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"FDI in MENA: Impact of political and trade liberalisation process"

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Title of the Action: *FDI in MENA: Impact of political and trade liberalisation process*

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Abstract

This study focuses on FDI in Middle East and North African countries (MENA). To this end, we use data for greenfield investments from FDI Markets that contains information about the number and volume of projects by source and destination countries all over the world for the period 2003-2012.

In a first step, we provide a comprehensive outlook of the nature and trend of FDI flowing to MENA. GIs have a relevant role as capital source for most MENA countries, it represents a higher share of GDP for MENA than for other developing countries. As expected, the Great Recession and the beginning of the Arab Spring had a negative impact on investments in this zone since GIs have failed drastically between 2009-2012, compared to the previous period.

In a second step, we estimate a gravity equation to explain greenfield investments for 160 countries. Macroeconomic factors, cultural ties, and distance are the main determinants of MNEs' decision to invest in a foreign country (extensive margin) while the amount of the projects might be determined also by other factors at the firm market levels (intensive margin).

Concerning possible specificities of MENA as host countries, our results suggest that cultural ties do seem to have a relevant role across these countries: sharing the same religion and language foster investments in these countries more than in any other region. Distance and FTA lack specific relevance for FDI's attractiveness in the region. All in all, FDI in MENA are clearly discouraged by cultural distance or informal trade barriers. Our results raise some doubts on usefulness of BIT to foster FDI in MENA like in the rest of the world.

Thirdly, we investigate the role of institutional quality as pull determinants of GI. At the world level, democracy, political stability, lack of corruption and business freedom attract FDI while compliance of rule of law, and other indicators of ease of doing business do not appear to have a clear significant impact. Finally, greenfield investments are displaced from countries suffering violence towards neighbors' countries. Other types of violence do not have at the world level any evident impact.

Not all the MENA share these patterns. Improvements in democracy would not improve the attractiveness of MENA non-oil producers but political stability would boost FDI to these countries Besides, they are especially harmed by violence in their neighborhood as far as attracting GI is concerned. All in all, this draws the conclusion that investors may see the political transition to democracy as a source of political instability of the whole region. Worryingly, reducing corruption in these countries would reduce the number of foreign investments flying to non-oil producers MENA.

According to our study, improving institutional quality is more likely to foster FDI in MENA oil producers than in MENA no oil producers while the presence of natural resources could be expected to undermine the positive impact of institutions' quality could have on FDI. This may be explained by the fact that the oil production of such MENA countries is so high and their dependence on FDI so low that governments have not developed special ties with MNEs while in other countries abundant in natural resources, non-democratic governments have given special treatment to foreign investors.

Keywords: FDI, MENA, oil producers, cultural ties, gravity equation, violence, political environment, institutions.

Résumé

Cette étude porte sur l'IED dans les pays du Moyen-Orient et d'Afrique du Nord (MENA). Dans ce but, nous utilisons des données sur les IED de base nouvelle ("greenfields", GI) de la base de données FDI Markets qui contient des informations sur le nombre et le volume des projets par pays de provenance et de destination dans le monde pour la période 2003-2012.

Dans un premier temps, nous fournissons une vue d'ensemble de la nature et de la tendance de l'IED vers la région MENA. Les GI ont un rôle important en tant que source de capital pour la plupart des pays MENA, mais représentent une part plus élevée du PIB pour la région MENA que pour les autres pays en développement. Comme prévu, la Grande Récession et le début du printemps arabe ont eu un impact négatif sur les investissements dans cette zone puisque les GI ont chuté drastiquement entre 2009-2012, par rapport à la période précédente.

Dans une deuxième étape, nous estimons une équation de la gravité pour expliquer les GI de 160 pays. Les facteurs macroéconomiques, les liens culturels et la distance sont les principaux déterminants de la décision des multinationales d'investir dans un pays étranger (marge extensive), tandis que le montant des projets pourrait être déterminé par d'autres facteurs au niveau du marché (marge intensive).

En ce qui concerne les spécificités possibles de la région MENA en tant que pays d'accueil, nos résultats suggèrent que les liens culturels semblent jouer un rôle important dans ces pays: partager la même religion et la même langue favorise les investissements dans ces pays plus que dans toute autre région. Les coûts de transport supposent une barrière à l'investissement plus particulièrement pour les pays MENA non producteurs de pétrole. Les politiques commerciales de la région MENA, mesurées par l'existence d'accords commerciaux régionaux, n'ont pas d'impact significatif sur les investissements étrangers dans la région MENA, comme dans le reste du monde, alors que l'impact pourrait même être négatif pour les non producteurs de pétrole. Les accords bilatéraux d'investissement s'avèrent, pour leur part, incapables de favoriser l'IED dans la région MENA et dans le reste du monde.

Troisièmement, nous étudions le rôle de la qualité institutionnelle comme facteur d'attraction de l'IED. Au niveau mondial, la démocratie, la stabilité politique, l'absence de corruption et la liberté d'entreprises attirent l'IED alors que le respect de l'état de droit et d'autres indicateurs relatifs à la facilité d'entreprise ne semblent pas avoir un impact significatif. Enfin, les investissements "greenfield" sont déplacés des pays qui souffrent de la violence vers les pays voisins. D'autres types de violence n'ont aucun effet évident au niveau mondial.

Ce modèle ne s'applique pas à tous les MENA. Les améliorations en matière de démocratie n'attireraient pas plus d'investissements dans les pays MENA non producteurs de pétrole alors que la stabilité politique renforcerait l'IED dans ces pays. En outre, la violence dans les pays voisins ne profite pas à ces pays en termes de détournement d'investissement. Dans l'ensemble, les investisseurs semblent voir la transition politique vers la démocratie comme une source d'instabilité politique dans toute la région. De manière inquiétante, la réduction de la corruption dans ces pays non pétroliers MENA réduirait le nombre d'investissements étrangers.

Selon notre étude, l'amélioration de la qualité institutionnelle est plus susceptible de favoriser l'IED dans les pays MENA producteurs de pétrole, alors que la présence de ressources naturelles pourrait compromettre l'impact positif de la qualité des établissements sur l'IED. Cela s'explique peut-être par le fait que la production de pétrole de ces pays MENA est si élevée et que leur dépendance à l'IDE est si faible que les gouvernements n'ont pas développé de liens particuliers avec les multinationales alors que dans d'autres pays abondants en ressources naturelles, les gouvernements non démocratiques ont accordé un traitement spécial aux investisseurs étrangers.

Mots clés IDE, MENA, producteurs de pétrole, liens culturels, équation de gravité, violence, environnement politique, institutions.

Content

Introduction

Foreign Direct Investment (FDI) could be an opportunity to increase capital resources of emerging countries and especially for MENA countries during their political transition process. For many MENA, this transition is contemporary with a trade liberalization process in the framework of the EU-Med agreements. This process has increased trade unbalances in the MENA countries and made even more important to attract foreign investment in order to equilibrate balance of payment. Moreover, FDI represents a source of much needed employment in the region. With a view to proposing accurate policies to attract FDI, a deep analysis of the attractiveness of the region in terms of FDI is needed.

There is a conventional wisdom that concomitant liberalization of trade and investment regimes, accompanied by creating a convenient environment for market-based decisions, are vital to attract FDI. Then, little has been told about how the political and trade liberalization reforms affect the volume (intensive margin) and number (extensive margin) of foreign investments. In particular, the politic instability and the Arab Spring may have affected both the number of investments across borders and the amount invested. How to attract FDI and limit disinvestments are very important issues for policy makers in these countries.

This project aims at providing a comprehensive outlook of FDI flows (both in terms of number of operation and in terms of volume) in the MENA countries. It seeks to compare the attractiveness of MENA as host countries compared to the world average. Additionally, we assess the role played by institutional factors, violence climate and measures of ease of doing business on FDI in MENA during the period 2003-2012. Finally, we provide a preliminary analysis of the impact of trade policies on FDI.

To this end, we use an original dataset that goes beyond the data available in international databases. Data has been taken from the Financial Times Ltd. cross-border investment monitor FDI Markets (FDI Markets, 2011). It includes data for greenfield investments disaggregated by countries of origin and destination and by activities. The database includes both the number of

projects, the volume of the projects and employment of all these flows. Our sample includes 160 countries and 10 years. We estimate a gravity equation to explain greenfield investments among up to 160 countries. This model explains satisfactorily the value of flows, and even better the number of investment projects. This strategy allows us to compare MENA with the patterns observed at the world level. Then, this study overpasses some of the drawbacks of country by country case studies.

In our study, we consider as MENA the classification of the World Bank excluding Israel. According to World Bank, MENA include: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West bank and Gaza, and Yemen. Though, West bank and Gaza is not included in FDImarkets Database. Moreover, we exclude Israel from the sample of study since it is in many aspects an outlier in the region. Then, we end up with 18 countries. Then, for classifying the rest of the world we follow UNCTAD's classification. We include as developing countries those that according to UNCTAD are developing, less developed and transition countries. In this way, the country classification used is the following: Developed countries, MENA countries and other developing countries.

This project is divided in three parts. In the first one, we present the literature about FDI determinants with especial focus on institutional variables.

In the second part, we detail the empirical strategy to measure the effect of several variables on bilateral FDI flows and number of projects through a gravity model to explain FDI. We also provide a global outlook of foreign direct investments (FDI) in the MENA during the period 2003-2012 and present the variables use in this study.

In part III, we detail the results. We study the specificities of MENA countries (compared to the world average) when attracting FDI. We also investigate the role played by business and political environments on FDI both at the world level and for MENA. We investigate the impact of democracy, political stability, lack of corruption and ease of doing business on greenfield investments.

Part I Literature review on FDI determinants

FDI determinants in general

On foreign direct investment Dunning (2001) highlights that it cannot be fully addressed by a single theory, due to the considerable heterogeneity among countries and firms. This reality gave way to Dunning's eclectic paradigm (Dunning, 1988), which clusters FDI and MNEs activity determinants in three sources: Ownership (O), Location (L) and Internalization (I). The OLI eclectic paradigm highlights the firms' competitive advantages (O), the potential benefits brought by exploiting different locations (L) and gains of internalizing different markets across borders (I). Moreover, Dunning (1993) classified FDI determinants as market, efficiency and resource seeking. In this way, FDI can be horizontal, which is when the MNEs carries out the same economic activity in a different country, or vertical which the MNEs sets only a part of its economic activity in different locations due to potential lower production costs (Blonigen, 2005; Horstmann & Markusen, 1987).

FDI is expected to be attracted towards large economies in which there is market potential for MNEs developing their activity (Blonigen, 2005). Similarly, host countries' trade openness is also expected to foster FDI as it may be motivated by export platform and supporting considerations (Ekholm et al., 2007; Helpman, 1984; Krautheim, 2013). Alternatively, FDI may seek to avoid tariffs, anti-dumping measures and other variable trade costs (Krautheim, 2013; Markusen, 1984), but can also deterred by distance since it increases the fixed and variable costs of investment (Kleinert & Toubal, 2010). There are also several factors which reduce transaction costs that may foster investment between a pair of countries such as the existence of Bilateral Investment Treaties (BIT), cultural and historical ties, religious affinity and sharing a common language (Bevan & Estrin, 2004; Desbordes & Vicard, 2009; Helble, 2007; Shenkar, 2001).

According to North (1990), institutions represent "the rules of the game" that shape social interactions and, in particular, agents' economic behavior. These rules may be embodied in formal or informal laws. Quality of institutions are expected to boost FDI as it reduces transaction costs and risks (Dunning, 1993). In turn, institutions are mainly shaped by the political system a country has; this political system differs depending on the degree of democracy or autocracy (Jensen, 2008). At the same time, Institutional failure may also affect negatively FDI through violence and barriers for starting a business. We turn our focus on these aspects.

Democracy

There are several reasons to hypothesize that democracy may attract FDI. Lack of democracy, as well as inequality, boosts social tensions; in turn, social tensions increase the likelihood of bringing severe political and social crisis to a country (Alesina & Perotti, 1996; Joffé, 2011; Taleb & Blyth, 2011). Moreover, the autocrat ruler has an incentive to exploit its position for extracting as much as possible from society's surplus for its own benefit. Consequently, in the long run, **autocracies are less likely to respect law, private property rights and being transparent when it comes to politics and policy** (Jensen, 2008; Olson, 1993). These aspects result in a less convenient environment for conducting productive and value-added activities.

However, **there are also mechanisms through which democracies may imply institutional risks for foreign firms** and consequently **autocracy foster FDI**. Democracies may imply changes of governments and policies, lobby from local firms towards protectionism or voters' interests which might not always be aligned with MNEs' ones. In contrast, an autocratic government may hold a better position to offer favorable treatment to foreign investors (Jensen, 2008; Li & Resnick, 2003; Oneal, 1994).

The reviewed empirical literature is inconclusive providing supportive evidence for both opposite hypothesis. Nonetheless, most point out a positive relationship between democracy and FDI inflows (Asiedu & Lien 2011; Busse & Hefeker, 2007; Farazmand & Moradi, 2014). However, opposite conclusions have also been reached, as well as non-significant relationship by others (Adam & Filippaios, 2007; Li & Resnick, 2003; Mathur & Singh, 2013; Oneal, 1994; Paniagua & Sapena, 2013, 2014). Adam & Filippaios (2007) for USA's FDI find that civil liberties in the host country have a negative non-linear relationship on these flows while political liberties attract them. Authors argue that slight civil repression might be preferred by MNEs, under certain conditions like efficiency or natural resources seeking. Moreover, for USA's outflows into developing countries, Oneal (1994) finds a positive relationship between the degree of autocracy and corporate profits. Similarly, Paniagua & Sapena (2013) provide evidence of a negative relationship between foreign

employment and the degree of democracy. For a sample of developing countries, similar results are reached for FDI inflows by Li & Resnick (2003) and Mathur & Singh (2013).

The MENA region has, on average, lower democratic standards than the rest of the World. As reported in Table 1, their average *Democracy* index is more than eight points below the world's average and almost seven points below the one of the rest of developing countries. During the considered period, the sole MENA that can be considered a full democracy is Israel. To our knowledge, the number of studies looking into the effects of democracy on FDI in the MENA region are scant. One exception is the work by Onyeiwu (2003) who finds a non-significant relationship between political rights and FDI.

