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IS MENA DIFFERENT? AN INVESTIGATION
OF THE HOST COUNTRY DETERMINANTS
OF CHINESE OUTWARD
FOREIGN DIRECT INVESTMENT

Rania S. Miniesy and Eman Elish

Working Paper No. 1024

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Abstract

The objectives of this paper are twofold; to investigate the host country determinants of Chinese Outward Foreign Direct Investment (OFDI) in general and to examine, given these determinants, if Chinese OFDI in MENA is different (less) than elsewhere. We obtained data for the top forty Chinese OFDI recipients worldwide and that included seven MENA countries from 2003-2012. Using a pooled ordinary least squares estimation technique on the lagged explanatory variables and the lagged dependent variable – flows and stocks alternatively – with robust standard errors, we found the following: Chinese OFDI is market seeking, resource seeking, and efficiency seeking and that it is not deterred by poor governance but on the contrary is attracted to it. Chinese OFDI follows its exports and relocates probably to evade barriers to trade in third markets. The seven MENA countries seemingly receive significantly less Chinese OFDI flows compared to other countries because they are less open, have lower labor productivity and do not import as much on average from China as other non-MENA countries. However, careful inspection shows that UAE is creating this bias; in other words, UAE is the reason Chinese OFDI to the MENA_7 is significantly less than in other countries. This maybe because exporting to UAE rather than licensing or FDI seems like the best scenario, or UAE is already satiated with FDI from other countries, or China is waiting for the right time to enter such an FDI-competitive market like that of UAE.

JEL Classification: F1

Keywords: China, outward foreign direct investment, MENA, eclectic paradigm.

ملخص

أهداف هذه الورقة هي ذات شقين. للتحقيق في محددات البلد المضيف من الصين إلى الخارج (الاستثمار الأجنبي المباشر) بشكل عام ودراسة، إذا ما اذا كان هذا النوع من الاستثمارات الصينية في الشرق الأوسط يختلف (أقل) من أي مكان آخر. حصلنا على بيانات لأربعين من كبار متلقي هذا النوع من الاستثمار الصيني في جميع أنحاء العالم والتي شملت سبع دول في الشرق الأوسط 2003-2012. باستخدام تقنية تقدير الساعات المجمعة على المتغيرات ومتغير الإبطاء - التدفقات والأسهم بدلا من ذلك - مع أخطاء معيارية قوية، وجدنا ما يلي: هذا النوع من الاستثمار الصيني يسعى الى السوق، والموارد، ويبحث عن الكفاءة، ولا تردعهم سوء الإدارة ولكن على العكس من ذلك يجذب إليها. هذا النوع من الاستثمار الصيني يتعقب صادراتها ويعيد تحديد المواقع على الأرجح للتهرب من الحواجز أمام التجارة في أسواق ثالثة. نتلقى سبعة بلدان من الشرق الأوسط على ما يبدو أقل بكثير تدفقات هذا النوع من الاستثمار الصيني بالمقارنة مع بلدان أخرى لأنها أقل انفتاحا، ولديهم إنتاجية أقل ولا تستورد كثيرا على المتوسط من الصين إلى الدول غير تلك الموجودة في المنطقة. ومع ذلك، يظهر الفحص الدقيق أن الإمارات العربية المتحدة خلقت هذا التحيز. وبعبارة أخرى، الإمارات العربية المتحدة هي السبب في هذا النوع من الاستثمار الصيني في وهو أقل بكثير مما في البلدان الأخرى. وربما يرجع السبب في ذلك أن التصدير إلى دولة الإمارات العربية المتحدة بدلا من الترخيص يجعل الاستثمار الأجنبي المباشر هو أفضل سيناريو، أو اشباع الإمارات العربية المتحدة بالفعل مع الاستثمار الأجنبي المباشر من بلدان أخرى، أو أن الصين تنتظر الوقت المناسب لدخول هذه السوق التنافسية بالاستثمار الأجنبي المباشر مثل سوق دولة الإمارات العربية المتحدة.

