmented gravity specification	Trade	UNCTAD
	GDP growth rate	WDI, World Bank
	Economic Freedom, Fiscal Freedom, Investment freedom, Business freedom and Financial freedom	Economic freedom of the world, annual report by CATO Institute
	ICRG	PRS Group
	Control of corruption, Political stability and regulatory quality	World Bank
	Fiscal treaties and investment treaties	Arab Investment & Export Credit Guarantee Corporation
	Infrastructure	Authors calculations (composite index based upon 13 World bank indicators)[15]

The Arab region is very heterogeneous in terms of economic and social development as well as in terms of market size and the quality of the business environment. Income per capita varies from high income level GCC countries of Qatar, Bahrain, Kuwait and the UAE to low income level in Mauritania, Sudan and Yemen. It varies from 80000 US$ to just 385 US$. Most Arab economies are classified as lower middle income. In terms of distance Arab countries stretches by more than 6300 Km from Baghdad to Nouakchott and as close by 85 Km between Manama and Doha. In terms of market size Egypt is the largest in term of population accounting for more than 22% of total Arab population in 2006. In fact six Arab countries account for more than 70% of population. In terms of GDP Saudi Arabia alone account for more than 26 5 of total Arab GDP in 2007, and only six countries account form nearly 70 % of total Arab GDP in the same year. As noted above the status of infrastructure is linked to the level of economic development. The results from the composite index we computed and based on 13 sub indices show that GCC countries have the highest scores whereas poor Arab countries have the lowest scores. UAE score was 67 index points compared to 7.4 for Sudan. Most Arab non Gulf countries need to upgrade infrastructure in order to improve their business environments.

In terms of the assessment of quality of institutions the paper uses a large array of indices that reflects different facets of the business and investment environment and potential risks for the investors. ICRG investment profile index which summarizes potential expropriation risks shows that such risks are limited and only Egypt, Syria and Sudan and Iraq scored below 8 out

of possible 12 points in 2007. As for regulatory constraints facing foreign investors, the index of investment freedom taken from the Economic Freedom index published by House of Fraser shows that most Arab countries have a relatively restrictive investment environments. The restrictions are highest in Qatar, UAE, KSA, Lebanon, Tunisia, Syria and Libya. Freedom of investment is highest in Morocco and Mauritania. The rest of Arab countries have average scores. Arab countries try to overcome such restrictive regulatory framework by establishing special laws and procedure such as the unified window in order to cut down red tape and to enact FDI bilateral investment treaties and avoid double imposition. GCC countries do not levy taxes on GCC citizens and are in the process of establishing a common market. Dummy variables for bilateral investment and fiscal treaties were coded as one for GCC intra FDI. Arab countries made progress in generalizing such treaties between them, however investment treaties coven only 45 % of possible bilateral conventions and only 32 % for fiscal treaties.

Table 4: Summary statistics

Variable	Mean	Std. Dev.	Min	Max
Log FDI	5.580798	7.781682	0	24.04625
$Sinh^{-1}$ (FDI)	5.813825	8.104329	0	24.7394
Log Distance	7.52364	0.82891	4.453665	8.761646
Log GDP	48.27769	1.256026	45.48945	52.1866
Log GDP per capita	16.38858	1.837968	12.09216	21.98793
GDP growth rate	4.99338	3.268615	-4.339	17.723
Log Population	31.89068	1.854063	26.5924	35.60681
Total Trade	17.06757	3.484856	0.693147	22.37977
Economic Freedom	57.34953	10.98425	31.53	76.3
Business Freedom	63.3098	12.97684	20	85
Financial Freedom	42.46667	20.10184	10	90
Investment Freedom	44.26667	16.22463	10	70
Fiscal Freedom	78.136	18.53596	32.3	99.9
ICRG (Investment Profile Index)	8.747326	1.806241	3	11.5
Control of corruption	2.936711	0.661078	1.633694	4.17946
Political stability	2.580206	0.909491	0.61368	4.034574
Regulatory quality	2.772289	0.719608	0.804803	4.072647
Infrastructure	34.60746	13.24502	6.005341	66.95997
GCC sender dummy	0.162917	0.369367	0	1
Fiscal treaties dummy	0.425417	0.494509	0	1
Investment treaties dummy	0.5675	0.495526	0	1
Common borer dummy	0.1625	0.368986	0	1
Common language dummy	0.541667	0.498365	0	1

We used World bank governance indicators in order to assess the quality of Arab institutional framework. The data show that Arab countries in general suffer from a weak regulatory framework, widespread corruption, and low level of political stability. These indicators reflect the syndrome of a risk prone region that inhibit foreign investors despite the investment opportunities of the region. As far as political stability only 6 Arab countries had positive values of the index out of 17 Arab countries. Rule of law situation is better with 8 countries having positive scores, however for corruption and regulatory framework only seven countries had positive scores in 2007. Countries that

had relatively better governance status are Bahrain, Jordan, Kuwait, Oman, Qatar, Tunisia, and the UAE. It is clear that the quality of the institutional framework is a big handicap for FDI inflows to the Arab region.

A dummy variable named GCC sender is added to account for the importance of GCC countries as FDI source block. Fiscal and investment treaties are dummy variables as well, taking 1 if a treaty exists between two countries and 0 otherwise, added in order to account for the effectiveness of such treaties in enhancing bilateral investment. Two other dummy variables are added to assess the importance of common language and border in explaining bilateral investment. Obviously, the common language means the second common one after Arabic and it reflects a same colonial history which leads to common business and legislation language. Table 4 shows that variables accounting for economic fiscal, investment, business and financial freedom vary much. Similarly, infrastructure variable shows a high standard deviation confirming relevant differences between host countries. Inversely, ICRG, accounting for country investment risk, control of corruption political stability and regulatory quality variables do not vary much.

5. <u>Estimation and results</u>

Based on the model presented in section 3 above we run numerous regressions of the basic, extended and augmented gravity model using panel fixed cross section and time effects. We also estimated the selected models using limited dependent panel logit model in order to determine the factors that help explain the probability of observing investment flows between Arab countries. The correlation table given in the Appendix E below shows that pair wise correlations between the explanatory do not pose a potential problem of multicollinearity. It is well documented in the literature that the level of development is highly correlated with the level of institutional development. So dropping GDP per capita from the model would produced spurious regression. In fact the level of correlation between governance indicators and GDP per capita in the sample does not exceed 50 %. The empirical results of the selected models are summarized in Appendixes C and D. Regression 1 (Model 1) with no country-pair dummies shows that the basic gravity specification works relatively well in terms of parameters significance, but with low goodness of fit, explaining over 13% of the variation in bilateral FDI. Simple gravity model produces the expected results when compared to other application using this model in which GDP, and Distance and population are significant with the correct signs. Thus, bilateral FDI inflows increases with economic size, as measured by GDP, and decreases in distance. However, GDP per capita is negatively related to FDI inflows. Thus, FDI seems to be positively driven by the total wealth and negatively driven by the average wealth of host countries. This is so in the context of Arab countries because sender countries are the wealthiest and small in population and are the least recipient of FDI except probably the Kingdom of Saudi Arabia. Country-pair fixed affect when introduced in the equation (Model 2) produces similar result whereby GDP, GDP per capita and population are significant with the same signs. However the explanatory power of the model increase dramatically to 45%. Given the erratic behavior of Arab intraregional FDI inflows country