Quality of Institutions

More specifically, the literature has highlighted the role played by the quality of institutions in private economic activities in general, and in attracting FDI, in particular. Several aspects determine countries' institutional quality like political stability, rule of law and corruption. **Instability is expected to deter FDI** since risk associated with the investment increases as far as multinationals are likely to face sudden changes in the environment they operate in. Particularly sudden changes in laws or risk of expropriation may deter FDI (Acemoglu & Johnson, 2005; Bénassy-Quéré et al., 2007; Busse & Hefeker, 2007; Méon & Sekkat, 2004; Thomas & Worrall, 1994). In this way, investors are likely to prefer stable governments, clear compliance of rule of law and strong protection of property rights (Olson, 1993). Investors, and especially foreign investors, will seek a system that fully guarantees a stable environment and allows them to develop in a continuous manner their economic activity in a country. Additionally, low quality institutions are prone to represent extra costs for firms through corruption or high load of arbitrary bureaucracy (Wei, 2000).

This issue is likely to be even more significant when there is a strong local ruling power established which use institutions as a barrier to foreign investors. Private investors might dilute governments' degree of power, and may have interests different from the ones of the local ruling oligarchy. This

aspect is especially relevant for the MENA region, where patronage networks are common and strong private sector is an exception (Dillman, 2001; Malik & Awadallah, 2013). Méon & Sekkat (2004) show that institutions' functioning may have disabled a greater participation of the Middle East and North Africa (MENA) in the world economy. In this line, they suggest complementing openness strategies with institutional reforms in order to improve MENA countries performance. Otherwise, most MENA countries' institutional idiosyncrasy is prone to undermine potential benefits to be obtained from economic policy.

Findings regarding the relationship between specific aspects of institutions´ quality and FDI are not unanimous, but, all in all, empirical results mainly highlight a positive relationship between both. For instance, Asiedu (2002) finds that political stability has no significant impact on FDI in developing countries. Busse & Hefeker (2007) find that several institutional variables[2] that measure political risk are relevant determinants of FDI. Wei (2000) shows that corruption does have a negative impact on FDI. Same conclusion is reached for five Asian countries by Farazmand & Moradi (2014) and Mathur & Singh (2013). Though, Egger & Winner (2005) and Adam & Filipaios (2007) reach opposite results while Asiedu & Lien (2011) do not find conclusive evidence for the role played by corruption, but show that bureaucracy, lack of rule of law and expropriation risk prevent FDI. Paniagua & Sapena (2014) provide evidence of a positive relationship between greenfield investments and less developed countries legal rights, while for developed countries a small but negative and significant relationship is reached.

For the case of **MENA countries**, Méon & Sekkat (2004) do not find a significant relationship between FDI and corruption, although their results do show a negative relationship with political instability. For the same region, Rogmans & Ebbers (2013) show that environmental risk index has a non-significant impact for their whole and first period of regression (1987-2008, 1987-1997), while in the second period (1998-2008) results indicate that risk has a positive impact on FDI. For Yemen, Musibah et al. (2015) show that political stability significantly boosts FDI inflows. Helmy (2013) studies the

[2]Government stability, internal and external conflicts, rule of law, ethnic tensions, bureaucratic quality, corruption and democratic accountability are found as significant determinants of FDI.

effect of corruption on FDI inflows in MENA and concludes that the degree of openness and freedom of the economy are the real stimulants of FDI in MENA. Asghari (2012) founds that a decrease in the environmental regulations stringency has positive and statistically significant effect on the FDI inflows into euro-Mediterranean countries during 1980-2010.

Violence

Violence is closely related to the state, institutions and income (Besley & Persson, 2014): the lower the quality of institutions and the economic development, the larger the income inequality, the more likely to suffer from violence country is. **These country's failures are expected to discourage foreign investors**. As pointed by Olson (1993), a society needs to enjoy peace to be able to prosper. Moreover, violence is one of the components that determines the grade of political risk of a country (Busse & Hefeker, 2007) and might directly restrict the firms' capacity for developing their economic activity in a profitable way (Abadie & Gardeazabal, 2003; Jensen, 2008). Additionally, as it happened during the Arab Spring, social revolts might bring institutional changes to a country. As pointed by Brunetti & Weder (1998), institutional uncertainty is prone to have a negative effect on FDI. Abadie & Gardeazabal (2008) points that **major violence's episodes like terrorism affects negatively FDI**.

We also posit that, violence in neighbor countries might also negatively affect FDI in this country. On one hand, major violence episodes from one country might have a negative impact on neighbors by making the region more unstable and less economically attractive. On the other hand, it is also possible that instability in neighbor countries might redirect FDI into more stable countries inside the same region (Paniagua, 2011).

The latest outcome brought by bad quality of institutions in MENA is the Arab Spring, which had a larger impact in Tunisia, Egypt, Libya, Syria, Yemen and Bahrain (Campante & Chor, 2012). Protests spread into other countries, and even pushed some governments to enact reforms like in Algeria and Morocco in order to counteract social unrest (Joffé, 2011). Social revolts demanded democracy, lower corruption and work opportunities. In fact, most

of these countries have been characterized by an increase of human capital quality together with a high unemployment and low wages (Campante & Chor, 2012; Joffé, 2011; Méon & Sekkat, 2004). High unemployment has particularly affected the young population. Moreover, corruption, lack of democracy, poverty, absence of the private sector and rents seeking by the ruling class has been a norm across these countries. These factors fueled the Arab Spring (Joffé, 2011; Malik & Awadallah, 2013), which brought a surge of riots and violence into the region.

When it comes to the impact of violence, most studies do find that terrorism, and internal and external violence have a negative impact on FDI (Abadie & Gardeazabal, 2008; Bandyopadhyay et al., 2013; Blomberg & Mody, 2005; Busse & Hefeker, 2007; Enders & Sandler, 1996). **In contrast, some works do find a surprising positive impact of violence and government instability on FDI inflows** (Asiedu & Lien, 2011; Blomberg & Mody, 2005). Then, **Paniagua (2011) finds a positive relationship between neighbor countries' violence and FDI.**

Ease of doing business

The ease of doing business is another relevant pull factor of FDI which is closely related with institutions; while previous indicators capture macroeconomic characteristics; this one reflects the **microeconomic environment that may affect foreign investors**. It refers to aspects such as the availability of credit, ease of starting a business or enforcing a contract (Bayraktar, 2013). This dimension hasn't been considered empirically by the literature until recent years. Studies like Djankov et al. (2002) and Djankov (2009) clearly demonstrate its relevance, and it started to be included in the policy agenda.

In the present study, we focus on the number of days and procedures needed for starting a business. In contrast with the reviewed literature (Corcoran & Gillanders, 2015; Jayasuriya, 2011), we study the impact on the extensive and intensive margin.

We expect a negative relationship between these variables and greenfield investment. The number of days required is likely to reflect direct and indirect

costs a company may face, by delaying the beginning of its economic activity. There is a cost of not doing business. The number of procedures may represent a mechanism through which politicians and bureaucrats may extract rents illegally (Djankov et al., 2002; Shleifer & Vishny, 1993). We expect this last issue to be significant for developing countries which do not enjoy transparent legal system. Actually, Treisman (2007) shows that, **the number of days for starting a business is a significant explanatory variable of corruption**[3].

On this aspect, Agosin & Machado (2007) present evidence that liberalizing approval procedures and lifting requirements that foreign companies enter into joint ventures with domestic firms encourage FDI. Jayasuriya (2011) shows that **improvements in the Ease of Doing Business's ranking from the World Bank, attract FDI on average. Nevertheless, the author does not find that countries performing large reforms on this aspect attract more FDI. Also, they find this relationship insignificant for the case of developing countries**. Corcoran & Gillanders (2015) find that better position in the doing business ranking from the World Bank attracts FDI. Then, by disentangling the index, the authors find that trade regulation is probably the most important factor for foreign investors. They also show this indicator is particularly relevant for explaining FDI into middle income countries.

Natural resources

The presence of natural resources can affect institutions functioning under certain circumstances. For instance, Bhattacharyya & Hodler (2009) present evidence that natural resources foster corruption when countries are not fully democratic. Similarly, the availability of natural resources in the host country may alter the relationship between FDI and institutions.

Asiedu & Lien (2011) argue there are two circumstances under which autocratic governments may favor FDI. First, MNEs in the extractive industry are more likely to be interested with long term stable governments whatever

[3]In fact, the correlation matrix (Appendix 5) shows that the negative correlation with lack of corruption is higher in the case of the number of procedures than in the case of the number of days needed for starting a business. Similar patterns are found when other institutional variables are considered.

their type to avoid frequent governments' changes. Second, authors suggest that natural resources are usually under a close state's supervision. Good relationships with governments increase the likelihood of accessing such resources. However, **foreign investors may face a trade off since long standing stable governments, autocracies, can offer good opportunities to strengthen ties, but the lack of democracy may also be accompanied by bad institutions' quality**.

Asiedu & Lien (2011) provide evidence that, overall, abundance in natural resources has a negative impact on FDI, and undermines in more than 80% the positive effect of democracy. Similarly, the presence of natural resources may impact the role played by institutions. Aleksynska & Havrylchyk (2013) distinguish between developed and developing countries investors; they find that bad quality of institutions has a negative effect on FDI, in general. For FDI from developed countries, the negative effect of bad quality institutions applies regardless the presence of natural resources in the host country. For FDI from developing countries, the negative impact of institutions on FDI inflows is lower when the host country is abundant in natural resources.

In sum, the literature tends to demonstrate a robust influence of institutions on FDI. However, this relationship seems to be complex. **Institutions' impact depends on the host countries' degree of development, and whether they hold natural resources or not.** Several works support the hypothesis that the degree of democracy and institutional quality have a positive impact on FDI, but there is no unanimity. In turn, the existing scant evidence suggests that the presence of natural resources might undermine the positive impact brought by good quality of institutions. At the microeconomic level, the reviewed studies points that the ease of doing business should facilitate FDI. However, no robust evidence is provided in the specific impact that the ease of starting a business might have. For the particular case of the MENA region, we find that studies that consider the quality of institutions are scarce and the existing ones consider a reduced number of institutional factors.

Part II Empirical strategy

1) Methodology

We are interested in estimating the effect of several variables on bilateral FDI flows and project counts. To this end, we estimate a conventional gravity model to explain FDI (baseline model) in a first step. The gravity equation is the empirical workhorse of international economics. It has been widely applied to study the determinants of bilateral flows of trade, FDI, migration and tourism (for an overview see Anderson (2011) Bergstrand & Peter Egger (2011), Costinot & Rodriguez-Clare (2014) and Head & Mayer (2014)). The initial application of the gravity equation was an empirical exercise with very little theoretical background. The work of Anderson (1979), Bergstrand (1985) and Anderson & Van Wincoop (2003) lead to structural a theoretically sound model for the gravity equation of trade. Following trade developments, Kleinert & Toubal (2010) and more recently Cuadros et al. (2016) develop theoretical models that result in an empirically tractable empirical equation.

This model will allow disentangling the role played by standard economic factors like demand and supply, cultural, historical and geographical distances, bilateral investment and trade agreements when explaining these flows at the world level. We follow Paniagua & Sapena's (2014) as our baseline specification of the gravity equation that has the following expression:

$$FDI_{ijt} = e^{\left(\begin{array}{c}\beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(D_{ij}) + \beta_3 contig_{ij} + \beta_4 colony_{ij} + \beta_5 lang_{ij} + \beta_6 smctry_{ij} \\ + \beta_7 rel_{ij} + \beta_8 FTA_{ijt} + \beta_9 BIT_{ijt} + FE\end{array}\right)} + \varepsilon_{ijt} \quad (1)$$

The variables are defined as follows: FDI_{ijt} is the aggregate investment between home country i and host j in year t; GDP_{it} and GDP_{jt} are the GDPs of home and host countries[4], respectively; D_{ij} is the distance in kilometers between country capitals; $contig_{ij}$ (Contiguity) is a dummy that indicates whether a pair of countries share a common border; col_{ij} (Colony) is set to

[4] The GDPs enter multiplicatively to prevent co-linearity with the fixed effects (Paniagua & Sapena, 2014).

one if the two countries have ever had a colonial link; $lang_{ij}$ (Common language) takes positive value if both countries share the same official language; rel_{ij} (Religion) is a composite index which measures the religious affinity between country pairs with values from zero to one; $smctry_{ij}$ (Same country) indicates if both countries were part of the same country in the past; FTA_{ijt} (Free trade agreement) is a dummy that indicates if both countries have a free trade agreement in force; BIT_{ijt} (Bilateral investment treaty) is a dummy that takes a value of one if the country pair has a bilateral investment treaty in force; lastly e_{ijt} represents an stochastic error term[5].

We run three alternative estimations of each model using different fixed effects (FE):

- FDI C&Y FE: Fixed effect for each destination countries (λ_i), each source countries (λ_j) and each year (λ_t) separately. Here, we assume that the resistance in FDI flows specific to each host and home countries is independent of time that is, it is static all over the period while conjecture affects all countries in the same manner. (1)
- FDI C*Y: Fixed effect for each destination countries (λ_{iT}), and period and for each source countries and period (λ_{jT}) on one hand and for years on the other hand (λ_t). Periods T refer to three years periods 2003-2005, 2006-2008, 2009-2012 which covers 2009's trade collapse. Here, we assume that the resistance in FDI flows is more structural, that is, it is dynamic over the period. (2)
- FDI C*Y FE: Fixed effect for each destination and year (λ_{it}), and for each source and year (λ_{jt}). Here, we control for any variable specific to the host or the home country which varies among years (like GDP for instance) apart from any unobservable factors varying across time, at the country level that may push out or pull in for FDI. This includes the multilateral resistance to FDI following the proposal of Anderson & Van Wincoop, (2003) for trade. (3)

[5]Origin of data: Variables which capture bilateral investment costs have been taken from the CEPII (2011) database: distance, landlocked, common language, colony, same country and border. BIT has been manually constructed from the UNCTAD website. The source of FTA and common currency is Head et al. (2010). GDP in constant 2000 US dollars have been taken from the World Bank. Religion is calculated with data from CIA World.

However, due that FDI C&Y FE is the only model compatible with estimating the effect of some variables (institutional) varying for each country and year, we select this estimation models. However, we have checked that alternative estimates lead to similar conclusions for the baseline model. Our estimations are based on a model with fixed effect for each destination and source countries and each year; that is, we assume that the resistance in FDI flows specific to each host and home countries is static all over the period while conjecture affects all countries in the same manner.

To hedge estimation bias due to zeros in the database, we follow Silva and Tenreyro (2006) and estimate FDI counts and flows with the Poisson pseudo maximum likelihood (PPML) method. We run a robustness check using both Poisson maximum likelihood country-pair (PML-CP) panel estimations and ordinary least squares (OLS).

In a second step, we estimate several augmented gravity equations. We investigate the specificities of MENA as host countries but adding to the baseline model some interacted variables to highlight possible specificities of MENA countries compared to the world average (Part III). Finally, we investigate the role played by business and political environments on FDI both at the world level and for MENA (Part IV).