1. Introduction

FDI is a vital source of investment funds. Attracting FDI is one of the top agenda items of most countries but particularly developing ones. China, although still a developing country and has recently become the second largest economy worldwide, has been one of the top destination countries for FDI for years. China has shifted from being almost a negligible source country less than a decade ago to being the third largest foreign direct investor according to the report of fDi intelligence (2015). But what are the determinants of Chinese outward foreign direct investment (OFDI)?

As indicated by Amighini et al. (2011), the empirical research carried on the determinants of Chinese OFDI can be divided into five categories: Studies based on descriptive evidence like that of Wong and Chan (2003), studies based on company case studies like that of Liu and Li (2002), studies based on specific industries like that of Amighini and Franco (2011), studies based on specific host countries like that of Pietrobelli et al. (2011), and a small number of studies based on aggregate FDI data. The latter is the approach of this paper.

Although China's OFDI is becoming increasingly substantial, a limited number of studies focused on Chinese OFDI from an aggregate or macroeconomic perspective. These studies compared OECD to non-OECD countries, developed to developing countries, or looked at an array of countries or just focused on a specific geographic area like Africa but MENA¹ was rarely investigated; only one study investigated the determinants of Chinese OFDI to MENA but which also included other African countries. There is no research to the best of our knowledge that investigated if Chinese OFDI into the MENA region is different than other regions. Our research intends to fill this knowledge gap. More precisely, the objectives of this paper are twofold; to investigate the host country determinants of Chinese OFDI in general, largely based on the theoretical foundations of Dunning's four motives and the gravity model with its extensions, for the top forty country recipients of Chinese OFDI from 2003 till 2012, and to examine, given these determinants, if Chinese OFDI in our sample of MENA countries - the MENA_7 - is different than elsewhere and the reasons behind that, if any. Data unavailability for MENA countries curtailed our intention of including more MENA countries. However, these MENA_7 are believed to be good representatives of the whole MENA region since amongst themselves they host more than 80% of Chinese OFDI stocks in the region. A positivist empirical approach to test our hypotheses is utilized.

We find these objectives both important and interesting for three main reasons: First, China is a relatively newcomer to OFDI so having a complete understanding of how it operates deepens our understanding of FDI as a phenomenon, especially when stemming out of developing countries. Second, as other FDI from other countries, Chinese FDI is expected to bring about foreign currency and technological spillovers. Third, for MENA, Chinese OFDI is particularly important because it has a comparative advantage relative to other FDI source countries in that: 1) China has no political prejudice against any of the MENA countries and thus invests in countries like Sudan and Iran, which almost no other major FDI source country invests in. 2) For other MENA countries, like for instance Algeria and Egypt, China is becoming increasingly competitive, with more outflows and outstocks into these two countries than from other top FDI source countries, like Belgium, Canada, Japan, Netherlands and Sweden. 3) Previous research (discussed in section 2) highlighted that China is not deterred by economic instability or political instability or other forms of poor governance, which means in a region characterized by rampant turmoil, Chinese OFDI would provide not only much needed investment funds but would help create direct, indirect and induced jobs as demonstrated by Miniesy and Adams (Forthcoming in 2016) and JCEFTS (Forthcoming in 2016), which should

¹ For the purpose of this paper MENA countries are the Arab countries in addition to Turkey and Iran. While MENA_7 will refer to the seven MENA countries that are particularly investigated in this study.

translate into higher economic growth. 4) Results of this research should help explain MENA countries' determinants that entice or discourage Chinese OFDI in this region and should allow us to identify strategies to attract it.

This paper is organized as follows. Section 2 provides a background on China's OFDI policy history and profile as well as MENA_7's inward FDI profile from China and from the other top source countries worldwide. Section 3 presents the most relevant (to our research questions) FDI theories and the empirical findings on the host country determinants of Chinese OFDI. Section 4 explains the hypotheses and the choice of variables together with their expected signs. Section 5 discusses the model and interprets the results. Section 6 concludes by briefly summarizing the paper and the results, pinpointing research limitations and giving suggestions for further research and finally discussing a number of policy implications.