pair dummies are thought to pick up the influence of some non economic factors that have a bearing on FDI allocation such as political factors between Arab states. On the other hand time dummies do not contribute significantly in the explanatory power of the model. The basic gravity model was extended (model 3) to include GDP growth, Common business language, Common border and trade. The result indicates that these variables are significant and the explanatory power of the model increased to 47%. Host countries GDP growth is shown to be negatively related to FDI inflows. An interpretation of this unexpected result is that investors jump on good opportunities, regarding the sector and its profitability, driven by the last wave of privatization. Moreover, common language dummy affects FDI negatively and significantly FDI inflows probably because most of the FDI inflows are operated between the same business language countries. This dummy variable was coded on a second common language given that Arabic is common to all Arab countries. This variable is used to take into account the level of proximity of source and host countries sharing the same colonial history which in part influences common business and legislation language. The result means that different second language is not seen as a constraint. Sharing a land border positively affect bilateral FDI inflows, which concurs with the negative impact of distance on FDI. This is also confirmed by the positive and significant impact of GCC sender dummy variable. GCC sender variable takes one when the source country is one of the six GCC countries. Its positive and significant coefficient indicates that GCC countries are the largest investors. In fact this dummy account for a large variations of FDI inflows and has the same explanatory power of the country fixed effect dummies. This extended gravity model indicates that proximity factors plays a significant role in bilateral FDI flows. Total trade was also found to have a positive significant impact. Intra trade affects FDI either through the information and familiarity of doing channel, or by investing abroad to overcome trade barriers and exploit local markets. We noticed that imports and exports when taken separately have insignificant impact on bilateral FDI. Only total trade which is the sum of both variables has significant impact on bilateral FDI, indicating that higher trade, without being able to say in which direction, leads to more investment.

Base of the theoretical and empirical evidence surveyed in section 3, the extended gravity model was further augmented to include factors that are believed to have influence on bilateral FDI inflows. In model 4 we test the pertinence of an open liberal economic environment to bilateral trade. Using economic freedom indices developed by the CATO institute, we added to models 3 variables that measure economic, financial, fiscal, business and investment freedoms. First investment freedom index has a positive impact on bilateral FDI in the Arab region. However other measures of economic freedom have a negative impact. Then how to account for such a contradiction. In model 5 also the aggregate measure of economic freedom and ICRG's investment profile are shown to negatively affect bilateral FDI. This result is probably due that Arab government make specific reforms in certain areas that are thought by policy makers as essential to stimulate development whereas in other areas the reforms are slow. Also some countries have FDI laws that are liberal whereas domestic regulation is very tight in other areas. However, the results shows that concentrating reforms in

the investments sector help to boost FDI which probably encouraged capital to go to areas where economic freedom is low. The significance confirms at least that they do matter, as we said before, but in the wrong way, since we thought or wished their impact would be positive. Thus, the economic environment as a whole hampers investment. We think that this does not mean that there is no improvement in business environment but the rhythm with which reforms are currently undertaken does not correspond to that of bilateral FDI (calculating growth rates of these indices over 1998-2007 period confirms this idea, except few examples of deep improvements for Bahrain, Oman and Qatar in terms of financial freedom, or Sudan, Syria and Libya in terms of fiscal freedom). In addition, ICRG is shown to negatively affect bilateral FDI. Given that ICRG reflects investment risk, the result concurs with the one above and tells a lot about the necessity of fostering reforms in order to deeply and quickly improve the economic environment and lower investment risk in some countries.

As for infrastructure variable, model 6 shows that it impacts negatively and significantly bilateral FDI, indicating that more investment flows are allocated to countries with bad infrastructure. This is related to the nature of intra-Arab investments widely concentrated in services, telecommunications, real estate and tourism driven mainly by lack of infrastructure and hence represent an opportunity offered by government aiming to upgrade infrastructure. This finding merely confirms the negative relationship between FDI and GDP growth rate discussed above.

In model 6 we test the impact of institutional variables that are thought to reflect the quality of business and investment environment and the different risks that investors encounter. We used World Bank governance indicators that benchmark political stability, control of corruption, and regulatory framework. Both political stability and control of corruption are found to be negatively and significantly related to FDI. This result also reflect the fact that Arab intraregional FDI occurs between countries with low level of institutions, because some of the investments are made by government investment agencies or because simply investors do not see potential threats because themselves operates in bad institutional environments. However regulatory quality is found to be positively significant related to FDI.

Finally, investment and fiscal treaties added to model 6 are found to be negatively related to bilateral FDI. These variables are coded as dummies if the pair of countries have a common investment and tax treaty. Tax treaties variable is not significant, however investment treaties variable is significant and also negative. This result means that treaties are not effective tools of investment promotion as FDI flows to countries without such treaties

6. Conclusion

Foreign Direct Investment has increased dramatically in the global economy over the past twenty years, though this recent surge has affected advanced countries as well as some Asian countries to a much greater extent than Arab countries. Simultaneously, some Arab countries, mainly GCC

countries, started to invest further in other Arab countries as a result of excess of liquidity driven by high oil prices and repatriated Arab money since September 11. Therefore, the need to draw up an assessment of the global evolution of Arab intraregional FDI in order to reap its benefits on Arab countries is highlighted using an augmented gravity model based on standard variables as well as a set of specific variables accounting for institutional and regulatory aspects using a panel data of 17 Arab countries over 1998-2007 period.

Empirical evidence stresses the importance of economic size, as measured by GDP, and distance in explaining FDI flows, which increase in GDP and decrease in distance. Inversely, GDP per capita and population negatively affect FDI bilateral flows, suggesting that bilateral FDI seems to be positively driven by total wealth and negatively driven by the average wealth of host countries. Furthermore, bilateral FDI flows are likely to be larger between neighbors, having already well established trade movements.

Empirical evidence on quality business environment, as measured by business, fiscal, economic, financial and investment environment, is quite mixed, but suggests that regulatory constraints in Arab countries tend to hamper bilateral investment. Likewise, relative investment profile risk, as measured by ICRG index, and low institutional quality, as measured by political stability and control of corruption, are found to negatively affect bilateral FDI flows. Evidence supports the idea that countries suffering the most from weak regulatory framework and widespread corruption attract, with no surprise, less FDI inflows. Inversely, differences in second language and infrastructure levels are found to positively affect bilateral FDI, indicating that different business languages is not seen as a constraint, and larger FDI flows are allocated to countries with bad infrastructure, revealing the nature of Arab FDI flows widely concentrated in services, telecommunications and real estate.