2) Data overview

The data used in this is study are greenfield investments during the period 2003-2012. The share of the world's Greenfield investment is typically around 40%. Scholar suggest greenfield FDI is expected to increase the productivity, employment and capital formation of host countries, while other types of FDI, namely cross-border M&A, which involve a financial transaction with no new productive capacity, have a lower impact (Ashraf et al., 2016).

The data come from FDIMarkets, www.fdimarkets.com, an online database maintained by fDi Intelligence, a division of the Financial Times Ltd. FDIMarkets is the official source of greenfield data for the UNCTAD's World Investment Report and the Economist Intelligence Unit. A growing academic body of work has used this data to study greenfield FDI (see for example, Amoroso & Müller, 2017; Cuadros et al., 2016; Myburgh & Paniagua, 2016;

Paniagua & Sapena 2014). The advantage of using this dataset is that is covers a rich panel of firm-level data, which allows us to distinguish between the extensive margin (number of projects) and intensive margin (capital expenditure of the projects).

We study the impact of different indicators of trade liberalisation and institutional environment at the macroeconomic and microeconomic levels on FDI. To this end, we include several indicators in a gravity equation to explain both the intensive and extensive margin of greenfield investment. In this section, we present an overview of the indicators we have selected. At the end of this section, we summarize the sources and expected sign for all the variables used in the regression (Table 4), and a correlation matrix (Appendix 5)[6].

Institutional Environment

To account for the institutional environment from the host country, we first consider an index that represents countries' political system. *Democracy* combines both, the measures of the degree of democracy and autocracy of a given country. This index is retrieved from Systemic Peace (Marshall et al., 2015). A country can exhibit mixed qualities of both type of regimes. Democracy and autocracy are measured independently without sharing categories in common. The overall grading is based on how a country scores in: competitiveness of executive recruitment, openness of executive recruitment, constraint on chief executive and competitiveness of political participation. This ordinal variable goes from -10 (no democracy) to +10 (full democracy).

Then, we consider four different indexes for disentangling the importance of specific aspects related with institutions. We use the indexes of *political stability*, *rule of law* and *lack of corruption* from the World Bank's Worldwide Governance Indicators. These variables range approximately from -2.5 to +2.5 (Kaufmann et al., 2011), although estimates below -2.5 are possible.

[6] For estimation purpose, we use the logarithm form the following variables: political stability, rule of law, lack of corruption, total civil violence, total violence, terrorist attacks, deaths due to terrorism and total violence from neighbour countries. Previously, we convert the indicators to obtain positive values larger than 1. For the estimation, we also convert the Democracy index so it goes from 0 to 20. For clarity, in the present section, variables are displayed in their original form.

Higher values suggest respectively a more stable political environment, better rule of law and less corruption. Statistics are available in Table 1, as it can be gathered the MENA region stands out by its' low level of democracy.

Table 1: Institutional quality, 2003-2012

	Variable	Obs.	Mean	Std. Dev.	Min	Max
MENA	*Democracy*	171	-4.37	4.52	-10	6
	Political stability	180	-0.46	1.01	-3.18	1.21
	Compliance with rule of law	180	-0.23	0.7	-1.92	1.03
	Lack of corruption	180	-0.24	0.71	-1.58	1.72
MENA oil producers	*Democracy*	123	-5.78	3.78	-10	3
	Political stability	130	-0.45	1.13	-3.18	1.21
	Compliance with rule of law	130	-0.23	0.79	-1.92	1.03
	Lack of corruption	130	-0.23	0.80	-1.58	1.72
MENA non-oil producers	*Democracy*	48	-0.77	4.27	-6	6
	Political stability	50	-0.47	0.63	-2.13	0.50
	Compliance with rule of law	50	-0.22	0.43	-0.91	0.46
	Lack of corruption	50	-0.27	0.38	-0.94	0.41
Rest of Developing countries	*Democracy*	1,062	3.23	5.81	-10	10
	Political stability	1,262	-0.34	0.92	-3.32	1.42
	Compliance with rule of law	1,259	-0.47	0.78	-2.67	1.77
	Lack of corruption	1,259	-0.39	0.79	-1.92	2.42
Developed countries	*Democracy*	350	9.73	0.55	8	10
	Political stability	404	0.78	0.53	-1.62	1.94
	Compliance with rule of law	404	1.21	0.59	-0.23	2
	Lack of corruption	394	1.21	0.8	-0.3	2.55

Sources: Systemic Peace (DEMOCRACY) and World Bank (Political stability, Compliance with rule of law and lack of corruption). Authors' own calculations.

Violence

We measure violence impact by using an indicator of total civil violence, total violence, number of terrorist attacks and number of deaths due to terrorists' attacks (see Table 2). We also control for the impact of violence in neighbor countries. These measures are retrieved from the dataset of Major Episodes of Political Violence from Systemic Peace (Marshall, 2016).

MENA suffers 69% of the total number of terrorist attacks from our whole sample and 61% of the deaths caused by terrorism. The average total violence perceived by these countries is one third larger than the rest of the world, and the total violence from their neighbors is twice. Only 8 from the 18 considered economies are free from terrorism during the considered period.

Table 2: Violence, 2003-2012

	Variable	Obs.	Mean	Std. Dev.	Min	Max
MENA	*Total civil violence*	180	0.26	0.84	0	5
	Total violence	180	0.54	1.45	0	6
	Terrorist attacks	180	5.64	23.84	0	148
	Deaths due to terrorism	180	95.68	433.46	0	4,038
	Total violence from neighbor countries	180	4.19	4.21	0	16
MENA oil producers	*Total civil violence*	130	0.35	0.97	0	5
	Total violence	130	0.72	1.67	0	6
	Terrorist attacks	130	7.68	27.79	0	148
	Deaths due to terrorism	130	131.25	506.04	0	4038
	Total violence from neighbor countries	130	4.28	4.48	0	16
MENA non-oil producers	*Total civil violence*	50	0.04	0.20	0	1
	Total violence	50	0.08	0.34	0	2
	Terrorist attacks	50	0.36	1.75	0	12
	Deaths due to terrorism	50	3.22	11.38	0	63
	Total violence from neighbor countries	50	3.98	3.45	0	11
Rest of Developing countries	*Total civil violence*	1,075	0.55	1.44	0	7
	Total violence	1,075	0.58	1.46	0	7
	Terrorist attacks	1,090	0.41	2.9	0	52
	Deaths due to terrorism	1,090	9.92	67.41	0	1,127
	Total violence from neighbor countries	1,075	2.47	3.82	0	26
Developed countries	*Total civil violence*	350	0.06	0.33	0	2
	Total violence	350	0.13	0.56	0	4
	Terrorist attacks	350	0.04	0.41	0	6
	Deaths due to terrorism	350	1.29	12.86	0	191
	Total violence from neighbor countries	350	0.63	1.22	0	6

Source: Systemic Peace. Authors' own calculations.

Ease of doing business

For measuring the ease of doing business, we focus our attention on the ease of starting a business since we are dealing with greenfield investments. We consider the number of procedures and the number of days required to open a new business (see Table 3). When it comes to FDI, these two variables are directly related with greenfield investments. These indicators are taken from the World Bank Doing Business database, which is to the best of our knowledge a reliable source for accessing the business environment of a country (Pinheiro-Alves & Zambujal-Oliveira, 2012).

Table 3: Ease of doing business, 2003-2012

	Variable	Obs.	Mean	Std. Dev.	Min	Max
MENA	Days for starting a business	142	26.02	16.86	7	79
	Procedures for starting a business	142	9.7	2.73	5	17
MENA oil producers	Days for starting a business	99	26.85	16.57	7	77
	Procedures for starting a business	99	10.21	2.79	5	17
MENA non-oil producers	Days for starting a business	43	24.12	17.58	11	79
	Procedures for starting a business	43	8.51	2.16	6	13
Rest of Developing countries	Days for starting a business	928	51.18	69.52	2	697
	Procedures for starting a business	928	9.71	3.29	2	21
Developed countries	Days for starting a business	298	20.36	18.94	0.5	138
	Procedures for starting a business	298	6.15	2.83	1	15

Sources: World Bank (*Days for starting a business* and *Procedures for starting a business*, 2004-2012) and Heritage Foundation (Business freedom and Investment freedom, 2003-2012). Authors' own calculations.

Natural resources

We explore how holding natural resources influences the impact of institutions on FDI. In particular, we distinguish among MENA countries which do not produce oil (Djibouti, Jordan, Lebanon, Morocco and Tunisia) and the MENA oil producers (Algeria, Bahrain, Egypt, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen).

Table 4: source and expected signs for variables used in the estimations

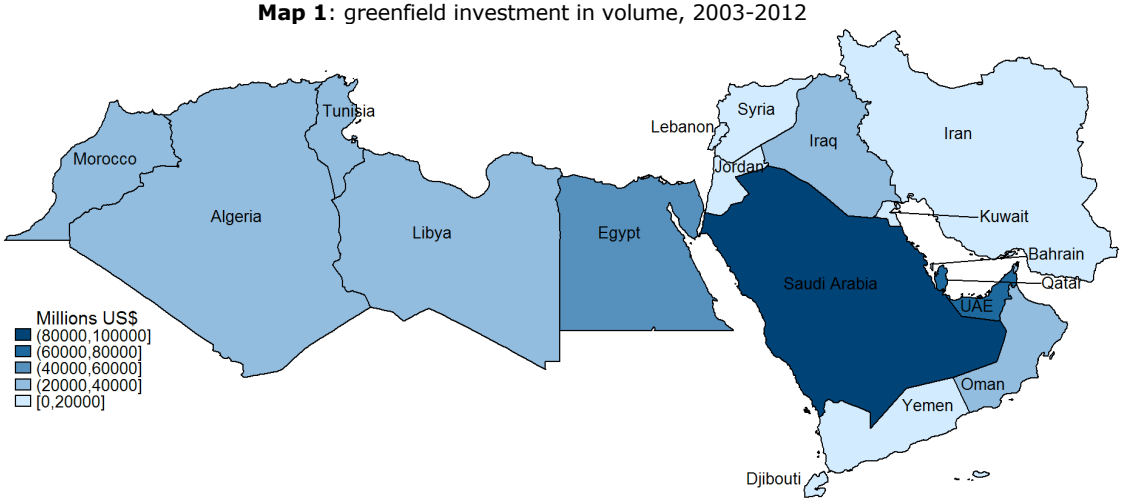
Variable	Definition	Source	Expected sign
Democracy	Autocracy and Democracy scale	Systemic Peace	+
Political stability	Political stability index	World Bank	+
Rule of law guarantee	Rule of law Index	World Bank	+
Lack of corruption	Corruption index	World Bank	+
Total civil violence	Civil violence	Systemic Peace	-
Total violence	Total violence	Systemic Peace	-
Terrorist attacks	Number of terrorists' attacks	Systemic Peace	-
Deaths due to terrorism	Number of deaths by terrorism	Systemic Peace	-
Total violence from neighbor countries	Total violence in neighbor countries	Systemic Peace	-/+
Days for starting a business	Number of days for starting a business	World Bank	-
Procedures for starting a business	Number of procedures for starting a business	World Bank	-

3) Global outlook of FDI in the MENA during the period 2003-2012

For the period 2003-2012, our dataset records more than 80 thousand greenfield investment projects and more than 500 thousand million US$ volume of investment across the World. As a consequence, more than 16 million jobs were created. In terms of source, during this period developing countries increase their role significantly, they passed from representing less than 20% to more than 30% of the total GIs made. BRICS countries were the main contributors to this trend, while the role of MENA countries as source of investment remained marginal. Then, in terms of inward GIs, developing countries received approximately 70% of the total GIs flows. MENA countries increased at a low pace but constantly its share of total GIs from 2003 to 2008, but from 2009 to 2012 their share as receptors decreased significantly again to its2003 levels[7].In contrast, the rest of developing countries perceived a stable 60% share of total GIs.

To have a first idea of the diversity of FDI flows in MENA region, we represent in some maps the volume of greenfield projects (map 1) flowing to these countries and their weight in GDP (map 2). Table 5 displays the number of greenfield FDI projects tracked in our dataset for the MENA countries together with other important characteristics of the countries.

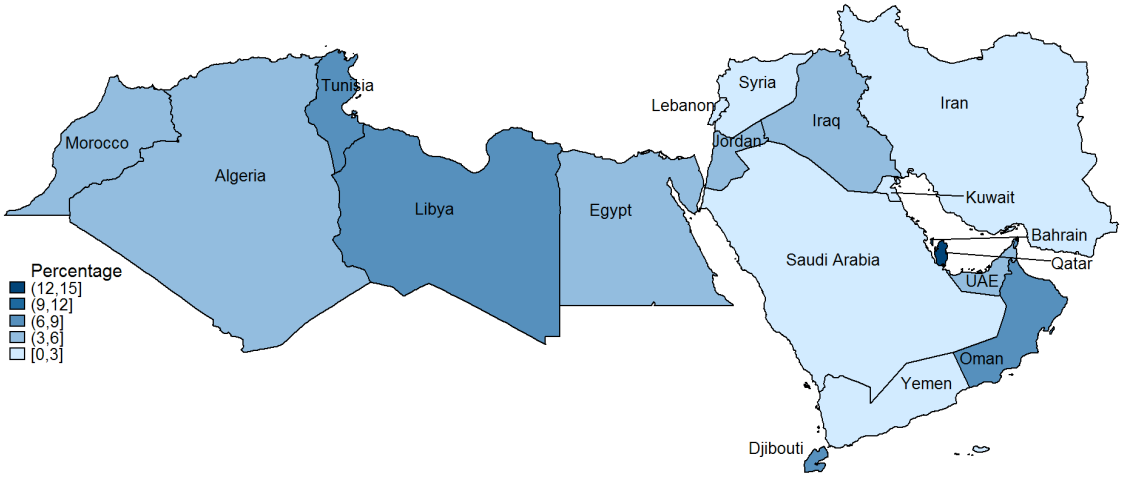
Map 1: greenfield investment in volume, 2003-2012



Source: Data from fDi Markets. Maps based on authors' own calculations.

[7]According to our statistics, the MENA regions received in 2003 6.63% of the total GIs flows, 14.94% in 2008 and 7.18% in 2012.

Map 2: Average greenfield investment over GDP, 2003-2012



Source: Data from fDi Markets. Maps based on authors' own calculations.