2. Background

2.1 China's OFDI policy history

Buckley et al. (2007) divided the Chinese OFDI policy development into five stages. Stage one (1979-1985) was characterized by careful implementation of an open door policy, where Chinese OFDI was encouraged as a way of integrating with the world. However, only state-owned firms were allowed to invest abroad. Stage two (1986-1991) was a period during which the Chinese government started to follow more liberal procedures for firms that invest in enterprises that would bring resources and technology into China. Stage three (1992-1998) was characterized by more expansion of Chinese OFDI. From 1992 to 2001 Chinese OFDI was directed to Africa and Latin America. Africa became the second largest regional destination of China's OFDI after Asia, where it received 24.1% of total Chinese OFDI. However, the Asian crisis in 1997 and the subsequent collapse of some enterprises slowed down this development and more tightening of OFDI occurred to prevent the loss of foreign exchange and state assets. Stage four (1999-2001) was supposed to be the stage for the implementation of the "Go Global" policy or '*zou chu qu*' directive, however conflicting policies characterized this period, where on the one hand further controls were applied on certain investments and on the other firms were encouraged especially those targeting productive investments and resource seeking investments. Finally from 2001 onwards, stage five of China's post WTO period started off. This has forced the industries that enjoyed protection especially from foreign competition to seek OFDI in other countries and private firms were allowed to invest abroad. Moreover, the Chinese government started to move away from requiring a pre-investment approval to a registration system after the investment.

As implicitly stated above, before 2003, private firms in China were legally prohibited from investing abroad. Since 2003, China has started publishing its OFDI data in a format that is consistent with the IMF and the OECD standard. These two factors are the reasons we chose 2003 as our Chinese OFDI's analysis start date, to which we now turn.

2.2 China's OFDI profile

Figure 1 shows Chinese FDI outflows and outstocks from 2003 till 2014. In 2003, Chinese FDI outflows were around \$3bn while its outstocks were \$33bn. Throughout the years, Chinese FDI outflows kept on increasing to reach \$123bn in 2014. The same happened with outstocks where it reached around \$883bn in 2014. In 2013 FDI outflows from China became the third highest FDI source after the USA and Japan. Chinese FDI outflows even surpassed its FDI inflows for the first time in 2014. (UNCTAD, 2015 & 2016).

Figure 2 shows the distribution of Chinese OFDI stocks by sector. In 2004, the wholesale & retail trade and the mining sectors were the top two targeted sectors by Chinese OFDI. Their values on average in 2004-2005 were \$9.6bn (19%) and \$7.3bn (14%) respectively. There was no OFDI in the financial intermediation sector prior to 2007. Its value in 2007 was \$16.7bn

(14% of total OFDI stocks) and reached \$117bn (18%) in 2013 and even took precedence over all the other sectors targeted by Chinese OFDI. In the same year - 2013, the value for mining was still high reaching \$106bn (16%) and it outweighed the value of the wholesale & retail trade which reached \$87bn (13%).

Concerning Chinese OFDI's regional distributions, UNCTAD data shows that in 2003 Chinese OFDI flows were going mostly to developing economies (91%) followed by developed economies (8%) then transition economies (1%)². By 2012, the same trend remained although with variations in the percentages, where for instance, developing economies were receiving 80% of China's OFDI flows while developed economies and transition economies were receiving 15% and 5% respectively. Figure 3 shows that developing economies in Asia were the highest recipients of China's OFDI flows in the whole period except in 2005 and 2006 where developing economies in Latin America and the Caribbean were the highest recipients. Figure 4 tells the same story; developing countries in Asia (particularly East Asia) remain to have the highest percentage of Chinese OFDI stocks during the whole period. This is mainly due to culture, distance and other gravitational model proximities between them. They are followed by Latin America and the Caribbean countries because some of them are tax haven countries like the Cayman Islands and the British Virgin Islands that had 24.1% and 10% Of Chinese OFDI stocks respectively in 2005 (Mork et al., 2008).