Finally, Arab generalizing efforts in terms of investment and fiscal treaties are shown to be, so far, not effective in boosting bilateral FDI flows contrary to host countries hopes. Besides gravity variables, normally affecting intraregional FDI, institutional quality and other variables are not in favor of intraregional FDI, indicating that there is room for improvement. Indeed, in order to achieve more effective intraregional FDI, more efforts have to be undertaken in terms of improving business environment, controlling corruption, limiting risks as well as deepening cooperation policies. Such efforts will certainly enhance Arab countries attractiveness in eyes of Arab investors as well as foreign investors.

Footnotes

(1) See Laabas (2002) and Noland and Pack (2007) for a discussion of economic development challenges facing Arab countries.

(2) GCC countries are Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and United Arab Emirates (UAE)

(3) To the best of our knowledge, there are few empirical comparative studies on Inter Arab Investment flows. Elafif (2006) used a model to study Arab intraregional investment flows, however the model specification was adhoc.

(4) The countries are: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

(5) researchers have various specifications of factor endowment of countries as well as transaction-cost-related variables, such as common language, common border, general openness of destination country to foreign competition, etc. What is called "gravity model", therefore, often goes beyond the core idea of such models, namely to take into account the size of the economies concerned and their distance.

(6) For example Joseph Francois and Miriam Manchin (2007) found that 42% of importer-exporter pairings had zero bilateral trade. Helpman and Melitz (2007) used a data set on 158 countries whereby about half of the country pairs do not trade with one-another.

(7) By assuming that Ln(FDI+a) and using a = 1 allows setting to zero the dependent variable when FDI is zero. However it would substantially compress the distribution of FDI. Alternative Benassay et al (2006) used a = 0..3, which corresponds to the first decile of the distribution.

(8) Helpman *et al.* (2005) proposed a theoretical model rationalizing the zero trade flows and suggest estimating the gravity equation with a correction for the probability of countries to trade. To estimate the model they apply a two-step estimation technique similar to sample selection models. Will Martin and Cong Pham (2007) applied Eaton-Tamura (E-T) Tobit estimator to a gravity model.

(9) See for example Westerlund*y* and Fredrik Wilhelmsson*z* (2006) who estimated the gravity model directly from its non-linear form by using the fixed effects Poisson maximum likelihood (ML) estimator that was first proposed by Hausman *et al.* (1984).

(10) The inverse hyperbolic sine function is defined as follows $Sinh^{-1} = Ln[x + (1 + x^2)^{1/2}]$.

(11) [1] Clair, G., G. Gaulier, T. Mayer, and S. Zignago (2004). "Notes on CEPII's distances measures." CEPII: Paris.

(12) See for example Hausman and Fernandez-Arias , 2000, Chunlai, 1997, De Menil, 1999, Portes and Rey, 2000, Portes et al, 2001 and Wei, 1997, 2000.

(13) Algeria, Bahrain, Egypt, Jordan, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, UAE and Yemen.

(14) Same countries plus Iraq and Kuwait.

(15) Air transport, freight (million ton-km), Fixed line and mobile phone subscribers (per 100 people), International Internet bandwidth (bits per person), International voice traffic (minutes per person), Internet users (per 100 people), Mobile phone subscribers (per 100 people), Personal computers (per 100 people), Population covered by mobile telephony (%),Price basket for residential fixed line (US$ per month), Roads, paved (% of total roads), Secure Internet servers (per 1 million people), Telephone faults (per 100 mainlines) and Telephone mainlines (per 100 people).

References

Aizenman, J., and Spiegel M (2002), "Institutional Efficiency, Monitoring Costs, and the Investment Share of FDI", NBER working paper 9324.

Alessandrini, S (2000) "FDI In the MENA Region" Bocconi University, Milan (Italy) February, 2000.

Anderson, J (1979), "A theoretical Foundation for the Gravity Equation", American Economic review, Vol 69, pp. 106-16.

Anderson, J and Van Wincoop, E (2003), "Gravity with Gravitas: A solution to the Border Puzzle", American Economic Review, Vol. 93, pp. 170-92.

Bashir, A Foreign Direct Investment and Economic Growth In Some MENA Countries: Theory and Evidence, Department of Economics, Grambling State University.

Benassy-Quere, , Maylis Coupet, A and Mayer, M (2005), "Institutional Determinants of Foreign Direct Investment", CEPII Mimeo.

Bergstrand, J. (1985), The Gravity Equation in International Trade: Some microeconomic Foundations and Empirical Evidence, The Review of Economics and Statistics, 67, p.474-481.

Bergstrand, J (1990):The Heckscher-Ohlin-Samuelson Model, the Linder Hypothesis and the Determinants of Bilateral Intra-Industry Trade", in: Economic Journal, Vol. 100, No. 403, pp. 1216-1229.

Böhmer , A (2008), "FDI Promotion Policies in Middle East and North Africa. 4th Meeting of Working Group 1 and 2 MENA-OECD Investment Program 28-29 October 2008, Paris OECD Private Sector Development Division.

Calvo, G., and E., Mendoza, (2000), "Rational Contagion and the Globalization of Securities Markets", Journal of International Economics, Vol. 51,1, pp. 79-113.

Clair, G., G. Gaulier, T. Mayer, and S. Zignago (2004). "Notes on CEPII's distances measures." CEPII: Paris.

Coval, J., and T., Moskowitz, (1999), "Home bias at home: local equity preference in domestic portfolios", Journal of Finance, Vol. 54, pp. 2045-2073.

De Menil, G., (1999), "Real capital market integration in the EU", Economic Policy, Vol. 28, pp. 167-204.

Davis, Donald (1995) \Intra-industry trade: A Heckscher{Ohlin{Ricardo approach" , Journal of International Economics (39)3-4 (1995) pp. 201-226.

Deardoff, A. (1998). "Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World?" in Jeffrey Frankel (ed.), The Regionalization of the World Economy.Chicago, IL: University of Chicago Press.

Disdier, A-C., and K. Head (2004), "The Puzzling Persistence of the Distance Effect on Bilateral Trade", Mimeo, University of British Columbia.

Divarcı, A, Hisarcıklılar, M , Kayalica O, and Kayam S (2007) "Foreign Direct Investment and Development in MENA Countries. Faculty of Management, Department of Management Engineering, Macka, 34367, Istanbul, Turkey.

Egger, P, and Winner, H (2006), "How Corruption Influences Foreign Direct Investment: A Panel Study", Economic Development and Cultural Change, Vol. 54 ,No. 2, pp. 459-486.

Eaton, J. and A. Tamura (1994), "Bilateralism and Regionalism in Japanese and U.S Trade and Direct Foreign Investment Patterns", Journal of the Japanese and International Economies, 8: 478-510.