For MENA countries, greenfield investments (GI) play a dominant role over FDI. In all countries, greenfield investment projects represent more than 60% of the total FDI investments (see Table 5). As illustrated by Map 1 and Table 5, the main greenfield receptors during 2003-2012 are Saudi Arabia followed by United Arab Emirates (UAE) and Qatar. Egypt also receives considerable flows of GI. In terms of GDP, Tunisia, Lydia and Oman are the countries for which GI represent a higher share, followed by Algeria, Egypt, Iraq, and Jordan. In terms of projects, UAE, Saudi Arabia and Egypt are, again, the top host countries; in terms of average investment per project Libya, Djibouti and Qatar present the highest figures. In the maps available in Appendix 1, we show average greenfield investment over GDP by periods. It appears clearly that GI increased their weight in GDP in the period 2006- 2008 compared with the previous period 2003-2005. Though, during the period 2009-2012, GI weight in GDP decreased to a lower level than the one recorded in 2003-2005. **As expected, the Great Recession and the beginning of the Arab Spring had a negative impact on investments in this zone**. Altogether, as it can be gathered, **GIs have a quite relevant role as a source of capital across most MENA countries**. While for the average developing country FDI flows represents approximately 3% of their GDP[8], while for most MENA, the weight of GIs is higher without considering other FDI realized

[8]According to the UNCTAD, and following the UNCTAD country classification, during the period 2003-2012 FDI flows represented on average 3.09% of their GDP.

through merger and acquisitions. Nevertheless, clear exceptions are Iran, Lebanon and Yemen.

Table 5: Characteristics of greenfield projects in MENA, 2003-2012

Country	Code	Oil rents /GDP	Projects	Volume	GI /GDP	Volume per project	Jobs	GI/ Tot. Invest.
Algeria	DZA	25.7%	203	32,659	3.1%	160.9	58,581	91.3%
Bahrain	BHR	18.6%	228	18,033	9.7%	79.1	30,899	91.6%
Djibouti	DJI	0.0%	6	1,658	6.8%	276.4	2,988	95.0%
Egypt	EGY	9.6%	343	55,502	5.1%	161.8	91,183	76.3%
Iran	IRN	30.2%	77	18,123	0.9%	235.4	22,369	87.1%
Iraq	IRQ	54.4%	107	22,845	3.7%	213.5	16,088	89.5%
Jordan	JOR	0.0%	121	8,622	5.9%	71.3	23,198	69.1%
Kuwait	KWT	52.5%	64	4,242	0.5%	66.3	6,251	80.8%
Lebanon	LBN	0.0%	76	3,921	1.6%	51.6	12,187	86.2%
Libya	LBY	56.6%	90	32,965	7.0%	366.3	21,264	90.7%
Morocco	MAR	0.0%	338	26,683	4.0%	78.9	97,676	87.0%
Oman	OMN	36.3%	173	23,684	6.4%	136.9	29,103	90.3%
Qatar	QAT	30.9%	297	71,780	13.1%	241.7	42,920	94.9%
Saudi Arabia	SAU	46.9%	500	96,587	2.6%	193.2	84,112	89.5%
Syria	SYR	23.0%	75	17,216	2.8%	229.5	27,712	92.6%
Tunisia	TUN	4.2%	227	30,440	8.3%	134.1	51,600	89.2%
UAE	ARE	22.4%	1,732	75,106	3.7%	43.4	147,582	92.2%
Yemen	YEM	28.9%	18	4,039	2.3%	224.4	2,414	84.1%

Column 3 refers to the average oil rents over GDP during 2003-2012. Data from columns 4-6 is retrieved from fDi Markets. Volume and Investment per project are in millions of US$. Data from last column refers to the percentage of greenfield investment projects over total investment projects in each country (greenfield investment and M&As). It is retrieved from the World Investment Report 2015 annex tables 11 and 22.

For most MENA countries, European countries and the United States are the main investors. These countries are also the ones who suffered the most from the economic crisis. Consequently, their outward FDI flows reduced drastically and MENA inward flows have decreased.

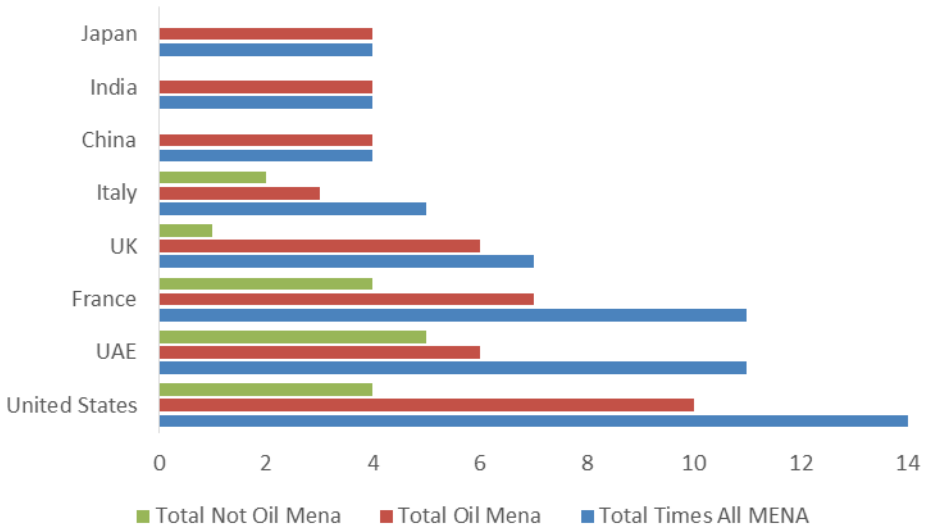
Graph 1 illustrates the number of times a given country is among the top 5 investors in any MENA country. Europe, specially **France and UK, USA and UAE have a prominent role in the region**. Some Asiatic countries like China, India and Japan are also relevant investors in some oil producing countries.

Accordingly, Appendix 2 shows how developed countries had a prominent role in the region as investors. It is also interesting to highlight that during the

period 2006-2008 investment from MENA countries into MENA had a relevant role as well as the investment from other developing countries.

Appendix 3 provides further details on the main investors. As it can be gathered, UAE and the United States are in most cases the main sources of GI. On this aspect, it is interesting to highlight that **United States have been among the top five investors in 14 of the 18 countries**. In addition, it can be also gathered that the share of investment is above 20% in 5 of the 13 countries in which oil rents represent an important share of GDP. In fact, it appears that United States' investment has been mainly attracted towards these countries. Following United States are European countries, which together represent more than 40% of the greenfield inflows in countries like Algeria, Yemen and Morocco. Moreover, statistics show how China and India appear among the main investors in some of these countries too[9]. Finally, investments between MENA countries are quite significant, in particular from UAE and Qatar. Both have their presence almost equally distributed across oil rent and non-oil rent countries.

Graph 1: Top investors: number of times a given country is among the top 5 investors in any MENA country



Regarding the sectorial distribution, Table 6 shows that **manufactures or construction sectors are in most cases the main receptors of GI**.

[9]Other emerging countries also play an increasing role in this region, particularly in oil producing countries. Although South Africa does not appear among the top investors in any case, we notice that all its' GI projects are exclusively directed towards countries in which oil rents represents a significant share of GDP. In the case of Brazil and Russia, we also find their investments being mainly directed toward these countries.

Services and sales oriented investments have a much lower importance. In these two sectors, we find that in Kuwait and UAE they represented a larger share of investment, and that in Iran and Yemen it had a marginal role. We consider that there are two factors that explain the presented sectorial distribution. First, as it was previously mentioned, fDi Markets only records those investments that surpass 1 million US$. In this sector which is more prone to be less capital intensive, it is likely that many investments are not recorded in our dataset. Secondly, high value-added services and sales oriented activities are likely to be sensible to institutions quality. We notice that in Appendix 4, while Kuwait and UAE are above average on this aspect, Iran and Yemen are among the worst in terms of political stability and corruption. In contrast to low value-added manufacture and construction activities, rule of law on value added services are determinants. In this branch of the firms' economic activity is where their capabilities are likely to be represented.

Table 6: Sectorial distribution, 2003-2012

Country	Manufacturing	Sales	Construction	Services	Others
Algeria *	53.5%	2.0%	22.7%	1.1%	20.7%
Bahrain*	18.7%	4.4%	52.7%	6.4%	17.8%
Djibouti	0.0%	2.3%	75.0%	0.4%	22.3%
Egypt*	32.0%	1.2%	39.2%	2.4%	25.2%
Iran*	45.0%	0.6%	3.5%	0.5%	50.3%
Iraq*	52.7%	1.2%	12.9%	1.3%	32.0%
Jordan	24.7%	5.7%	31.5%	3.7%	34.5%
Kuwait*	2.3%	2.7%	74.9%	9.9%	10.1%
Lebanon	8.3%	5.5%	61.7%	6.1%	18.5%
Libya*	5.5%	1.0%	66.7%	1.1%	25.7%
Morocco	39.0%	3.2%	42.3%	1.5%	14.0%
Oman*	54.7%	2.6%	14.7%	3.7%	24.3%
Qatar*	53.4%	1.6%	15.4%	2.1%	27.4%
Saudi Arabia*	74.9%	1.4%	14.3%	2.0%	7.4%
Syria*	29.0%	1.1%	49.7%	1.3%	19.0%
Tunisia	16.1%	1.8%	64.2%	1.0%	16.8%
United Arab Emirates*	18.3%	8.2%	42.4%	7.9%	23.2%
Yemen*	43.9%	0.5%	5.7%	0.7%	49.2%

Data from fDi Markets. Countries which oil rents represent a high proportion from GDP are marked with *.

Part III: Results

1) Baseline model: determinants of FDI at the world level

To obtain a robust and useful benchmark, we estimate first a base line model for the whole sample that is, for all bilateral FDI flows among the 160 countries during the period 2003-2012. Results of the base line model respectively for value of projects in millions of dollars (FDI_vol) and the number of projects (FDI_nb) are displayed in Table 7.

Table 7: Baseline model

	Volume of GI (intensive margin)	Number of projects (extensive margin)
ln(GDPi*GDPj)	-0.342 (0.30)	-0.174 (0.24)
ln(Distance)	-0.371*** (0.04)	-0.341*** (0.06)
Contiguity	-0.137* (0.08)	0.024 (0.13)
Common language	0.513*** (0.06)	0.493*** (0.11)
Colony	0.626*** (0.08)	0.513*** (0.11)
Same country	0.579*** (0.15)	0.396 (0.24)
Religion	0.417*** (0.13)	0.846*** (0.23)
Free Trade Agreement (FTA)	0.245*** (0.07)	0.239** (0.11)
Bilateral Investment Treaty (BIT)	-0.007 (0.04)	-0.094 (0.07)
Fixed effects	λi + λj + λt	
Constant	3.796 (5.34)	1.963 (4.28)
Observations	39181	39181
R^2	0.775	0.44

Generally speaking, **the gravity equation explains satisfactorily FDI and particularly well, the extensive margin:** macroeconomic factors, cultural ties, and distance are more important for MNE to take the decision to establish a new project in another country while the amount of the projects is also determined by other factors at the firm market levels[10].

The results suggest that trade specific regulations enhance also FDI (FTA have a positive impact); additionally, **cultural proximity also boosts**

[10] The product of GDP is not significant which may be explained by the fact that the size of demand and supply are already reflected in the fixed effects included for country.

investment between countries. Interestingly, BIT do not present any significant impact. This should call the attention of policy makers: initially it may suggest that **the content of investment treaties does not fit with the needs of investors**.

FDI relations are not more intensive among neighbor's countries. For horizontal FDI with market seeking motivations, exports may be a less costly option than FDI in their neighborhood. As regards vertical FDI seeking, as long as neighbors are more likely to be similar as the source country, they do not appeal investors pursuing efficiency gains and complementarities.

2) Specific determinants of FDI in MENA

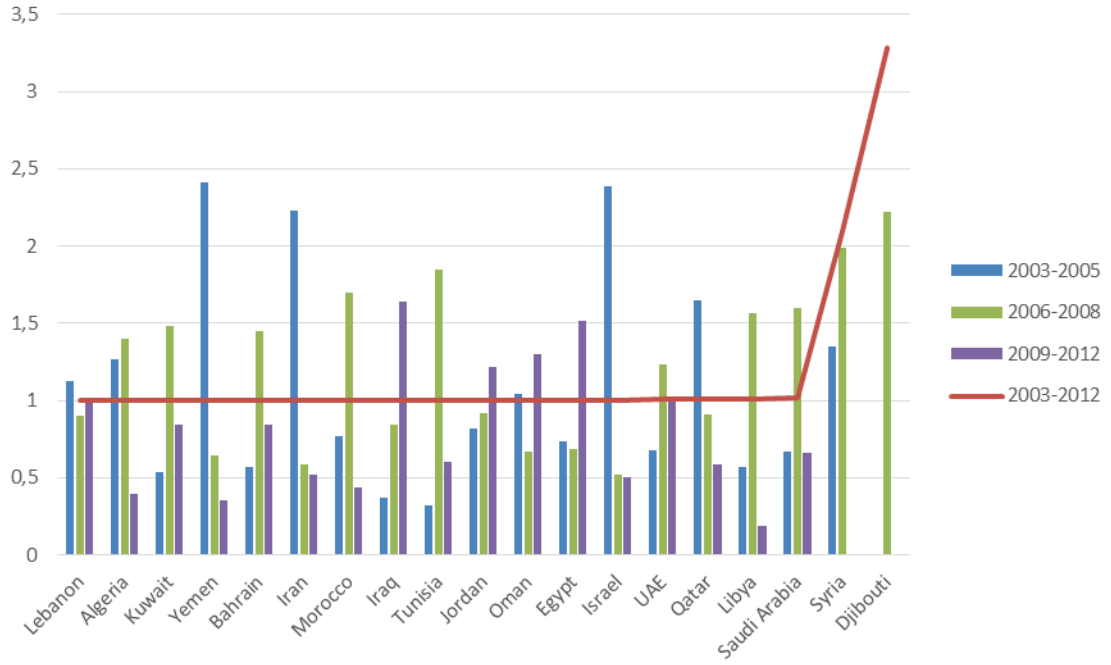
FDI potentials in MENA

Using predicted values of FDI flows from the baseline model, we estimate potential FDI flows to MENA countries. This exercise allows us to detect if there is a potential for increase in inward flows in MENA, once all the variables included in the estimation are controlled for. Graph 2 displays the value of real flows over potential flows (volume) for each MENA countries for the all period 2003-2012 (line) and for each sub period of three years (bars).

For most MENA, **the model predicts identical values to the real ones for the whole period for all countries** This is explained by the selected estimation method where countries effects are all controlled for through fixed effects. Therefore, any discrimination or preference towards a MENA country that is fixed over time is already taken into account[11]. **For the period 2009-2012, all the MENA are performing below their potential except Iraq, Egypt, Oman and Jordan.** The performance of most of them declined in comparison with the previous period 2006-2008.