With respect to Chinese OFDI flows and stocks specifically to the MENA countries³, as shown in Figure 5, in 2003 Chinese FDI outflows were \$26m and they peaked in 2011 then decreased in 2012 but increased again to reach around \$3bn in 2014. The fall during 2012 could go back to the rampant political instability in the region during this time. Chinese FDI outstocks were increasing at an increasing rate throughout the whole period, where they were \$537m in 2003 but reached around \$16bn in 2014. Regarding our MENA_7 countries, in 2003, Chinese OFDI flows were around \$23m representing around 90% of Chinese outflows going into the whole MENA region, they increased to \$184m out of \$205m (90%) in 2008 and by 2014 Chinese outflows reached \$2590m out of \$2913m, i.e. around 89% of flows going to MENA as a whole. As for Chinese OFDI stocks, in 2003, the MENA_7 had 15% of the total Chinese stocks in the MENA region. This percentage kept on increasing from 40% in 2004 till 90% in 2009 and never fell below 80% from 2007 onwards. (Calculated from UNCTAD).

2.3 MENA_7 inward FDI profile

Figure 6 shows Chinese FDI outflows and outstocks in our MENA_7 from 2003 till 2014. As shown, there was a dip in outflows in 2008, probably because of the financial crises and then they peaked at 2011 then decreased in 2012 and then increased again. This is very similar to Figure 5 since as stated earlier those seven countries absorb the bulk of flows going out from China to the whole of the MENA region. Chinese outstocks on the other hand show a continuous increase but at different rates, again similar to the pattern presented in Figure 5.

Figures 7 show Chinese OFDI flows in each of the seven MENA countries from 2003 till 2014. With respect to Chinese FDI outflows, the trend hasn't been uniform at all, but it is possible to say when comparing the values in 2003 to those of 2014 that outflows increased in every single country as an entirety albeit with one or two dips along the way. For instance, outflows to

² Developed economies include: 1) Europe; European Union countries and other developed Europe namely Iceland, Liechtenstein, Norway and Switzerland, 2) North America; Canada and the United States, and 3) Other developed countries; Australia, Bermuda, Israel, Japan and New Zealand. Developing economies include: 1) Africa including South Africa, 2) Asia; East Asia including Hong Kong China, Macao China and Taiwan province of China, South-East Asia, South Asia, West Asia including Turkey, 3) Latin America and the Caribbean; South America, Central America including Mexico and the Caribbean countries, and 4) Oceania. Transition economies include: 1) South-East Europe and 2) CIS countries including Georgia.

³ Unfortunately, we weren't able to get data on the sectoral distribution of Chinese OFDI going specifically into MENA in general or specific MENA countries as the data is very expensive.

Algeria decreased in 2008 and 2013; outflows to Egypt dropped in 2010 and then again in 2013; outflows to Iran showed a considerable increase from 2009 onwards but then fell in 2014; outflows to Sudan increased significantly from 2010 till 2011 but then also dropped significantly from 2011 to 2012, this might be due to the division of Sudan to Sudan and South Sudan; outflows to Saudi Arabia had two dips in 2010 and 2014; outflows to Turkey dropped in 2008 but then started to pick up to decrease again in 2014; outflows to UAE dropped substantially in 2012 but then had a remarkable increase. Dips in outflows in the different countries could be due to the financial crisis or political conditions within these countries themselves or a combination of both or other reasons not even related to them but related to China itself. Concerning outstocks, they show a more behaved and more uniform trend, one that is largely increasing, as shown in Figure 8.

As stated in the introduction, Chinese OFDI in MENA is important and particularly in our sample because a number of them do not get much FDI from other source countries with few exceptions and this signifies the importance of Chinese OFDI in the region. Using UNCTAD's 2014 bilateral FDI statistics (UNCTAD, 2015), we were able to identify the top ten FDI source countries worldwide every year from 2001 till 2012. The names of certain countries always appeared while a few alternated places from one year to the other. This resulted in top twelve countries, other than China, that had the highest FDI outstocks and they were in no specific order: Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, UK and USA.