Eaton, J and Kortum, S (2002), " Technology, Geography, and Trade", Econometrica, Vol 70, pp. 1741-1779.

Evenett, S. and Keller W (2002). "On Theories Explaining the Success of the Gravity Equation." Journal of Political Economy. 110(2): 281-316.

Favara, M (2006) "FDI Inflows And Trade in The MENA Region: Complementary- Substitution Issues" University of Genoa".

Feenstra, R., Markusen, J, and , Andrew K., (2001), "Using the Gravity Equation to Differentiate among Alternative Theories of Trade", Canadian Journal of Economics, Vol. 34, No. 4, pp. 430-447.

Feenstra, R. (2004). Advanced International Trade: Theory and Evidence. Princeton University Press: Oxford.

Goldstein, I.,and A. Razin, (2002), "The Volatility of FDI and Portfolio Investment: The Role of Information, Liquidation Shocks and Transparency", Latin American and Caribbean Economic Association, meetings proceedings.

Globerman, S. and D. Shapiro (2002), "Governance Infrastructure and U.S. Foreign Direct Investment", Journal of International Business Studies.

Gehrig, T., (1993), "An information based explanation of the domestic bias in international equity investments", Scandinavian Journal of Economics, Vol. 95, 97-109.

Guerin, S., (2006), "The Role of Geography in Financial and Economic Integration: A Comparative Analysis of Foreign Direct Investment, Trade and Portfolio Investment Flows", The World Economy, Vol. 29, No. 2, pp. 189-209.

Globerman, S. and D. Shapiro (2002), "Global Foreign Direct Investment Flows : The Role of Governance Infrastructure", World Development 30(11):1899-1919.

Gourieroux, C., Monfort, A and Trognon, A (1984). "Pseudo Maximum Likelihood Methods: Applications to Poisson Models," Econometrica, 52, 701-720.

Ghosh, S. and H. Wolf, (1999), "The Geography of Capital Flows", In: Edwards, S. (Ed.), Capital Inflows to Emerging Markets. University of Chicago Press, Chicago.

Habib, M., and L. Zurawicki (2002), "Corruption and Foreign Direct Investment", Journal of International Business Studies 33 (2).

Hausman, J.,. Hall, B and Griliches ,Z (1984). Econometric models for count data with an application to patents-R&D relationship, Econometrica, Vol. 52, pp. 909-938.

Hausmann, R, and Fernandez-Arias, E (2000), "Foreign Direct Investment: Good Cholesterol?", Inter-American Development Bank, Mimeo.

Heckman, J. (1979), "Sample Selection Bias as a Specification Error", Econometrica, 47 153-161.

Havemann, J. and D. Hummels (2004). "Alternative Hypotheses and the Volume of Trade: the Gravity Equation and the Extent of Specialization."Canadian Journal of Economics 37(1): 199-218.

Helpman, E and Krugman, P (1985), 'Market Structure and Foreign Trade", Cambridge MA, The MIT Press.

Helpman, E (1987), "Imperfect Competition and International Trade: Evidence from fourteen Industrial Countries", Journal of Japanese and International Economics, Vol 1, pp. 62-81.

Johnston, N. L., (1949), "Systems of Frequency Curves Generated by Methods of Translation", Biometrika, 36, pp. 149-76.

Jallab, M, Gbakou P, Sandretto, R (2008), " Foreign Direct Investment, Macroeconomic Instability And Economic Growth in MENA Countries" Working Papers W.P. 08-17 Groupe d'Analyse et de Théorie Économique UMR 5824 du CNRS GATE.

Kang, J.-K., and Stulz, R (1997), "Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan", Journal of Financial Economics, Vol. 46, pp. 3-28.

Khadarooa, J (2000), "Transport Infrastructure and FDI: Lessons from Sub Saharan African Economies". Boopen Seetanahb,* *Bank of Maurtitius, Port-Louis, Mauritius, University of Technology, Mauritius, Pointes aux Sables, Mauritius*.

Kamaly, A (2005) "Evaluation of FDI flows into the MENA Region", Economics Department, The American University in Cairo.

Kaufmann, D, Kraay, A and Mastruzzi, M, "Governance Matters IV: Governance Indicators for 1996-2004" (May 2005). World Bank Policy Research Working Paper Series No. 3630 Available at SSRN: http://ssrn.com/abstract=718081 or DOI: 10.2139/ssrn.718081.

Kristjansdottir, H, (2005), "Determinants of Foreign Direct Investment in Iceland", CAM, WP No. 15.

Laabas, B, ed (2002), " Arab Development Challenges of the Millenium", Ashgate Publishing Limited, Hampshire, England.

Levchenko, A. (2004), "Institutional Quality and International Trade", HIMF Working Paper, 04/231.

Linnemann, H (1966), " An Econometric Study of International Trade Flows", Amesterdam.

Martin, W and Pham, C (2007), "Estimating the Gravity Model When Zero Trade Flows Are Important". World Bank Workin Paper, 1 September, 2007

Martin, P, and Rey, H (2004), "Financial supermarkets: size matters for asset trade", Journal of International Economics, 64, 335-361.

Martín, I (2000), " The Euro-Mediterranean Partnership and Inward FDI in Maghreb Countries". European University Institute. Robert Schauman Center For Advanced Studies. University Carlos III, Madrid Workshop IV Promoting Trade and Investment Links in the MENA Region: The Potential Role of the Euro-Med Partnership Agreements.

Mina, W (2007), "Are the GCC FDI Location Determinants Favorable? Department of Economics and Finance". College of Business and Economics UAE University.

Nicet-Chena, D and Rougier, F (2008), "Recent exports matter: export discoveries, FDI and growth, an empirical assessment for MENA countries Université de Bordeaux GREThA UMR CNRS 5113 Cahiers du GRETA n° 2008-22.

Noland, M and Pack, H (2007), " The Arab Economies in a Changing World", Peter G Peterson Institute for International Economics, Washington, DC, USA.

Onyeiwu, S (2006) "Analysis of FDI Flows to Developing Countries: Is the MENA Region Different?". Allegheny College. Meadville, Pennsylvania 16335, USA.

Onyeiwu, S (2008), "Does Investment in Knowledge and Technology Spur Optimal FDI in the MENA Region? Evidence from Logit and Cross-Country Regressions". Paper for Presentation at the African Economic Conference Organized by the African Development Bank and the United Nations Economic Commission for Africa , Tunis, November 12-14, 2008.

Ouali, H (2006),"EU-MENA Partnership Agreements; Competition for FDI and Sustainable Growth". *Graduate School of Economics & Business Administration Hokkaido University Japan*.

Pöyhönen P., 1963, "A Tentative Model for the Volume of Trade between Countries", Weltwirtschaftliches Archiv, 90 (1), pp.93-100.

Stein, E., and Daude, C (2001), "Institutions, Integration and the Location of Foreign Direct Investment", Inter-American Development Bank.