[11] The cases of Syria and Djibouti are exceptions. They attract more FDI than expected according to the gravity variables. For Syria, this may be due to the drop in their GDP and the conflicts that would tend to predict zero flows. Though, Syria has attracted some FDI flows before 2009 unlike predicted by the estimation. The same occurs for Djibouti due to the fact that this country is especially small and investments are more erratic and difficult to predict.

Graph 2: Real flows over potential flows (volume) (Baseline model with PPML)



We also calculate potentials for each MENA countries by origin of investments. Graphs are shown in Appendix 6. **Investments from Europe in MENA are, in general, quite below the prediction**, in particular after 2008 except for Libya, Tunisia and Morocco. Investments from other developed countries have been more stable and fit with the expected in particular in oil countries. On the opposite, the ratio of real investments over predicted investments from developing countries and BRICS have fluctuated more drastically over the periods. As far as MENA countries are concerned as origin of investments in their neighbor countries, their investments have been in general over the predictions during the period 2006-2008.

Specificities of MENA as host countries

MENA versus Rest of the World

We investigate if transaction costs to MENA have a specific effect on their FDI attractiveness (compared to the world average). To this end, we add to the baseline model the key variables, interacted with a dummy when the host country is a MENA country. The sums of coefficients and significance tests are

displayed in Table 8. Detailed results of the estimation are available in Appendix 7.

As far as MENA specificities are concerned, **historical and cultural ties, namely common language and sharing the same religion have a specific importance for MENA**. Colony ties are especially important for them to start new projects (extensive margin) and distance from the investors diminishes especially the probability to start new project. According to our results, colonial ties foster greenfield projects by 0.58% in the rest of the world, while the effect for MENA is almost the double (1.01%). These results indicate some difficulties for other investors to overpass some informal barriers.

Table 8: Specificities of MENA as host countries: sum of coefficients for the interacted variables and tests

Variable	Intensive margin Coef.	Extensive margin Coef.
ln(GDPi*GDPj)*MENA	-0.0310	-0.0507
ln(Distance)*MENA	0.0880	-0.5519***
Contiguity*MENA	-1.7481***	-0.8976***
Language*MENA	1.5932***	0.5229***
Colony*MENA	0.0633	1.0134***
Same country*MENA	0.2080	0.3479
Religion*MENA	1.7399***	0.9690***
FTA*MENA	0.0999	-0.2647*
BIT*MENA	0.1694	-0.0167

These coefficients are obtained as the sum of coefficients β_i and β_j of variables X and X*MENA from Appendix 7. Then, we test whether this sum is significant or not using t = (β_i+β_j)/√(σ_i^2+σ_j^2-2Cov(β_i,⟦ β⟧_j)). Significance of the tests is expressed as *p≤0.10, **p≤0.05, ***p≤0.01

Transport costs proxied by distance discourage MNE to start new projects in MENA in the same proportion as for the rest of the world. Contiguity for MENA deters both the FDI volume and number of projects.

Finally, the relevance of trade and investment treatments is quite limited. Unlike the rest of the world, FTA fails to act as a pull factor in MENA. BIT does not seem to be relevant.

MENA oil producers versus MENA non-oil producers

Obviously, MENA should not be considered as a homogeneous block. Specially, it may be important to distinguish among **MENA countries specialized in the oil sector and the others**. Oil exporters may attract investments in natural resources and may not be willing to invest in their

neighbors which are usually similar to them. In contrast, countries that mainly export manufactured products attract other kind of FDI: investments in manufactures that may be efficiency seeking or consist in export platform or market-seeking. In Table 9, we report the results of the coefficient tests of the estimations run with dummies for each type of MENA. Complete results are displayed in Appendix 7.

Table 9: Specificities of MENA oil and non-oil producers as host countries: sum of coefficients for the interacted variables and tests

	Intensive margin Coef.	Extensive margin Coef.
ln(GDPi*GDPj)*MENA OIL	-0.0470	-0.0628
ln(GDPi*GDPj)*MENA NO OIL	0.0985	-0.0280
ln(Distance)*MENA OIL	0.1505	-0.4195***
ln(Distance)*MENA NO OIL	-0.9290***	-1.0712***
Contiguity*MENA OIL	-1.5512***	-0.6378**
Contiguity *MENA NO OIL	-3.6029***	-1.2955***
Language*MENA OIL	2.0150***	0.4275*
Language*MENA NO OIL	0.9172*	0.4734*
Colony*MENA OIL	0.1559	1.0271***
Colony*MENA NO OIL	-0.0588	0.9563***
Same country*MENA OIL	0.2830	0.5032
Same country*MENA NO OIL	12.329	0.7050
Religion*MENA OIL	1.1002**	1.0689***
Religion*MENA NO OIL	3.2630***	1.3413***
FTA*MENA OIL	0.2793	-0.2912
FTA*MENA NO OIL	-0.9145**	-0.6189**
BIT*MENA OIL	0.0525	-0.0193
BIT*MENA NO OIL	1.0077***	0.1707

These coefficients are obtained as the sum of coefficients β_i and β_j of variables X and X*MENA from Appendix 7. Then, we test whether this sum is significant or not using t = (β_i+β_j)/√(σ_i^2+σ_j^2-2Cov(β_i,〖 β〗_j)). Significance of the tests is expressed as *p≤0.10, **p≤0.05, ***p≤0.01

The first interesting difference between both groups is related with the role played by distance. **While for non-oil producers, poor infrastructure and connections with the rest of the world deter FDI, oil producers are able to attract large amount of investments despite transport costs**. Then, non-oil producers are more reluctant to invest in their neighborhood than MENA oil producers. When it comes to religion, this cultural tie plays a major role for non-oil producers.

As regards FTA, our results report that in both margins FDI is deterred from non-oil producers. The impact for oil producers of having signed a FTA is insignificant. Finally, BIT only seems to boost the volume of investment perceived by non-oil producers. For oil producers, they have no significant impact

3) Impact of Democracy, Quality of Institutions and Violence

Our analysis is threefold. First, we consider whether there is any difference between MENA countries and the rest of the world regarding these relations. Secondly, we compare the sensibility of FDI to these variables for MENA with the one of the rest of developing countries. Finally, we investigate in which manner owning natural resources, namely oil, affects the role played by institutions.

Democracy

Results obtained concerning the impact of **democracy** are reported in Table 10. Five from the six regressions report a positive and significant coefficient for *Democracy*. In line with previous works (Asiedu & Lien 2011; Busse & Hefeker, 2007; Farazmand & Moradi, 2014), our results support the hypothesis that **democracy has an overall positive impact on both the volume, and the number of greenfield investments**. In contrast, **democracy is found to have a non-significant impact on MENA**[12].

[12] These results are taken from the sum of coefficients in column 6 from Table 10 MENA= 0.112 – 0.093 and Other developing countries = 0.112 – 0.09. Then, we test whether the coefficient from the base group plus interaction is significant or not: $t = \frac{\beta_i+\beta_j}{\sqrt{\sigma_i^2+\sigma_j^2-2Cov(\beta_i,\beta_j)}}$. This test is applied whenever there is an interaction; tests' results are reported in Appendix 8.

Table 10- Impact of Democracy on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			Number of projects (extensive margin)		
	1	2	3	4	5	6
DEMOCRACY in host country	0.058**	0.058**	0.067	0.024***	0.024***	0.112**
	(0.02)	(0.02)	(0.09)	(0.01)	(0.01)	(0.05)
DEMOCRACY when host country is MENA	-0.014		-0.023	-0.006		-0.093
	(0.06)		(0.11)	(0.02)		(0.06)
DEMOCRACY when host country is MENA (NON-OIL PRODUCER)		-0.190**			-0.046*	
		(0.08)			(0.02)	
DEMOCRACY when host country is MENA (OIL PRODUCER)		0.088			0.069**	
		(0.06)			(0.03)	
DEMOCRACY when host country is OTHER DEVELOPING COUNTRY			-0.009			-0.090*
			(0.09)			(0.05)
Constant	2.589	2.694	2.115	2.703	2.719	1.84
	(3.68)	(3.67)	(3.62)	(3.04)	(3.04)	(2.89)
Observations	37163	37163	37153	37163	37163	37153
R^2	0.431	0.432	0.432	0.845	0.845	0.845
Control variables from baseline model	X	X	X	X	X	X
Estimation method	PPML with fixed effect $\lambda_i + \lambda_j + \lambda_t$					

Regarding the nexus between democracy, natural resources and FDI, we do find that the lack of significant oil production does alter the relationship between FDI and democracy. The interaction *Democracy*non-oil-MENA* reported in column 2 indicates that **an increase of democracy may deter FDI inflows in MENA non-oil producers**. For instance, other things constant, for the year 2012, if Morocco had increased its level of democracy to the one of Uganda (from -4 to -1), greenfield investments' volume would have decreased in approximately 39%.

In contrast, **the impact of democracy is positive for oil producers both on the extensive and intensive margins**. In the same year, other things constant, if Algeria had increased its level of democracy to the one of Ecuador (from 2 to 5), greenfield investment inflows and projects would have increased by almost 44% and 28% respectively. This result is not in line with Asiedu & Lien (2011); according to their results, we should expect a positive effect for non-oil producers since oil production undermines the benefits of democracy. However, in our study, democracy, or lower degree of autocracy, in oil MENA producing countries attracts FDI in a significant larger quantity than in the rest of the world.

At first sight, the negative effect found for non-oil-MENA is however surprising. These countries present on average higher *Democracy* scores than

the oil-MENA group but an increase in Democracy would not attract more FDI. Our interpretation relates to findings obtained in the next section.

Political stability

Political instability hampers the country's capacity of attracting new investors (Table 11). If we consider the results from regression 6, one percent improvement in this variable would increase the number of projects by 0.95% for developed countries, by 1.14% for MENA and by 1.04% for the rest of developing countries.

In addition to these results, political stability significantly increases the number of greenfield projects in MENA oil producers, while for non-producers the impact is not significant (column 5). For instance, if Algeria were to improve its political stability to the level of Venezuela (from -1.32 to -1), number of projects would increase in approximately 14%[13].

Table 11- Impact of Political stability on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			Number of projects (extensive margin)		
	1	2	3	4	5	6
Political stability in host country	0.605 (0.39)	0.605 (0.39)	0.53 (0.79)	1.020*** (0.20)	1.021*** (0.20)	0.953** (0.45)
Political stability when host country is MENA	0.048 (1.18)		0.123 (1.37)	0.116 (0.35)		0.184 (0.54)
Political stability when host country is MENA (NON-OIL PRODUCER)		-0.149 (2.47)			-0.612 (0.69)	
Political stability when host country is MENA (OIL PRODUCER)		0.069 (1.26)			0.29 (0.38)	
Political stability when host country is OTHER DEVELOPING COUNTRY			0.089 (0.90)			0.091 (0.49)
Constant	0.042 (4.04)	0.037 (4.04)	0.063 (4.02)	-1.828 (3.05)	-1.837 (3.05)	-1.816 (3.05)
Observations	39118	39118	39118	39118	39118	39118
R^2	0.431	0.431	0.431	0.846	0.847	0.847
Control variables from baseline model	X	X	X	X	X	X
Estimation method	PPML with fixed effect $\lambda_i + \lambda_j + \lambda t$					

[13]When interactions are significant and our independent variable is in logs, we calculate its effect in the following way: $\frac{FDI'}{FDI} = e^{(\beta_1+\beta_2)x(\ln(P')-\ln(P))}$ where $\frac{FDI'}{FDI}$ is a ratio in which represents the new level of FDI (FDI') considering the independent variables changed to a new value (D'). $\beta_1$is the base coefficient and β_2 is the coefficient of the interaction.

Violence

Violence, regardless the indicator used, affects MENA much more than any other developing countries, decreasing the number of FDI projects flying to these countries (Tables 12, 13 and 14). Both, civil and total violence have no significant impact on the remaining developing countries.

Civil violence seems to affect MENA which do not produce oil in a more negative manner while **total violence particularly affects oil producing countries**. Total violence includes internal civil violence episodes and international ones. It appears that oil producing countries suffer from a larger rate of international violence episodes, like wars.

In the same line, if any, terrorism, either measured by the number of Terrorist attacks or the number of deaths, has a negative impact on MENA countries and especially on oil producing countries [14]. Riots and protests appear to be more likely to be handled by oil producing national governments, while terrorism and wars are not.

Overall, our results point out a negative relationship between GIs and violence, which is in line with findings from previous literature (Abadie & Gardeazabal, 2008; Bandyopadhyay et al., 2013; Blomberg & Mody, 2005; Busse& Hefeker, 2007; Enders & Sandler, 1996). However, as in Asiedu & Lien, (2011) and Blomberg & Mody (2005), a positive relationship is also reached in some cases.

The relationship between violence and greenfield investment does not appear to be as straight forward as one would expect. Actually, some emerging economies attract greenfield investments above the average even though they suffered from civil violence and terrorism. For instance, India suffered from terrorist attacks in seven of the ten considered years and Russia in four. It seems that other characteristics of these countries, other than the ones already considered in our model boost GI to this region despite the violence. In contrast, MENA appear to be particularly negatively affected by violence even after controlling for these circumstances. It may be the case

[14]In the extensive margin, MENA countries appear to be particularly negatively affected by terrorism in comparison with the rest of the world. According to specification 4, one percent increase of terrorist attacks may decrease the number of projects by 0.11%.

that some endogeneity issues arise as long as dense areas are more often in the eye of terrorism attacks, while these regions are more likely to attract investors who anticipate growth potential or improvements in political climate.

Neighbors' violence

Our results support the hypothesis that, in general, greenfield investments are displaced from countries suffering from violence towards neighbor countries with similar characteristics (Paniagua, 2011). Again, violence has a clearer influence on the decision to invest rather than on the decision about the amount to be invested. In contrast, **violence in neighbor countries deters GI from MENA countries and the impact is quite large. I**n particular MENA non-oil producers are especially harmed by violence in their neighborhood as far as attracting GI is concerned.

It appears that **for MENA, every major violence's episodes translate into a perception of regional instability for foreign investors.** This may be due to the fact that violence spreads easily across frontiers or because investors perceive these countries as similar. While for most countries, violence exerts a diversion effect in benefit of neighborhood, this does not apply in MENA.