As shown in Table 1, careful inspection of FDI outstocks of these countries show the following when Sudan is concerned: Hardly any of them had FDI outstocks there probably because of UN sanctions. USA had FDI outstocks in Sudan but they started decreasing from 2001 until they reached zero from 2007 onwards. Italy whose outstocks began to show positive values from 2008 were then reduced to zero in 2012. While for Belgium, its FDI outstocks were reversed or in other words it started to disinvest in Sudan starting 2011. This basically means that China's FDI in Sudan is very crucial when compared to other non-existent foreign investments as it provides the sole potential for investment funds and employment creation, other than local investment.

With respect to Iran, it seems that Iran either did not have any or had very little FDI stocks from Belgium, Canada, Spain, Sweden, and Switzerland since Iran didn't even exist in these countries' lists of FDI recipients. Iran even had negative FDI stocks from USA, which basically meant disinvestment. FDI stocks from Japan never exceeded \$10m during the entire investigated period, while although there were positive amounts from Italy during 2007 till 2011, they then dropped to zero. Netherlands had positive FDI outstocks from 2008 till 2012 but China's FDI compared favorably from 2010 onwards. FDI outstocks from France were significant but starting from 2010 their amounts were surpassed by China's. Germany's FDI outstocks in Iran were lower than their counterparts from China in 2011 and 2012. Once again, like in the case of Sudan, Chinese investment in Iran still seems like a golden opportunity for potential funds and job creation.

Concerning Algeria, it is not even in the list of recipient countries of FDI stocks from Japan, Netherlands, Sweden, and Switzerland, which most probably signifies zero or little FDI stocks. Belgium had very little investment in Algeria compared to China in every single year. FDI outstocks from Canada were positive but were reduced to zero by 2009, and from 2006 onwards Chinese FDI outstocks were more than that of Canada. China's investment in Algeria is more than that of Germany from 2006 onwards. Italy had significant positive FDI outstocks in Algeria from 2007 till 2011 after which they were driven down to zero. Spain had only one positive year of FDI outstocks (2011) in Algeria and China's investment was more even during

this year. USA and France seem like the only two countries that had significant positive FDI outstocks in Algeria which exceed that of China. This is not difficult to comprehend given that American MNCs have significant investments almost everywhere except with countries with which they have major political tensions while France has an obvious historical relation with Algeria. Still, China is a significant foreign direct investor in Algeria.

Japan and Sweden do not seem to have FDI outstocks in Egypt. Egypt had a significant value of FDI outstocks compared to China from France, Germany, Italy, Spain, Switzerland and USA, probably given its strategic importance in the region. China had FDI outstocks in Egypt comparable to that of Belgium but more than that of the Netherlands from 2009 onwards. Canada's FDI outstocks prior to 2010 in Egypt compared favorably than those from China.

Canada, Spain and Sweden do not seem to invest in Saudi Arabia, while China's FDI stocks compared favorably to those of Belgium and Switzerland from 2006 onwards. Italy's FDI stocks in Saudi Arabia dropped to zero in 2012, while France, Germany, Japan, Netherlands and USA had more FDI stocks than did China.

Japan does not seem to invest in Turkey. All the remaining ten countries had more FDI outstocks in Turkey than did China. As for UAE, it does not seem to have FDI from either Spain or Sweden. Canada and Japan invested little in UAE in comparison to China. Belgium invested in UAE less than China. Italy's FDI stocks in UAE dropped to zero in 2012. France, Germany, Switzerland and USA had more FDI stocks in UAE than did China. As for Netherlands FDI outstocks in UAE, they were surpassed by those of China in 2011 and 2012.

The above analysis shows that China's investment in MENA is becoming increasingly important and comparable to other top FDI source countries and thus justifies our inquiry about how China's FDI behave in MENA compared to the rest of its investment elsewhere.