Portes, R, and Rey, H (2005), "The determinants of cross-border equity flows", Journal of International Economics, 65, 269-296.

Sarisoy, S and Manzocchi, S (2007), " Political Regime and Vertical vs. Horizontal FDI. Luiss Lab of European Economics LLEE Working Document no. 49 May 2007

Sarisoy, S and Manzocchi S, (2007) "Political Regime and Vertical vs. Horizontal FDI". May 2007 Luiss Lab of European Economics LLEE Working Document no. 49.

Sekkat K, Varoudakis, M (2004) ", Trade and Foreign Exchange Liberalization, Investment Climate and FDI in the MENA Countries WORKING PAPER N°05-06.RS. DULBEA l Université Libre de Bruxelles, Belgium.

Sekkat K (2002) "Trade, FDI and "backbone" services in the MENA region", (A report to the World Bank) By (University of Brussels and the ERF).

Shirazi, A Gwendolyn K (2008) "Determinants of Foreign Direct Investment in MENA Countries: An Empirical Analysis University of Wollongong in Dubai, UAE.

Tesar, L., and I. Werner, (1995), "Home bias and high turnover", Journal of International Money and Finance, Vol. 14, pp. 467-492.

Tinbergen, J (1962), " Shaping the World Economy - Suggestions for an International Economic Policy", The Twentieth Century Fund.

Vittorio, D and Ugo M (2007) "Do institutions matter for FDI? A comparative analysis for the MENA countries".   Munich Personal RePEc Archive Universita Magna Graecia di Catanzaro Online at http://mpra.ub.uni-muenchen.de/2426/ MPRA Paper No. 2426, posted 07. November 2007 / 02:28.

Westerlundy, J and Wilhelmssonz , F (2006) "Estimating the gravity model without gravity using panel data" February 14, 2006 Department of Economics, Lund University, P. O. Box 7082, S-220 07 Lund, Sweden.

Wei, J (1997), ' How is taxing corruption on International investors", NBER Working paper 6030.

Wei, J (2000), ' How is taxing corruption on Internal investors", The Review of Economics and Statistics, Volume 82, issue 1, pp.1-11.

Wheeler, D., and A. Mody, 1992, "International investment location decisions. The case of U.S. firms", Journal of International Economics, 33: 57-76.

Żukrowska, K, Galek, A, Hussain, M, Czerpak, M, Grącik, M, Stryjek, J (2005), "The Political Economy of Governance in the Euro-Mediterranean Partnership Deliverable No. 3 Working Package II: The Political Economy of Euro-Med Investment FDI in Mediterranean Partnership Countries. How to improve the institutional environment in the Mediterranean region to attract the FDI? Go-Euro-Med Working Paper No. 0605 International Security Department Warsaw School of Economics Poland 2006 The Sixth Framework Program Contract No. 028386.

Appendix

Appendix A: Total FDI inflows in Arab countries (US Dollars at current prices in millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Saudi Arabia	94.00	123.00	183.00	504.00	453.00	778.46	1942.00	12097.00	18293.00	24318.40
UAE	257.66	-985.34	-506.33	1183.84	1314.27	4255.96	10003.54	10899.93	12805.99	13253.12
Egypt	1075.50	1065.30	1235.40	509.90	646.90	237.40	2157.40	5375.60	10042.80	11578.10
Lebanon	1134.90	871.68	964.10	1451.22	1335.96	2977.00	1993.10	2791.47	2739.40	2844.56
Morocco	400.29	1363.92	422.21	2807.73	481.30	2314.49	894.78	1653.37	2450.30	2577.08
Libya	-148.00	-128.10	141.00	-113.00	145.00	143.00	357.00	1038.00	2013.00	2541.00
Sudan	370.70	370.80	392.21	574.00	713.18	1349.19	1511.07	2304.64	3541.36	2436.34
Oman	101.44	39.01	83.20	5.20	122.24	494.15	228.87	1687.90	1622.90	2377.10
Jordan	310.01	156.40	814.81	179.84	121.58	443.16	816.36	1774.05	3219.32	1835.40
Bahrain	179.52	453.72	363.56	80.40	217.02	516.70	865.31	1048.67	2914.89	1756.00
Algeria	606.60	291.70	438.00	1196.00	1065.00	633.80	881.90	1081.30	1795.40	1664.60
Tunisia	668.10	367.90	778.80	486.40	821.30	583.90	638.90	782.40	3311.80	1617.90
Qatar	347.30	113.25	251.60	295.52	623.92	624.92	1198.97	1298.23	158.98	1137.99
Syria	82.00	263.00	270.00	110.00	115.00	180.00	275.00	500.00	600.00	885.00
Yemen	-219.40	-307.60	6.40	135.50	101.70	5.50	143.60	-302.10	1121.00	464.27
Iraq	7.11	-6.90	-3.14	-6.45	-1.59	-0.02	300.00	515.30	383.00	447.89
Djibouti	3.45	4.24	3.29	3.35	3.50	14.22	38.54	59.04	163.59	195.35
Mauritania	-0.30	15.12	40.10	76.70	67.40	101.89	391.60	814.10	154.57	152.88
Somalia	0.04	-0.81	0.27	0.04	0.14	-0.85	-4.79	24.00	96.00	141.00
Kuwait	59.06	72.28	16.30	-175.00	3.62	-68.00	23.75	234.00	122.00	123.00
Palestine	218.20	188.60	62.00	19.20	9.40	18.00	48.90	46.50	18.60	20.86
Comoros	0.38	0.27	0.09	1.15	0.43	0.79	0.67	0.56	0.58	0.80

Source : Unctad database, 2008.

**Appendix B: Total FDI outflows of Arab countries (US Dollars
at current prices in millions)**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Kuwait	-1866.86	22.99	-303.14	-242	-78	-5016	2581	5142.12	8207	14203
Saudi Arabia	140.64	97.38	1550	39.28	2020.02	473	78.389	52.858	1257.40	13139.11
UAE	127.30	317.10	423.66	213.70	412.67	991.15	2208.03	3750.30	10891.76	6624.73
Qatar	21.42	7.19	17.74	17.21	-21.04	88.17	437.918	351.91	127.43	5262.60
Bahrain	180.8	163.4	9.57	215.95	190.15	741.35	1035.63	1135.37	980.05	1669.14
Egypt	45.5	37.5	51.2	12.4	27.8	20.7	158.9	92	148.4	664.8
Morocco	20.36	17.84	58.55	97.07	28.36	12.20	30.80	73.55412	444.91	652.14
Oman	-4.73	3.39	-2	54.99	0.026	153.44	249.67	234.1	327.7	569.6
Algeria	1	47	18	9	99.8	14.2	257.9	22.5	34.6	289.9
Lebanon	37.83	131.73	108.37	1.19	0.20	40	212.9	122.04	70.01	232.9
Iraq	..	..	..	..	..	..	..	88.7	305	147.15
Palestine	81.83	86.58	218.14	363.69	346.15	48.5	-11.49	40.38	139.18	56.02
Syria	1	20	43.08	8.94	119.40	57.10	47.54	61.23	55.29	54.69
Yemen	4.00	-3.99	-8.76	0.60	39.34	61.41	21.48	65.03	55.91	53.83
Jordan	2.054	2.7	8.60	31.59	13.82	-3.66	18.19	163.18	-138.08	48.09
Tunisia	1.8	2.5	0.4	5.8	6.5	5.4	4.2	12.6	33.1	20.07
Sudan	..	..	..	..	..	..	..	..	7.28	10.74
Mauritania	0.09275	..	..	..	..	-1	4	2.02	5.07	3.75
Libya	295	226	98	-174.6	-136	62.6	-286	128	-534	-479

Source : Unctad database, 2008.