Table 12- Impact of Civil violence and terrorist attacks on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			**Number of projects (extensive margin)**		
	1	2	3	4	5	6
Total violence from neighbor countries	0.164**	0.166**	0.104	0.177***	0.177***	0.174***
	(0.08)	(0.08)	(0.10)	(0.04)	(0.04)	(0.05)
Total civil violence	0.037	0.038	1.131	0.045	0.045	1.631***
	(0.09)	(0.09)	(1.05)	(0.05)	(0.05)	(0.58)
Total terrorist attacks	-0.029	-0.028	-0.274**	0.031**	0.031**	0.016
	(0.04)	(0.04)	(0.11)	(0.01)	(0.01)	(0.06)
Total violence from neighbor countries when host country is MENA	-0.508**		-0.446*	-0.488***		-0.485***
	(0.25)		(0.26)	(0.08)		(0.08)
Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)		-0.874**			-0.468***	
		(0.39)			(0.11)	
Total violence from neighbor countries when host country is MENA (OIL PRODUCER)		-0.357			-0.527***	
		(0.31)			(0.09)	
Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY			0.169			0.003
			(0.16)			(0.08)
Total civil violence when host country is MENA	0.158		-0.935	-0.281*		-1.867***
	(0.40)		(1.12)	(0.15)		(0.61)
Total civil violence when host country is MENA (NON-OIL PRODUCER)		0.026			-1.663***	
		(0.79)			(0.56)	
Total civil violence when host country is MENA (OIL PRODUCER)		0.141			-0.218	
		(0.4)			(0.15)	
Total civil violence when host country is OTHER DEVELOPING COUNTRY			-1.093			-1.586***
			(1.05)			(0.59)
Total terrorist attacks when host country is MENA	-0.174		0.071	-0.147**		-0.132
	(0.15)		(0.19)	(0.07)		(0.09)
Total terrorist attacks when host country is MENA (NON-OIL PRODUCER)		-0.33			0.047	
		(0.27)			(0.11)	
Total terrorist attacks when host country is MENA (OIL PRODUCER)		-0.155			-0.216***	
		(0.17)			(0.08)	
Total terrorist attacks when host country is OTHER DEVELOPING COUNTRY			0.261**			0.017
			(0.12)			(0.06)
Constant	0.042	-0.219	-0.397	-1.799	-1.761	-1.845
	(3.96)	(3.93)	(3.96)	(3.16)	(3.16)	(3.12)
Observations	37630	37630	37461	37630	37630	37461
R^2	0.431	0.431	0.431	0.848	0.848	0.848
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effects $\lambda_i + \lambda_j + \lambda_t$					

Table 13- Impact of Civil violence and deaths due to terrorisms from terrorism on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			**Number of projects (extensive margin)**		
	1	2	3	4	5	6
Total violence from neighbor countries	0.160*	0.162*	0.105	0.176***	0.175***	0.173***
	(0.08)	(0.08)	(0.10)	(0.04)	(0.04)	(0.05)
Total civil violence	0.044	0.045	1.108	0.048	0.047	1.613***
	(0.09)	(0.09)	(1.04)	(0.05)	(0.05)	(0.58)
Deaths due to terrorism	-0.021	-0.021	-0.070**	0.006	0.005	-0.003
	(0.02)	(0.02)	(0.04)	(0.01)	(0.01)	(0.02)
Total violence from neighbor countries when host country is MENA	-0.530**		-0.472*	-0.494***		-0.491***
	(0.25)		(0.25)	(0.08)		(0.08)
Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)		-0.901**			-0.453***	
		(0.37)			(0.11)	
Total violence from neighbor countries when host country is MENA (OIL PRODUCER)		-0.374			-0.534***	
		(0.30)			(0.09)	
Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY			0.16			0.003
			(0.17)			(0.08)
Total civil violence when host country is MENA	0.135		-0.929	-0.273*		-1.838***
	(0.40)		(1.12)	(0.15)		(0.60)
Total civil violence when host country is MENA (NON-OIL PRODUCER)		0.106			-1.686***	
		(0.77)			(0.56)	
Total civil violence when host country is MENA (OIL PRODUCER)		0.116			-0.215	
		(0.40)			(0.15)	
Total civil violence when host country is OTHER DEVELOPING COUNTRY			-1.066			-1.566***
			(1.05)			(0.59)
Deaths due to terrorism when host country is MENA	-0.038		0.011	-0.063**		-0.055*
	(0.08)		(0.09)	(0.03)		(0.03)
Deaths due to terrorism when host country is MENA (NON-OIL PRODUCER)		-0.127			0.026	
		(0.11)			(0.05)	
Deaths due to terrorism when host country is MENA (OIL PRODUCER)		-0.028			-0.087**	
		(0.08)			(0.04)	
Deaths due to terrorism when host country is OTHER DEVELOPING COUNTRY			0.057			0.01
			(0.04)			(0.02)
Constant	0.241	-0.048	-0.161	-1.638	-1.588	-1.722
	(3.96)	(3.93)	(3.97)	(3.16)	(3.16)	(3.14)
Observations	37630	37630	37461	37630	37630	37461
R^2	0.431	0.431	0.431	0.848	0.848	0.848
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effects $\lambda_i + \lambda_j + \lambda_t$					

Table 14- Impact of Total Violence on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			Number of projects (extensive margin)		
	1	2	3	4	5	6
Total violence from neighbor countries	0.166** (0.08)	0.168** (0.08)	0.119 (0.10)	0.172*** (0.04)	0.172*** (0.04)	0.167*** (0.05)
Total Violence	-0.029 (0.10)	-0.028 (0.10)	-0.449 (0.47)	-0.081 (0.05)	-0.081 (0.05)	-0.559*** (0.08)
Total violence from neighbor countries when host country is MENA	-0.550** (0.25)		-0.499** (0.25)	-0.520*** (0.08)		-0.517*** (0.08)
Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)		-0.949*** (0.36)			-0.419*** (0.11)	
Total violence from neighbor countries when host country is MENA (OIL PRODUCER)		-0.39 (0.31)			-0.565*** (0.08)	
Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY			0.147 (0.17)			-0.017 (0.08)
Total violence when host country is MENA	-0.314 (0.44)		0.109 (0.63)	-0.523*** (0.16)		-0.045 (0.17)
Total violence when host country is MENA (NON-OIL PRODUCER)		-0.254 (0.50)			-0.023 (0.23)	
Total violence when host country is MENA (OIL PRODUCER)		-0.3 (0.44)			-0.577*** (0.17)	
Total violence when host country is OTHER DEVELOPING COUNTRY			0.475 (0.48)			0.615*** (0.09)
Constant	0.243 (3.96)	-0.043 (3.93)	-0.376 (3.96)	-1.248 (3.08)	-1.229 (3.07)	-2.103 (3.07)
Observations	37630	37630	37630	37630	37630	37630
R^2	0.432	0.431	0.431	0.849	0.849	0.85
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effects $\lambda_i + \lambda_j + \lambda_t$					

Institutions' quality: Rule of law and corruption

According to our results, the lack of **rule of law** does not seem to have a significant influence on investors worldwide while it clearly reduces the chance to attract investors in MENA and in particular in MENA oil producers (see Table 15).

Results concerning the impact of corruption on GI are displayed in Table 16. **Lack of corruption, seems to have, on average, a weak positive impact on the number of projects a country receives**. Reducing corruption will have opposite effects within MENA: in oil producing countries, improving this index by 1% would expand the number of projects in approximately 2.12% while in non-oil producers it would reduce it in 3.22%. This worrying result also applies to the intensive margin: a reduction of

corruption would significantly diminish the volume of GI flying to non-oil producers MENA.

Table 15- Impact of Rule of law on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			**Number of projects (extensive margin)**		
	1	2	3	4	5	6
Rule of law guarantee in host country	-0.024 (0.84)	-0.029 (0.84)	1.417 (1.77)	0.424 (0.48)	0.426 (0.48)	-1.480* (0.84)
Rule of law guarantee when host country is MENA	-2.345 (3.45)		-3.799 (3.82)	2.593*** (0.82)		4.525*** (1.07)
Rule of law guarantee when host country is MENA (NON-OIL PRODUCER)		0.907 (6.12)			0.108 (1.83)	
Rule of law guarantee when host country is MENA (OIL PRODUCER)		-2.758 (3.73)			3.183*** (0.89)	
Rule of law guarantee when host country is OTHER DEVELOPING COUNTRY			-1.602 (1.98)			2.299** (1.08)
Constant	-0.135 (3.95)	-0.187 (3.95)	-0.211 (3.94)	-0.776 (3.34)	-0.746 (3.34)	-0.814 (3.42)
Observations	39151	39151	39151	39151	39151	39151
R^2	0.431	0.431	0.431	0.845	0.845	0.844
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effect $\lambda_i + \lambda_j + \lambda t$					

Table 16- Impact of Corruption on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			**Number of projects (extensive margin)**		
	1	2	3	4	5	6
Lack of corruption	0.598 (0.48)	0.583 (0.48)	-1.748* (0.96)	0.524** (0.25)	0.512** (0.25)	-0.607 (0.45)
Lack of corruption when host country is MENA	-0.909 (1.67)		1.365 (1.85)	0.829 (0.51)		1.915*** (0.63)
Lack of corruption when host country is MENA (NON-OIL PRODUCER)		-6.432** (2.81)			-3.730*** (1.29)	
Lack of corruption when host country is MENA (OIL PRODUCER)		-0.44 (1.82)			1.613*** (0.55)	
Lack of corruption when host country is OTHER DEVELOPING COUNTRY			2.964*** (1.07)			1.687*** (0.54)
Constant	0.372 (3.95)	0.452 (3.94)	-1.355 (4.03)	-0.487 (3.27)	-0.406 (3.26)	-1.694 (3.30)
Observations	39151	39151	39151	39151	39151	39151
R^2	0.431	0.431	0.433	0.845	0.845	0.846
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effect $\lambda_i + \lambda_j + \lambda t$					

Ease of doing business

At the world level, not all the aspects of the business environment play a relevant role for GI but when they do, they influence the location's choice of

GI rather than the volume of the projects. Similar conclusions are reached by Corcoran & Gillanders (2015) for FDI from US. The easiness of doing business is taken into consideration by foreign investors ex ante but once the decision to invest in this country is taken, it does not influence the amount of the investment.

The number of procedures does have a negative impact for MENA countries and for the remaining developing countries (Table 17). Furthermore, oil producers would be the countries that would benefit more from a reduction of procedures: a country like Kuwait may increase the number of FDI projects by 7% by reducing the number of procedures from 12 to 11.

In developing countries, bureaucratic procedures are in general associated with higher legal (and not legal) costs since administration may be less efficient. Actually, the number of procedures is negatively correlated with the rule of law's compliance, lack of corruption and guarantee of property rights which deter MNEs. As reported in Table 3, the number of procedures necessary for starting a business in MENA region is slightly higher than for developed countries as it is for the rest of developing countries. The unexpected positive impact of the number of procedures in developed country may be explained by the fact that they may be interpreted as an instrument that guarantees the rights of the investors, the efficiency of the administration and, the quality of institutions. Procedures may not represent significant cost for MNEs.

Generally speaking, **the number of days necessary for starting a business is not relevant for greenfield investors** (Table 18). When considering the possibility to invest in developing countries, a small but significant negative effect is registered. One extra day would decrease the number of projects in approximately 0.40%. For the MENA region, a similar coefficient is reached, but it is not significant. The impact of this variable remains insignificant when oil and non-oil producers are considered separately.

Table 17- Impact of Number of procedures on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			Number of projects (extensive margin)		
	1	2	3	4	5	6
Number of procedures for starting a business	0.02	0.02	0.062*	0.029***	0.029***	0.090***
	(0.03)	(0.03)	(0.04)	(0.01)	(0.01)	(0.01)
Number of procedures for starting a business when host country is MENA	-0.024		-0.068	-0.061***		-0.125***
	(0.07)		(0.07)	(0.02)		(0.02)
Number of procedures for starting a business when host country is MENA (NON-OIL PRODUCER)		-0.09			-0.027	
		(0.07)			(0.04)	
Number of procedures for starting a business when host country is MENA (OIL PRODUCER)		-0.019			-0.065***	
		(0.07)			(0.02)	
Number of procedures for starting a business when host country is OTHER DEVELOPING COUNTRY			-0.063*			-0.102***
			(0.03)			(0.02)
Constant	-9.043	-9.096	-7.342	-16.044***	-16.044***	-12.557***
	(6.68)	(6.69)	(6.83)	(2.15)	(2.15)	(2.21)
Observations	27147	27147	27147	27147	27147	27147
R^2	0.223	0.223	0.223	0.793	0.793	0.793
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effects $\lambda_i + \lambda_j + \lambda_t$					

Table 18- Impact of Number of days on the intensive and extensive margin of GI

	Volume of GI (intensive margin)			Number of projects (extensive margin)		
	1	2	3	4	5	6
Number of days for starting a business	-0.004	-0.004	0	0	0	0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of days for starting a business when host country is MENA	0.008		0.003	-0.004		-0.006**
	(0.01)		(0.01)	(0.00)		(0.00)
Number of days for starting a business when host country is MENA (NON-OIL PRODUCER)		-0.006			0.002	
		(0.01)			(0.00)	
Number of days for starting a business when host country is MENA (OIL PRODUCER)		0.009			-0.005	
		(0.01)			(0.00)	
Number of days for starting a business when host country is OTHER DEVELOPING COUNTRY			-0.008**			-0.006***
			(0.00)			(0.00)
Constant	-9.481	-9.524	-6.904	-15.043***	-15.037***	-12.607***
	(6.95)	(6.95)	(7.31)	(2.19)	(2.19)	(2.37)
Observations	27147	27147	27147	27147	27147	27147
R^2	0.224	0.224	0.224	0.792	0.792	0.792
Control variables	X	X	X	X	X	X
Estimation method	PPML with fixed effects $\lambda_i + \lambda_j + \lambda_t$					

Non-technical summary and policy brief

This study focuses on FDI in Middle East and North African countries (MENA). To this end, we use data for greenfield investments from FDI Markets that contains information about the number and volume of projects by source and destination countries all over the world for the period 2003-2012.

In a first step, we provide a comprehensive outlook of the nature and trend of FDI flowing to MENA. In a second step, we estimate a gravity equation to explain greenfield investments for 160 countries. Macroeconomic factors, cultural ties, and distance are the main determinants of MNEs' decision to invest in a foreign country (extensive margin) while the amount of the projects might be determined also by other factors at the firm market levels (intensive margin).

As far as trade agreements are concerned, FTA between the source and host countries seem to inventive investments among trade partners at the world level. On the opposite, BIT fait to reach their goals. This should call the attention of policy makers: initially it may suggest that the content of investment treaties does not fit with the needs of investors.

Based on this benchmark model, investments in MENA countries are shown to be very close to their potential values over the period 2003-2012. MENA countries invest less in their neighborhood than other countries do. At the same time, cultural ties do seem to play a relevant role across these countries, particularly when it comes to language and religion. Distance and FTA lack specific relevance for FDI's attractiveness in the region. All in all, trade costs are neither a specific motive to invest in MENA region, nor a reason not to do so. Our results raise some doubts on usefulness of BIT to foster FDI in MENA like in the rest of the world.