Before going forward, a few interesting questions arise: why did Chinese firms invest abroad? Why did they prefer FDI rather than exporting or licensing? What were their motives from choosing these specific locations/countries? We are going to attempt to answer these questions in the following section from a theoretical perspective then from an empirical one.

3. Literature Review

3.1 Theoretical Foundation: the most relevant theories of FDI

Vernon (1966) developed the International Product Life Cycle theory. This theory is used to explain both international trade and FDI. A product life cycle consists of three stages. Stage 1 – the new product stage – is when a firm produces a new product at the home country for many reasons and its exports are limited. Stage 2 – the maturing stage – is when the innovating firm establishes new facilities at home and exports peak while other firms in other industrialized countries start to emerge and compete with the home firm. In this stage, a firm may decide to build facilities in such industrialized countries as well if the demand is big enough. Stage 3 – the standardized product stage – is when heightened competition between the home firm and other rivalry firms pressures all firms to reduce costs and drives them to locate in developing countries that enjoy low production costs. The International Product Life Cycle although appealing, does not explain why firms for instance decide to invest abroad when demand is large in another country, rather than just increase their exports or grant licenses to other non-domestic firms (Wild & Wild, 2012).

High transportation costs and trade barriers constrain the exporting choice of firms and encourage horizontal or vertical FDI. Horizontal FDI refers to the duplication, roughly, of the same production taking place at home in different countries, while vertical FDI has two types; backward, where the MNC creates its own input supplier in a foreign country which sends these inputs back to the parent company, or forward FDI, where the MNC uses inputs from the

parent company to use in the production in the host country. This explains the shying away from exportation, but what about granting licenses?

Hymer (1960&1968) and Kindleberger (1969) argued that FDI exists due to market imperfections. In other words, firms must enjoy some kind of firm-specific advantages or ownership-specific advantages like for instance certain technology or skilled employees that would allow them to increase their profits through the exploitation of such advantages in a way that is only possible through FDI. Hymer and Kindleberger's hypothesis gave rise later on to the Internationalization theory, which is also based on market imperfections but which Buckley and Casson (1976) and many others fully developed. The Internationalization theory makes clear why FDI is preferred to licensing as an entry mode to foreign markets. It heavily relies on transaction costs; the costs related to 'negotiating, monitoring, and enforcing a contract' (Griffin & Pustay, 2010). FDI is preferred to licensing, based on the internationalization theory, when: the MNC's know-how and other capabilities are not appropriate for licensing, when licensing may cause the technological know-how of a MNC to be given away to another possible foreign competitor and thus FDI becomes the safer choice, and when maximum market share and earnings can be gained only through FDI (Hill, 2014).

Dunning's eclectic paradigm stemmed out from his discontent with the product life cycle, the Hymer-Kindleberger hypothesis, and the internationalization theory (Dunning, 1979). For Dunning, location-specific advantages is another factor that must be added to the above factors in order to explain not only the rationale but also the direction of FDI. So Dunning (1979 &1993) in fact combined the different perspectives into one, also known as the OLI (Ownership, Location and Internationalization) paradigm to understand both the reasons and directions of FDI. The Ownership advantages are competitive advantages that MNCs must have to be able to compete with other firms in the host country. These can be a trademark or a brand, production techniques, entrepreneurial skills, returns to scale and so on and so forth. The Location advantages refer to the locational attractions of foreign countries that would drive MNCs to invest there like lower labor costs, natural resources, knowledge or technology, etc. As for the Internalization advantages, this is when FDI is better, in terms of more returns to investment and lower transaction costs, than licensing or any alternative mode of internationalization as explained earlier. Derived from the location-specific advantages are Dunning's most famous motives behind FDI. These are the market-seeking motive, where entering a new foreign market to increase the MNC's profitability is the main objective; the resource seeking motive where finding resources is the main purpose; the efficiency seeking motive where reducing costs is the principal target. A fourth motive which is a subset from the second motive is the strategic asset seeking motive where acquiring strategic assets, whether tangibles or not are crucial to a firm's long run goals.