26

Appendix C: Panel Least Squares Gravity model results (dependant variable Sinh^{-1}(FDI))

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	**-58.95*****	**52.6*****	**6.36**	**5.81**	**4.08**	**-5.28**
	(-8.95)	(5.49)	(1.12)	(1.01)	(0.73)	(-0.93)
Ln GDP	**32.48*****	**24.69*****	**0.1**	**0.3*****	**0.31*****	**0.49*****
	(4.24)	(3.05)	(0.80)	(2.51)	(2.68)	(3.88)
Ln GDP per capita	**-31.12*****	**-24.77*****				
	(-4.07)	(-3.06)				
Ln Distance	**-2.4*****		**-1.15*****	**-1.76*****	**-1.6*****	**-1.65*****
	(-12.61)		(-5.61)	(-10.22)	(-9.54)	(-7.81)
Ln Population	**-30.58*****	**-40.96*****				
	(-4.00)	(-4.77)				
GDP growth			**-0.14*****	**-0.12*****	**-0.11*****	
			(-3.94)	(-3.38)	(-2.9)	
Common language			**-0.57****			**-0.48***
			(-2.14)			(-1.83)
Common border			**2.11*****			**1.39*****
			(4.48)			(3.00)
GCC sender			**13.51*****	**13.07*****	**13.17*****	**12.88*****
			(54.68)	(52.22)	(53.84)	(49.40)
Trade			**0.1****	**0.11*****	**0.13*****	**0.13*****
			(2.33)	(2.73)	(3.06)	(3.14)
Economic freedom					**-0.05*****	
					(-4.98)	
Financial freedom				**-0.02*****		
				(-2.46)		
Fiscal freedom				**-0.02****		
				(-2.43)		
Business freedom				**-0.03*****		
				(-3.05)		
Investment freedom				**0.04*****		
				(5.01)		
Infrastructure						**-0.09*****
						(-5.69)
Political stability						**-0.44***
						(-1.67)
Regulatory quality						**1.63*****
						(4.38)
ICRG				**-0.24*****	**-0.2****	
				(-2.82)	(-2.29)	
Control of corruption						**-1.37****
						(-2.17)
Investment treaties						**-0.72****
						(-2.54)
Fiscal treaties						**-0.068**
						(-0.23)
Observations	**2400**	**2400**	**2400**	**2400**	**2400**	**2400**
Adjusted R-squared	**0.13**	**0.45**	**0.47**	**0.48**	**0.47**	**0.50**
F statistic	**29.63**	**8.98**	**134.79**	**119.28**	**137**	**116.61**
Prob(F stat)	**0**	**0**	**0**	**0**	**0**	**0**
Country Pair Dummies	**No**	**Yes**	**No**	**No**	**No**	**No**
Year Dummies	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Hausman test: Chi-Sq (FE verses RE)		**41.15**				

T-statistic of the coefficients are reported in parentheses. ***, **, and * indicate significance levels at 1, 5 and 10 [percent, respectively.

Appendix D: Panel Logit Gravity model results (dependant variable Sinh^{-1}(FDI))

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	**-16.66***	**-21.28***	**-10.26***	**0.78**	**-6.42**	**-10.32***
	(-3.95)	(-4.96)	(-1.87)	(0.14)	(-1.17)	(-1.72)
Log GDP	**19.33***	**19.45***	**0.2***	**0.08**	**0.21***	**0.27***
	(2.73)	(2.78)	(1.74)	(0.68)	(1.88)	(2.10)
Log GDP per capita	**-19.06***	**-19.16***				
	(-2.69)	(-2.74)				
Log Distance	**-0.96***		**-0.46***	**-0.82***	**-0.76***	**-0.53***
	(-5.96)		(-1.98)	(-4.4)	(-4.0)	(-2.29)
Log Population	**-18.76***	**-18.28**				
	(-2.65)	(-2.71)				
GDP growth			**-0.03**	**-0.07***	**-0.05***	
			(-1.47)	(-2.46)	(-2.11)	
Common language			**-0.24**			**-0.13**
			(-0.78)			(-0.44)
Common border			**1.03***			**0.97***
			(2.06)			(1.96
GCC sender			**26.31**	**26.57**	**26.37**	**26.74**
			(0.01)	(0.01)	(0.01)	(0.01)
Trade			**0.094***	**0.08***	**0.1***	**0.083***
			(2.71)	(2.30)	(2.83)	(2.30)
Economic freedom					**-0.06***	
					(-5.11)	
Financial freedom				**-0.03***		
				(-5.14)		
Fiscal freedom				**-0.003**		
				(-0.5)		
Business freedom				**-0.04***		
				(-4.54)		
Investment freedom				**0.02***		
				(3.38)		
Infrastructure						**-0.02**
						(-1.41)
Political stability						**-0.3**
						(-1.45)
Regulatory quality						**0.95***
						(2.51)
ICRG				**0.17***	**0.19***	
				(2.61)	(3.16)	
Control of corruption						**-1.23***
						(-2.9)
Investment treaties						**-0.09**
						(-0.37)
Fiscal treaties						**0.32**
						(1.19)
Observations	**2400**	**2400**	**2400**	**2400**	**2400**	**2400**
Wald chi2	**68.7**	**32.93**	**41.2**	**93.78**	**62.57**	**71.81**
Prob > chi2	**0**	**0**	**0**	**0**	**0**	**0**
Country Pair Dummies	No	Yes	No	No	No	No
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Hausman test: Chi-Sq (FE verses RE)		6.62				
Prob>chi2		0.084				

Z-statistic of the coefficients are reported in parentheses. ***, **, and * indicate significance levels at 1, 5 and 10 [percent, respectively.