When studying differences among oil and non-oil producers, we find that poor infrastructure and connections with the rest of the world deter FDI in non-oil producers. Another specificity of these countries is their reluctance to invest in their neighborhood. FTA could have a negative impact on inward investments in MENA.

Then, attracting more investments in the region is not only a matter of economic growth and trade costs. All in all, FDI in MENA are clearly discouraged by cultural distance or informal trade barriers.

GIs have a relevant role as capital source for most MENA countries; it represents a higher share of GDP for MENA than for other developing countries. As expected, the Great Recession and the beginning of the Arab Spring had a negative impact on investments in this zone since GIs have failed drastically between 2009-2012, compared to the previous period.

At the world level, our macroeconomic model accurately explains the framework that allows new projects of investments to emerge while the volume of investment seems to respond to more microeconomic incentives: macroeconomic factors, cultural ties, and distance influence MNEs' decision to invest in a foreign country while the amount of the projects might be determined by other factors at the firm market levels.

At the world level, a better quality of institutions is prone to make more attractive the host country to foreign investors; **our results evidence as clear pull determinants of GI: democracy, political stability, lack of corruption and business freedom**. In contrast, rule of law, and other indicators of ease of doing business do not appear to have a clear significant impact. Finally, **greenfield investments are displaced from countries suffering violence towards** neighbors' countries. Other types of violence do not have at the world level any evident impact.

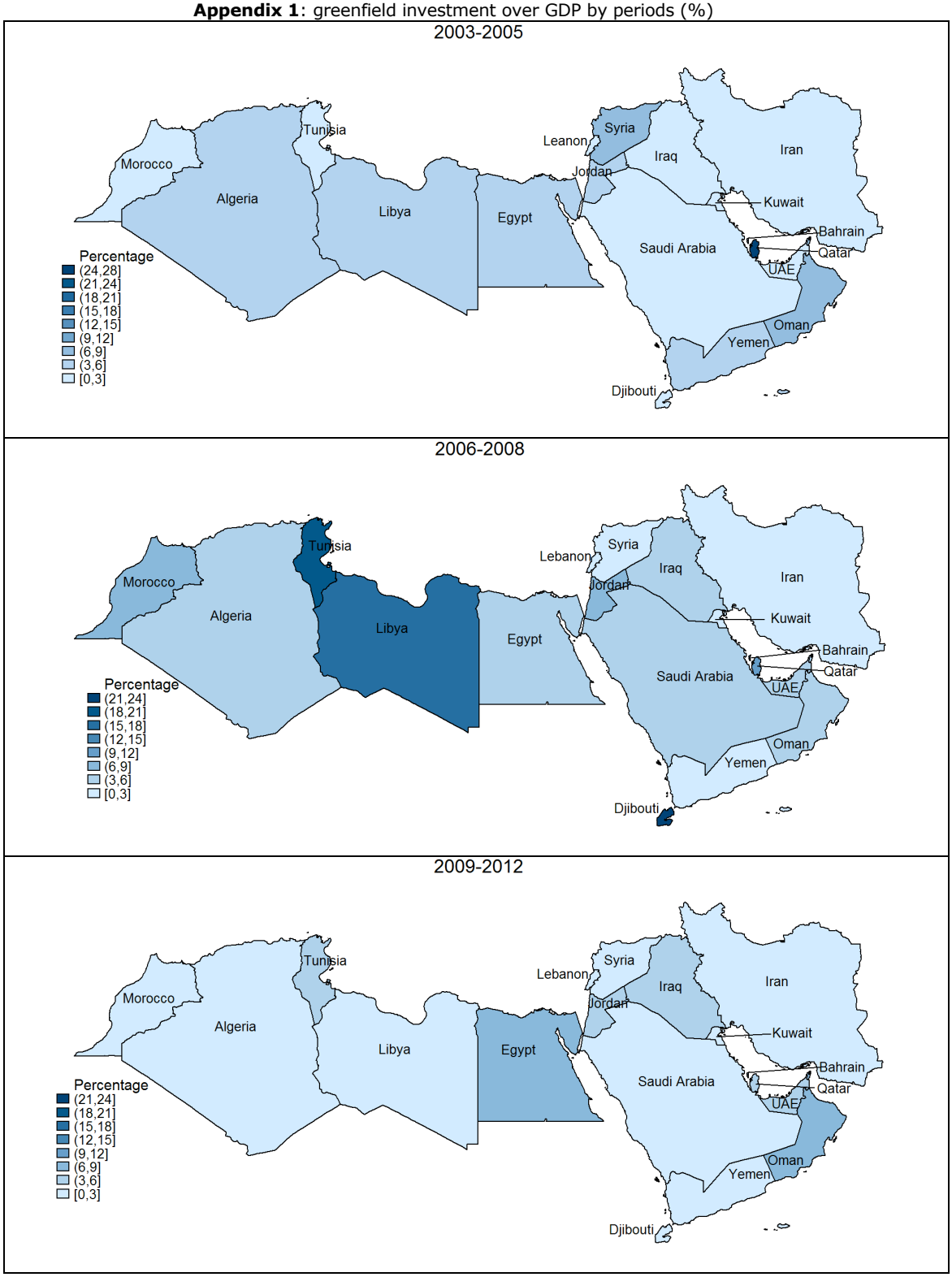
Further insight is reached when considering the heterogeneity of countries. More precisely, the considered characteristics have **a different impact on GI in MENA that do not produce oil compared with GI in MENA that do produce oil.** For the formers, the environment doesn't seem to play a significant role in most cases or have an unexpected impact, while for the latter the impact is in general significant, and in line with the hypothesis. Improvements in democracy would not improve the attractiveness of MENA non-oil producers but political stability would attract FDI to these countries (in the same manner as it would attract foreign investments elsewhere). Some of these countries have been directly and indirectly affected by the Arab Spring whose effect can only partly been assessed in this study since our data ended

in 2012. For instance, due to this phenomenon Tunisia and Morocco performed some institutional changes towards democracy. Such institutional changes can be perceived in the short run as a source of instability by foreign investors. Finally, MENA non-oil producers are especially harmed by violence in their neighborhood as far as attracting GI is concerned. All in all, this draws the conclusion that investors may see the political transition to democracy as a source of political instability of the whole region. Besides and more worrying is the fact that reducing corruption in these countries would reduce the number of foreign investments flying to non-oil producers MENA.

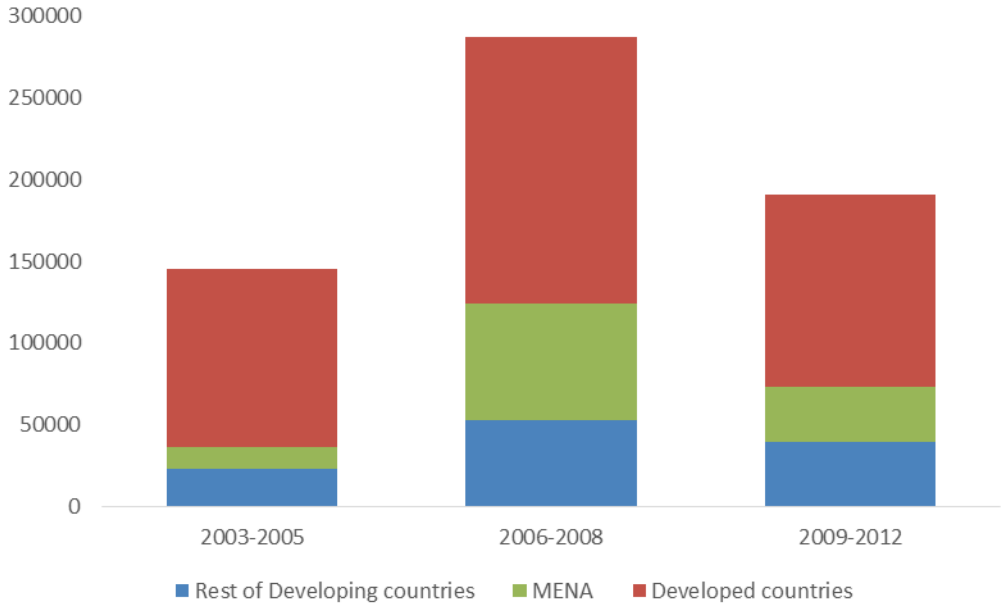
Whether MENA produces or not oil seems to significantly alter the FDI-institutions nexus. On the basis of previous works, one would expect the presence of natural resources to undermine the positive impact of institutions' quality could have on FDI. Our results do not confirm this assumption: **improving institutional quality is more likely to foster FDI in MENA oil producers than in MENA no oil producers**. This may be explained by the fact that the oil production of such MENA countries is so high and their dependence on FDI so low that governments have not developed special ties with MNEs while in other countries abundant in natural resources, non-democratic governments have given special treatment to foreign investors. Then, any improvements in democracy index in these MENA could improve inward FDI while it would deter FDI in other oil producers developing countries.

Appendix

Appendix 1: greenfield investment over GDP by periods (%)



Appendix 2: Evolution of investors in MENA



Appendix 3: Top 5 investors per country, 2003-2012

	Europe	USA	UAE	China	India	Japan	Qatar	Canada	Russia	Bahrain	Saudi Arabia	Indonesia	Kuwait	Singapore	South Korea
Yemen (o)	54.5%							34.6%			7.4%				
Tunisia	19.6%	6.7%	58.9%												
Syria (o)	5.9%	7.2%	39.5%	16.6%					5.8%						
Saudi Arabia (o)	13.7%	32.0%	5.3%	6.0%		13.4%									
Qatar (o)	23.1%	39.4%				15.6%									
Oman (o)	14.0%	10.5%			14.5%		7.9%	10.7%							
Morocco	39.0%		28.8%						7.2%						
Libya (o)	7.9%	3.0%								58.9%		11.5%			
Lebanon		9.7%	43.6%				9.5%	9.9%			7.2%				
Kuwait (o)	14.1%	30.3%	20.6%											14.8%	
Jordan	10.8%	11.5%	20.7%							10.6%					8.8%
Iraq (o)	25.4%	40.4%	8.7%		8.6%										
Iran (o)	11.1%	9.5%		19.7%	9.9%				10.7%						
Egypt (o)	23.0%		15.1%				22.4%								
Algeria (o)	56.7%			9.2%											
Djibouti	1.6%	0.9%	97.5%												
UAE (o)	16.4%	24.3%			5.7%	7.1%									
Bahrain (o)	8.0%	18.6%	6.6%			7.5%							26.6%		
Total Times All MENA	35 (17)	14	11	4	4	4	3	3	3	2	2	1	1	1	1
Total Oil MENA	25 (13)	10	6	4	4	4	2	2	2	1	1	1	1	1	0
Total Non-Oil MENA	10 (4)	4	5	0	0	0	1	1	1	1	1	0	0	0	1

Appendix 4: Institutions main statistics, 2003-2012

Country	Democracy - Autocracy	Political stability	Rule of law	Lack of corruption	Total civil violence	Total violence	Number of terrorist attacks	Number of deaths from terrorism	Total neighbors' violence	Days for starting a business	Procedures for starting a business
UAE	-8.0	0.9	0.5	1.0	0.0	0.0	0.0	0.0	0.5	17.2	9.0
Bahrain	-7.2	-0.3	0.5	0.3	0.0	0.0	0.0	0.0	0.5	9.0	7.0
Djibouti	2.0	-0.1	-0.8	-0.5	0.0	0.0	0.0	0.0	5.6	40.0	11.0
Algeria	1.5	-1.3	-0.7	-0.5	0.8	0.8	0.7	17.5	0.5	24.1	13.1
Egypt	-3.5	-0.9	-0.1	-0.6	0.1	0.1	1.0	17.0	6.6	17.7	9.1
Iran	-5.5	-1.1	-0.8	-0.6	0.0	0.0	0.7	14.3	14.7	24.3	8.9
Iraq	3.0	-2.5	-1.7	-1.4	0.6	5.4	94.2	1588.0	2.4	31.9	11.0
Jordan	-2.6	-0.4	0.4	0.2	0.0	0.0	0.3	6.3	9.1	22.1	8.9
Kuwait	-7.0	0.3	0.6	0.5	0.0	0.0	0.0	0.0	5.9	34.7	12.9
Lebanon	6.0	-1.5	-0.6	-0.8	0.2	0.4	0.2	3.8	3.2	36.4	6.6
Libya	-5.6	0.1	-0.9	-1.0	0.4	0.4	0.0	0.0	6.5	.	.
Morocco	-5.6	-0.5	-0.2	-0.3	0.0	0.0	1.3	6.0	0.8	14.6	6.7
Oman	-8.0	0.8	0.6	0.3	0.0	0.0	0.0	0.0	1.6	25.3	8.0
Qatar	-10.0	1.1	0.8	1.1	0.0	0.0	0.0	0.0	0.5	7.8	7.6
Saudi Arabia	-10.0	-0.4	0.2	-0.2	0.5	0.5	0.5	7.3	6.5	42.7	14.0
Syria	-7.2	-0.8	-0.6	-1.0	1.0	1.0	2.0	37.4	8.9	30.2	10.0
Tunisia	-2.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.2	11.0	10.0
Yemen	-1.5	-1.9	-1.1	-0.9	1.1	1.1	0.7	24.7	0.5	41.4	9.4

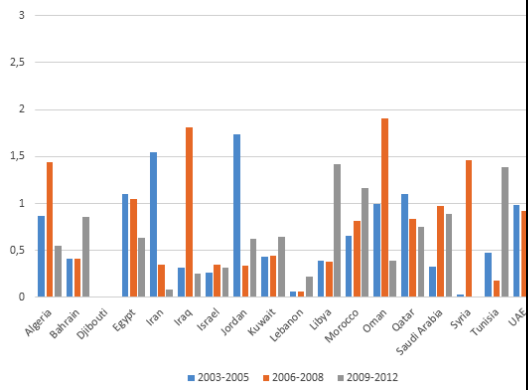
Terrorist attacks, civil violence, total violence, neighbors' violence and democracy indicators are retrieved from Systemic Peace, political stability, rule of law, days for starting a business and procedures for starting a business from World Bank and the lack of corruption, business freedom and investment freedom indexes from Heritage Foundation. See section on data for more information about these indexes. Authors' own calculations.