The motive can affect the mode of entry for instance; we can expect that a market seeking MNC would probably enter through horizontal FDI, a resource seeking MNC would probably enter through backward vertical FDI to send the resources back to the home country for continuing the production process. An efficiency seeking MNC would probably enter through forward vertical integration. A strategic asset seeking MNC can enter in a number of forms depending on the nature of the asset. Paul Krugman (1991) and Fujita et al. (1999) explained the MNEs' motive behind choosing vertical and horizontal integration of FDI based on the Global Value Chain theory. MNEs usually select countries for outsourcing under vertical integration when they have comparative advantages in lower cost factors of production. On the other hand, MNEs would choose to employ horizontal integration with other countries when they enjoy comparative advantages of specialization and high quality of production. Empirical studies show that the first is mostly dominating the FDI relation between MNEs and firms in developing countries, while the latter dominates the FDI relation with other developed

countries. The Knowledge Capital theory developed by Carr et al. (2001) and Markusen (2002) also discussed the choice decision of FDI by MNCs that owns such a capital. It has three main assumptions; First, where there is a MNE that owns the knowledge capital and provides the headquarter activities, while there are foreign affiliates that do not have knowledge capital but can do production activities to MNCs investing in them at minimum production cost. Second, where the headquarter MNE provide activities that are skilled-labor intensive, while the affiliated companies only provide activities that are unskilled-labor intensive. Third, where there is a MNC that provides headquarter activities while the affiliates provide the same headquarter activities. The first two assumptions apply to vertical FDI between developed and developing countries, while the third assumption applies to horizontal FDI that is usually valid for countries that have similar economic characteristics of market size, factor endowments and trade costs are relatively high, or due to trade barriers.

The gravity model, although not a theory in itself has recently become a very successful empirical tool used in explaining the factors/determinants that encourage or discourage FDI outflows or outstocks. It explores the impact of geographic, economic and cultural similarities between countries on FDI flows between them. It includes the traditional gravity variables like market size, level of development, the distance between countries, a common language, culture aspects and sometimes shareholders protection and openness to trade. It can also include governance variables and other policy related variables. In other words, the gravity model and the variables it utilizes give more valid and more empirically tested and proven insights on the reasons and directions of FDI.

Most of the theories explained above were successful in explaining the experiences of OFDI originating from industrialized countries. Concerning Chinese OFDI, many studies emphasized its uniqueness and questioned if a new theory should be developed to uncover the reasons behind OFDI stemming from emerging economies' MNCs, especially China. This is because of three main reasons: First, many Chinese OFDI firms are state-owned, which indicates that political objectives could be a significant determinant in choosing the host countries (Yeung and Liu, 2008). Second, institutional factors also play a role in the choice of the recipient country, where in one way Chinese MNCs might have high government support that could offset the location and ownership disadvantages abroad (Aggarwal and Agmon, 1990) and where in another way policy directives determine where the FDI is to take place to support exports, secure resources or acquire knowledge and technology (Buckely et al, 2007). We cannot discount the importance of the geo-political aspirations since China actually operates on a 50 year cycle of 5 years plan. We are just entering the 4th five year plan of the 2000-2050 cycle. Third, Chinese MNCs do not appear to be dissuaded by high political risk like MNCs from industrialized countries (Kolstad and Wiig, 2010; Quer et al, 2012).

In what follows, we present the empirical findings regarding Chinese OFDI locational motives or in other words the host country determinants of Chinese OFDI. It must be noted here that our objective as stated earlier is to investigate Chinese OFDI at a macro level not at a micro/firm level; we are not interested in the mode of entry but rather in the choice of the location, although they are very closely related.

3.2 Empirical findings on host country determinants of Chinese OFDI

In an attempt to investigate the host country determinants of Chinese OFDI, many researches put Dunning's four motives to the test, each using the variables or proxies they believed the most suitable. Moreover, many used a variety of gravitational type proxies because they have previously been proven empirically successful in explaining trade as well as FDI flows, whether distance, governance or other institutional factors. Since the number of researches

tackling the motives of Chinese OFDI is limited, we are going to go through the ones we were able to source in order to be able to highlight how we are going to add to this literature.