Appendix E: Correlations matrix

Correlation	Border	Business freedom	Control of corruption	Economic freedom	Financial freedom	Fiscal freedom	Fiscal treaties	GCCSENDER	GDP growth rate	ICRG	Infrastructure	Investment freedom	Investment treaties	Language	Distance	GDP	GDP per capita	GDP per capita recipient	GDP per capita sender	GDP recipient	GDP sender	Population	Population recipient	Population sender	Political stability	Regulatory quality	Sinh⁻¹FDI	Trade
Border	1.00																											
Business freedom	-0.04	1.00																										
Control of corruption	-0.01	0.53	1.00																									
Economic freedom	-0.02	0.74	0.79	1.00																								
Financial freedom	-0.07	0.53	0.43	0.75	1.00																							
Fiscal freedom	0.01	0.39	0.65	0.75	0.51	1.00																						
Fiscal treaties	0.06	0.06	0.11	0.14	0.07	0.15	1.00																					
GCCSENDER	0.05	-0.02	-0.07	-0.01	0.02	-0.03	0.07	1.00																				
GDP growth rate	-0.07	-0.06	0.22	0.15	0.05	0.20	0.06	-0.06	1.00																			
ICRG	-0.01	0.19	0.59	0.50	0.40	0.47	0.07	-0.05	0.26	1.00																		
Infrastructure	-0.01	0.39	0.82	0.71	0.45	0.64	0.13	-0.02	0.25	0.58	1.00																	
Investment freedom	-0.07	0.46	0.27	0.53	0.52	0.10	0.07	0.03	0.04	0.28	0.22	1.00																
Investment treaties	0.03	0.04	0.12	0.15	0.09	0.16	0.47	0.01	0.12	0.10	0.12	0.10	1.00															
Language	0.20	-0.08	0.11	0.06	0.00	0.13	0.06	0.08	0.09	0.09	0.07	-0.12	0.06	1.00														
Distance	-0.51	-0.02	-0.13	-0.12	-0.11	-0.19	-0.27	-0.06	-0.03	-0.02	-0.18	0.07	-0.16	-0.31	1.00													
GDP	0.21	-0.09	0.06	0.03	-0.18	0.10	0.08	0.28	0.05	0.12	0.21	-0.09	0.04	0.01	0.05	1.00												
GDP per capita	0.01	0.11	0.51	0.35	0.18	0.42	0.13	0.32	0.18	0.38	0.57	-0.08	0.06	0.15	-0.21	0.33	1.00											
GDP per capita recipient	0.03	0.19	0.77	0.53	0.27	0.60	0.08	-0.08	0.23	0.54	0.83	-0.11	0.02	0.12	-0.16	0.22	0.68	1.00										
GDP per capita sender	-0.01	-0.04	-0.05	-0.03	-0.02	-0.02	0.10	0.51	0.01	-0.01	-0.03	0.00	0.06	0.09	-0.12	0.23	0.70	-0.05	1.00									
GDP recipient	0.16	-0.08	0.10	0.06	-0.24	0.10	0.05	0.03	0.01	0.11	0.24	-0.11	-0.02	0.01	0.04	0.72	0.22	0.30	0.00	1.00								
GDP sender	0.14	-0.05	-0.02	-0.01	0.00	0.04	0.07	0.37	0.07	0.07	0.05	-0.01	0.07	0.01	0.03	0.68	0.25	0.00	0.33	-0.02	1.00							
Population	0.13	-0.17	-0.46	-0.33	-0.30	-0.35	-0.07	-0.13	-0.14	-0.30	-0.43	0.02	-0.03	-0.15	0.24	0.35	-0.77	-0.52	-0.54	0.27	0.22	1.00						
Population recipient	0.08	-0.24	-0.67	-0.47	-0.43	-0.51	-0.04	0.10	-0.22	-0.46	-0.64	0.03	-0.03	-0.11	0.18	0.27	-0.51	-0.77	0.05	0.39	-0.01	0.69	1.00					
Population sender	0.10	0.00	0.04	0.03	0.02	0.04	-0.05	-0.28	0.03	0.05	0.06	0.00	-0.01	-0.08	0.14	0.21	-0.54	0.05	-0.79	-0.01	0.32	0.68	-0.06	1.00				
Political stability	0.01	0.24	0.84	0.48	0.17	0.39	0.07	-0.06	0.22	0.53	0.70	0.13	0.10	0.08	-0.10	0.07	0.48	0.73	-0.05	0.11	0.01	-0.43	-0.62	0.04	1.00			
Regulatory quality	-0.04	0.63	0.89	0.91	0.68	0.73	0.14	-0.03	0.22	0.64	0.80	0.46	0.18	0.08	-0.13	0.02	0.41	0.61	-0.03	0.01	0.23	-0.40	-0.59	0.04	0.67	1.00		
Sinh⁻¹FDI	0.20	-0.10	-0.18	-0.09	-0.07	-0.08	0.08	0.64	-0.08	-0.08	-0.13	0.02	0.01	0.07	-0.21	0.24	0.02	-0.20	0.22	0.10	0.23	0.14	0.26	-0.07	-0.18	-0.11	1.00	
Trade	0.23	0.04	0.10	0.15	0.08	0.20	0.26	0.19	0.06	0.12	0.21	0.06	0.20	0.09	-0.35	0.32	0.24	0.11	0.22	0.21	0.23	-0.02	0.04	-0.07	0.07	0.16	0.25	1.00

29

Previous Publications

No	Author	Title
API/WPS 9701	جميل طاهر	النفط والتنمية المستديمة في الأقطار العربية : الفرص والتحديات
API/WPS 9702	**Riad Dahel**	**Project Financing and Risk Analysis**
API/WPS 9801	**Imed Limam**	**A SOCIO-ECONOMIC TAXONOMY OF ARAB COUNTRIES**
API/WPS 9802	محمد عدنان وديع بلقاسم العباس	منظومات المعلومات لأسواق العمل الخليجية
API/WPS 9803	**Adil Abdalla**	**The Impact of Euro-Mediterranean Partnerships on Trade Interests of the OIC Countries**
API/WPS 9804	رياض دهال حسن الحاج	حول طرق الخصخصة
API/WPS 9805	**Ujjayant Chakravorty Fereidun Fesharaki Shuoying Zhou**	**DOMESTIC DEMAMD FOR PETROLEUM PRODUCTS IN OPEC**
API/WPS 9806	**Imed Limam Adil Abdalla**	**Inter-Arab Trade and the Potential Success of AFTA**
API/WPS 9901	**Karima Aly Korayem**	**Priorities of Social Policy Measures and the Interset of Low-Income People; the Egyptian Case**
API/WPS 9902	**Sami Bibi**	**A Welfare Analysis of the Price System Reforms' Effects on Poverty in Tunisia**
API/WPS 9903	**Samy Ben Naceur Mohamed Goaied**	**The Value Creation Process in The Tunisia Stock Exchange**
API/WPS 9904	نجاة النيش	تكاليف التدهور البيئي وشحة الموارد الطبيعية: بين النظرية وقابلية التطبيق في الدول العربية
API/WPS 9905	**Riad Dahel**	**Volatility in Arab Stock Markets**
API/WPS 9906	**Yousef Al-Ebraheem Bassim Shebeb**	**IMPORTED INTERMEDIATE INPUTS: IMPACT ON ECONOMIC GROWTH**
API/WPS 9907	**Magda Kandil**	**Determinants and Implications of Asymmetric Fluctuations: Empirical Evidence and Policy Implications Across MENA Countries**
API/WPS 9908	**M. Nagy Eltony**	**Oil Price Fluctuations and their Impact on the Macroeconomic Variables of Kuwait: A Case Study Using a VAR Model**
API/WPS 9909	علي عبد القادر	إعادة رؤوس الأموال العربية إلى الوطن العربي بين الأماني والواقع
API/WPS 0001	محمد عدنان وديع	التنمية البشرية ، تنمية الموارد البشرية والإحلال في الدول الخليجية
API/WPS 0002	محمد ناجي التوني	برامج الأفست : بعض التجارب العربية
API/WPS 0003	**Riad Dahel**	**On the Predictability of Currency Crises: The Use of Indicators in the Case of Arab Countries**
API/WPS 0004	نسرين بركات عادل العلي	مفهوم التنافسية والتجارب الناجحة في النفاذ إلى الأسواق الدولية