Appendix 5: Correlation matrix

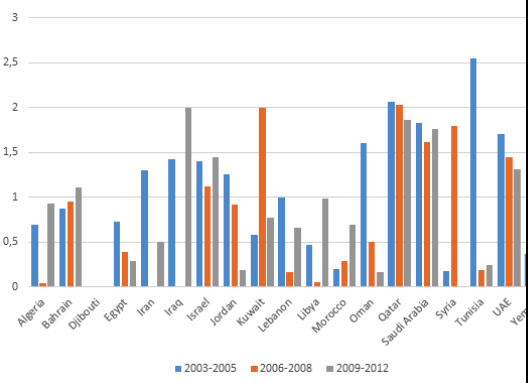
	1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*	*11.*	*12.*
1.Democracy	1											
2. Political stability	0.286***	1										
3. Rule of law guarantee	0.460***	0.785***	1									
4. Lack of corruption	0.431***	0.757***	0.953***	1								
5. Guarantee of property rights	0.504***	0.657***	0.923***	0.903***	1							
6. Total civil violence	-0.047*	-0.523***	-0.24***	-0.243***	-0.123***	1						
7. Total violence	-0.033	-0.573***	-0.264***	-0.258***	-0.095***	0.918***	1					
8. Terrorist attacks	-0.006	-0.228***	-0.131***	-0.117***	-0.037	0.130***	0.362***	1				
9. Deaths due to terrorism	0.001	-0.247***	-0.134***	-0.120***	-0.046*	0.137***	0.393***	0.868***	1			
10. Total violence from neighbor countries	-0.377***	-0.360***	-0.270***	-0.291***	-0.278***	0.276***	0.265***	0.060**	0.056**	1		
11. Days for starting a business	-0.084***	-0.121***	-0.255***	-0.237***	-0.236***	0.033	0.013	-0.02	-0.018	-0.029	1	
12. Procedures for starting a business	-0.291**	-0.361***	-0.499***	-0.488***	-0.510***	0.160***	0.128***	0.033	0.029	0.186***	0.431***	1

Appendix 6: Real flows over potential flows in MENA by partners.

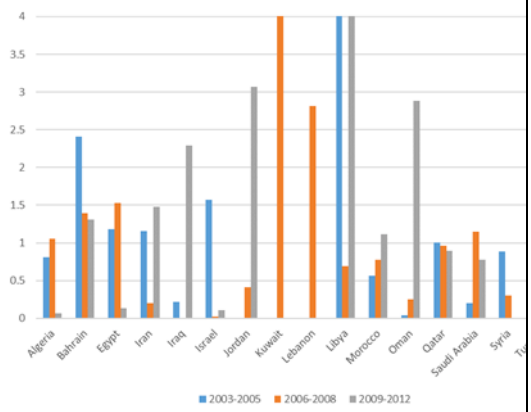
Graph 1A: Europe, Potential over Real



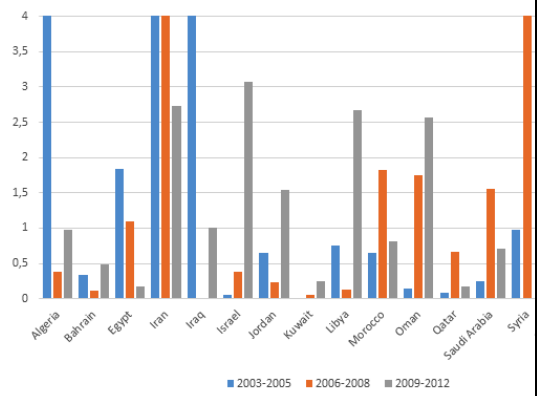
Graph 1B: Other developed countries, Potential over Real



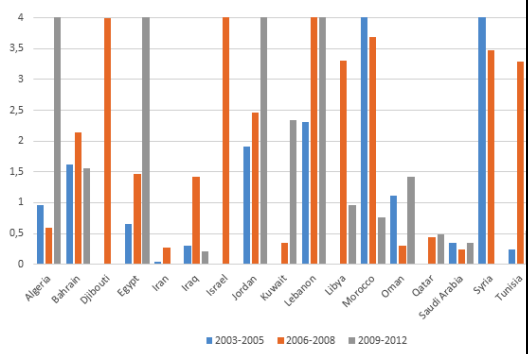
Graph 1C: Developing countries, Potential over Real



Graph 1D: BRICS, Potential over Real



Graph 1E: MENA, Potential over Real



Appendix 7: Specificities of MENA as host countries

	Volume of GI (Intensive margin)	Number of projects (Extensive margin)
	(1)	(2)
ln(GDPi*GDPj)	-0.053	-0.076
	(0.22)	(0.18)
ln(GDPi*GDPj)*MENA	0.022	0.025
	(0.07)	(0.05)
ln(Distance)	-0.452***	-0.382***
	(0.05)	(0.03)
ln(Distance)*MENA	0.540**	-0.169
	(0.27)	(0.13)
Contiguity	0.046	-0.118
	(0.14)	(0.08)
Contiguity*MENA	-1.795***	-0.779**
	(0.56)	(0.30)
Common language	0.369***	0.487***
	(0.12)	(0.06)
Language*MENA	1.224***	0.036
	(0.38)	(0.21)
Colony	0.563***	0.581***
	(0.11)	(0.08)
Colony*MENA	-0.499*	0.433***
	(0.30)	(0.13)
Same country	0.36	0.578***
	(0.25)	(0.15)
Same country*MENA	-0.152	-0.23
	(0.75)	(0.46)
Religion	0.462**	0.296*
	(0.23)	(0.15)
Religion*MENA	1.278**	0.673**
	(0.50)	(0.31)
Free Trade Agreement (FTA)	0.163	0.212***
	(0.11)	(0.06)
FTA*MENA	-0.064	-0.477***
	(0.35)	(0.17)
Bilateral Investment Treaty (BIT)	-0.130*	-0.024
	(0.08)	(0.04)
BIT*MENA	0.3	0.007
	(0.20)	(0.11)
Fixed effects	λi + λj + λt	λi + λj + λt
Constant	1.032	-0.721
	(-4.05)	(-3.27)
Observations	39151	39151
R^2	0.438	0.848

Appendix 7: Specificities of MENA oil and non-oil producers as host countries

	Volume of GI (Intensive margin)	Number of projects (Extensive margin)
	(1)	(2)
ln(GDPi*GDPj)	-0.05	-0.075
	(0.22)	(0.18)
ln(GDPi*GDPj)*MENA OIL	0.003	0.012
	(0.08)	(0.05)
ln(GDPi*GDPj)*MENA NO OIL	0.149	0.047
	(0.17)	(0.07)
ln(Distance)	-0.450***	-0.381***
	(0.05)	(0.03)
ln(Distance)*MENA OIL	0.601*	-0.038
	(0.31)	(0.12)
ln(Distance)*MENA NO OIL	-0.479*	-0.690***
	(0.26)	(0.21)
Contiguity	0.04	-0.119
	(0.14)	(0.08)
Contiguity*MENA OIL	-1.592***	-0.519*
	(0.59)	(0.31)
Contiguity*MENA NO OIL	-3.643***	-1.176***
	(0.53)	(0.4)
Common language	0.368***	0.488***
	(0.12)	(0.06)
Language*MENA OIL	1.647***	-0.06
	(0.55)	(0.26)
Language*MENA NO OIL	0.55	-0.014
	(0.48)	(0.28)
Colony	0.567***	0.581***
	(0.11)	(0.08)
Colony*MENA OIL	-0.411	0.446***
	(0.34)	(0.14)
Colony*MENA NO OIL	-0.625	0.375
	(0.64)	(0.30)
Same country	0.363	0.578***
	(0.25)	(0.15)
Same country*MENA OIL	-0.08	-0.075
	(0.73)	(0.43)
Same country*MENA NO OIL	0.869	0.127
	(1.20)	(0.79)
Religion	0.473**	0.306**
	(0.23)	(0.15)
Religion*MENA OIL	0.627	0.763**
	(0.53)	(0.35)
Religion*MENA NO OIL	2.790***	1.036***
	(0.71)	(0.39)
Free Trade Agreement (FTA)	0.164	0.214***
	(0.11)	(0.06)
FTA*MENA OIL	0.115	-0.505**
	(0.41)	(0.24)
FTA*MENA NO OIL	-1.078***	-0.833***
	(0.40)	(0.27)
Bilateral Investment Treaty (BIT)	-0.134*	-0.025
	(0.08)	(0.04)

BIT*MENA OIL	0.186 (0.22)	0.006 (0.12)
BIT*MENA NO OIL	1.142*** (0.37)	0.196 (0.20)
Fixed effects	λi + λj + λt	
Constant	0.96 (4.05)	-0.757 (3.27)
Observations	39151	39151
R2	0.44	0.848

*p≤0.10, **p≤0.05, ***p≤0.01

Appendix 8: Coefficients from interaction tests

Variable	Intensive margin Coef.	Extensive margin Coef.	Variable	Intensive margin Coef.	Extensive margin Coef.
DEMOCRACY when host country is MENA	0.0445	0.0187	Total civil violence when host country is MENA (OIL PRODUCER)	0.1609	-0.1670
DEMOCRACY when host country is MENA (NON-OIL PRODUCER)	-0.1319*	-0.0219	Deaths due to terrorism when host country is MENA (NON-OIL PRODUCER)	-0.1477	0.0319
DEMOCRACY when host country is MENA (OIL PRODUCER)	0.1464***	0.0933***	Deaths due to terrorism when host country is MENA (OIL PRODUCER)	-0.0486	-0.0816**
DEMOCRACY when host country is MENA	0.0445	0.0186	Total violence from neighbor countries when host country is MENA	-0.3674†	-0.3184***
DEMOCRACY when host country is OTHER DEVELOPING COUNTRY	0.0581***	0.0220***	Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY	0.2652**	0.1759***
Political stability when host country is MENA	0.6530	1.1362***	Total civil violence when host country is MENA	0.1792	-0.2257†
Political stability when host country is MENA (NON-OIL PRODUCER)	0.4564	0.4086	Total civil violence when host country is OTHER DEVELOPING COUNTRY	0.0425	0.0465
Political stability when host country is MENA (OIL PRODUCER)	0.6747	1.3110***	Deaths due to terrorism when host country is MENA	-0.0587	-0.0577**
Political stability when host country is MENA	0.6536	1.1376***	Deaths due to terrorism when host country is OTHER DEVELOPING COUNTRY	-0.0129	0.0075
Political stability when host country is OTHER DEVELOPING COUNTRY	0.6193	1.0448***	Total violence from neighbor countries when host country is MENA	-0.3840*	-0.3478***
Rule of law guarantee when host country is MENA	-2.3694	3.0163***	Total violence when host country is MENA	-0.3434	-0.6041***
Rule of law guarantee when host country is MENA (NON-OIL PRODUCER)	0.8778	0.5336	Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)	-0.7809**	-0.2470***
Rule of law guarantee when host country is MENA (OIL PRODUCER)	-2.7869	3.6088***	Total violence from neighbor countries when host country is MENA (OIL PRODUCER)	-0.2226	-0.3932***
Rule of law guarantee when host country is MENA	-2.3824	3.0445***	Total violence when host country is MENA (NON-OIL PRODUCER)	-0.2821	-0.1042

Rule of law guarantee when host country is OTHER DEVELOPING COUNTRY	-0.1856	0.8189	Total violence when host country is MENA (OIL PRODUCER)	-0.3283	-0.6584***
Lack of corruption when host country is MENA	-0.3112	1.3529***	Total violence from neighbor countries when host country is MENA	-0.3803*	-0.3499***
Lack of corruption when host country is MENA (NON-OIL PRODUCER)	-5.8490**	-3.2188***	Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY	0.2666**	0.1504**
Lack of corruption when host country is MENA (OIL PRODUCER)	0.1428	2.1249***	Total violence when host country is MENA	-0.3398	-0.6048***
Lack of corruption when host country is MENA	-0.3831	1.3085***	Total violence when host country is OTHER DEVELOPING COUNTRY	0.0259	0.0553
Lack of corruption when host country is OTHER DEVELOPING COUNTRY	1.2155**	1.0808***	Number of procedures for starting a business when host country is MENA	-0.0039	-0.0316*
Total violence from neighbor countries when host country is MENA	-0.3442	-0.3106***	Number of procedures for starting a business when host country is MENA (NON-OIL PRODUCER)	-0.0698	0.0024
Total civil violence when host country is MENA	0.1955	-0.2364†	Number of procedures for starting a business when host country is MENA (OIL PRODUCER)	0.0004	-0.0356**
Total terrorist attacks when host country is MENA	-0.2028	-0.1157*	Number of procedures for starting a business when host country is MENA	-0.0052	-0.0345**
Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)	-0.7082*	-0.2912***	Number of procedures for starting a business when host country is OTHER DEVELOPING COUNTRY	-0.0009	-0.0112
Total violence from neighbor countries when host country is MENA (OIL PRODUCER)	-0.1906	-0.3500***	Number of days for starting a business when host country is MENA	0.0042	-0.0038
Total civil violence when host country is MENA (NON-OIL PRODUCER)	0.0645	-1.6185***	Number of days for starting a business when host country is MENA (NON-OIL PRODUCER)	-0.0094	0.0017
Total civil violence when host country is MENA (OIL PRODUCER)	0.1798	-0.1736	Number of days for starting a business when host country is MENA (OIL PRODUCER)	0.0048	-0.0047
Total terrorist attacks when host country is MENA (NON-OIL PRODUCER)	-0.3582	0.0782	Number of days for starting a business when host country is MENA	0.0038	-0.0043
Total terrorist attacks when host country is MENA (OIL PRODUCER)	-0.1835	-0.1844**	Number of days for starting a business when host country is OTHER DEVELOPING COUNTRY	-0.0076***	-0.0041***

Total violence from neighbor countries when host country is MENA	-0.3423	-0.3108***
Total violence from neighbor countries when host country is OTHER DEVELOPING COUNTRY	0.2729**	0.1768***
Total civil violence when host country is MENA	0.1955	-0.2364†
Total civil violence when host country is OTHER DEVELOPING COUNTRY	0.0378	0.0444
Total terrorist attacks when host country is MENA	-0.2028	-0.1157*
Total terrorist attacks when host country is OTHER DEVELOPING COUNTRY	-0.0130	0.0333**
Total violence from neighbor countries when host country is MENA	-0.3698†	-0.3183***
Total civil violence when host country is MENA	0.1787	-0.2256†
Deaths due to terrorism when host country is MENA	-0.0591	-0.0577**
Total violence from neighbor countries when host country is MENA (NON-OIL PRODUCER)	-0.7382**	-0.2773***
Total violence from neighbor countries when host country is MENA (OIL PRODUCER)	-0.2111	-0.3586***
Total civil violence when host country is MENA (NON-OIL PRODUCER)	0.1504	-1.6387***
†13≥p>10, *p≤0.10, **p≤0.05, ***p≤0.01		

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