No	Author	Title
API/WPS 0101	Imed Limam	Measuring Technical Efficiency Of Kuwaiti Banks
API/WPS 0102	Ali Abdel Gadir Ali	Internal Sustainability And Economic Growth In The Arab States
API/WPS 0103	Belkacem Laabas	Poverty Dynamics In Algeria
API/WPS 0104	محمد عدنان وديع	التعليم وسوق العمل : ضرورات الاصلاح –حالة الكويت
API/WPS 0105	محمد ناجي التوني	دور وآفاق القطاع السياحي في اقتصادات الأقطار العربية
API/WPS 0106	نجاة النيش	الطاقة والبيئة والتنمية المستديمة : آفاق ومستجدات
API/WPS 0107	Riad Dahel	Telecommunications Privatization in Arab Countries: An Overview
API/WPS 0108	علي عبد القادر	أسس العلاقة بين التعليم وسوق العمل وقياس عوائد الاستثمار البشري
API/WPS 0201	أحمد الكواز	مناهج تقدير المداخيل المختلطة في الأقطار العربية
API/WPS 0202	سليمان شعبان القدسي	الكفاءة التوزيعية لشبكات التكافل الاجتماعي في الاقتصاد العربي
API/WPS 0203	Belkacem Laabas and Imed Limam	Are GCC Countries Ready for Currency Union?
API/WPS 0204	محمد ناجي التوني	سياسات العمل والتنمية البشرية في الأقطار العربية : تحليل للتجربة الكويتية
API/WPS 0205	Mustafa Babiker	Taxation and Labor Supply Decisions: The Implications of Human Capital Accumulation
API/WPS 0206	Ibrahim A. Elbadawi	Reviving Growth in the Arab World
API/WPS 0207	M. Nagy Eltony	The Determinants of Tax Effort in Arab Countries
API/WPS 0208	أحمد الكواز	السياسات الاقتصادية ورأس المال البشري
API/WPS 0209	Mustafa Babiker	The Impact of Environmental Regulations on Exports: A Case Study of Kuwait Chemical and Petrochemical Industry
API/WPS 0301	Samir Makdisi, Zeki Fattah and Imed Limam	Determinants Of Growth In The Mena Countries
API/WPS 0302	طارق نوير	دور الحكومة الداعم للتنافسية "حالة مصر"
API/WPS 0303	M. Nagy Eltony	Quantitative Measures of Financial Sector Reform in the Arab Countries
API/WPS 0304	Ali Abdel Gadir Ali	Can the Sudan Reduce Poverty by Half by the Year 2015?
API/WPS 0305	Ali Abdel Gadir Ali	Conflict Resolution and Wealth Sharing in Sudan: Towards an Allocation Formula
API/WPS 0306	Mustafa Babiker	Environment and Development in Arab Countries: Economic Impacts of Climate Change Policies in the GCC Region
API/WPS 0307	Ali Abdel Gadir Ali	Globalization and Inequality in the Arab Region
API/WPS 0308	علي عبد القادر علي	تقييم سياسات وإستراتيجيات الإقلال من الفقر في عينة من الدول العربية

No	Author	Title
API/WPS 0401	Belkacem Laabas and Imed Limam	Impact of Public Policies on Poverty, Income Distribution and Growth
API/WPS 0402	Ali Abdel Gadir Ali	Poverty in the Arab Region: A Selective Review
API/WPS 0403	Mustafa Babiker	Impacts of Public Policy on Poverty in Arab Countries: Review of the CGE Literature
API/WPS 0404	Ali Abdel Gadir Ali	On Financing Post-Conflict Development in Sudan
API/WPS 0501	Ali Abdel Gadir Ali	On the Challenges of Economic Development in Post-Conflict Sudan
API/WPS 0601	Ali Abdel Gadir Ali	Growth, Poverty and Institutions: Is there a Missing Link?
API/WPS 0602	Ali Abdel Gadir Ali	On Human Capital in Post-Conflict Sudan: Some Exploratory Results
API/WPS 0603	Ahmad Telfah	Optimal Asset Allocation in Stochastic Environment: Evidence on the Horizon and Hedging Effects
API/WPS 0604	Ahmad Telfah	Do Financial Planners Take Financial Crashes In Their Advice: Dynamic Asset Allocation under Thick Tails and Fast volatility Updating
API/WPS 0701	Ali Abdel Gadir Ali	Child Poverty: Concept and Measurement
API/WPS 0702	حاتم مهران	التضخم في دول مجلس التعاون الخليجي ودور صناديق النفط في الاستقرار الاقتصادي
API/WPS 0801	Weshah Razzak	In the Middle of the Heat The GCC Countries Between Rising Oil Prices and the Sliding Greenback
API/WPS 0802	Rabie Nasser	Could New Growth Cross-Country Empirics Explain the Single Country Growth of Syria During 1965-2004?
API/WPS 0803	Sufian Eltayeb Mohamed	Finance-Growth Nexus in Sudan: Empirical Assessment Based on an Application of the Autoregressive Distributed Lag (ARDL) Model
API/WPS 0804	Weshah Razzak	Self Selection versus Learning-by-Exporting Four Arab Economies
API/WPS 0805	رشا مصطفى	اتفاقية أغادير: نحو بيئة أعمال أفضل
API/WPS 0806	Mohamed Osman Suliman & Mahmoud Sami Nabi	Unemployment and Labor Market Institutions: Theory and Evidence from the GCC
API/WPS 0901	Weshah Razzak & Rabie Nasser	A Nonparametric Approach to Evaluating Inflation-Targeting Regimes
API/WPS 0902	Ali Abdel Gadir Ali	A Note on Economic Insecurity in the Arab Countries
API/WPS 0903	وشاح رزاق	الأزمة المالية الحالية
API/WPS 0904	Ali Abdel Gadir Ali	The Political Economy of Inequality in the Arab Region and Relevant Development Policies