Buckley et al. (2007) – “one of the first attempts to formally model Chinese ODI” – is probably the most cited study that examined the host country determinants of Chinese OFDI. In their paper, they also investigated the degree to which ‘capital market imperfections’, ‘special ownership advantage’ and ‘institutional factors’ warrant their inclusion within the general theory of multinational enterprises (MNEs). Buckley et al. collected data for 49 countries; 22 OECD and 27 non-OECD during the period 1984-2001. Utilizing a random effects estimation technique, they concluded that Chinese OFDI, measured in terms of approved flows, was associated with host countries’ market size and geographic proximity in the 1984-1991 period and the host’s natural resource endowments in the 1992-2001 period, while it was associated with high degrees of cultural proximity and political risk in host countries during the entire undivided period.

Cheng and Ma (2007) used a gravity equation to estimate the determinants of Chinese OFDI in 70+ countries from 2003-2005. Two alternative measures were used to proxy for OFDI; flows and stocks. They argued that the use of stocks adds more depth to the model because their significance would vary from one period to another. They found that GDP and Chinese language had a positive and significant effect while distance and the landlocked status of a nation had a negative and significant impact on both flows and stocks. Gross Domestic Product Per Capita (GDPPC) had a negative and significant effect where stocks were concerned.

Cheung and Qian (2009) collected data for the top 50 recipients of Chinese OFDI (as of 2005) from 1991 to 2005 to investigate the characteristics that they possessed that attracted Chinese capital. Using Chinese stocks as the dependent variable and feasible generalized least squares as the estimation technique, their results showed the following: 1) Market seeking motives drove OFDI in developed but not in developing countries. 2) Resource seeking motives drove OFDI in both developed and developing countries. 3) Chinese OFDI in developing countries was stimulated by Chinese exports to them. 4) Chinese OFDI was promoted by its international reserves. 5) Chinese OFDI agglomerated in developed countries but diversified in developing ones and 6) there is no conclusive evidence that China invests in oil-producing and African economies only for the sake of their natural resources.

Duanmu and Guney (2009) attempted to examine the determinants of Chinese and Indian OFDI. They collected data from the top 30 recipients of Chinese OFDI (1999-200) and Indian OFDI (2001-2004) and using a fixed effects estimation method and FDI flows as the dependent variable they found the following results: China although attracted to large market size was attracted to countries with low Growth in GDP (GGDP). They explained that this was probably because China was attracted more to established economies, which had already surpassed the stage of rapid growth and might even be facing slight recessions. Chinese OFDI was also driven by high volumes of Chinese imports, open economies, host countries with depreciated currencies, less politically risky countries, English speaking countries and low corporate tax rates. Duanmu and Guney also found that geographical distance and being an OECD country discourages Chinese OFDI.

Zhang and Daly (2011) examined the determinants of Chinese OFDI from 2003-2009 for 23 countries, which were the top destinations of Chinese OFDI at one or more points of time during the period of examination. Employing Pooled Ordinary Least Squares (POLS) estimation technique and identifying FDI flows as their dependent variable, they found that Chinese OFDI was driven by sizable GDPPC, rapid GGDP, natural resources, high volumes of Chinese exports to the host countries and open economies.

Salidjanova (2011) reviewed reasons for Chinese investment abroad based on statistical data and made the following arguments. China was resource seeking; it was the world's third largest importer of oil, after the USA and Japan in 2005. China applied the "dollar diplomacy" policy with host countries for securing energy resources through bilateral trade relations, by awarding them aid and providing transportation and communication infrastructure. Mergers and acquisitions were to acquire technology, brands and know how to overcome the copyright restrictions imposed after joining the WTO. He gave the Lenovo purchase of IBM personal computer division in 2005 as evidence. China expands in foreign markets to avoid its oversaturated highly competitive market. Finally, Chinese MNCs were seeking a way to access countries that impose strict barriers to international trade by directly investing in these countries.

Kolstad and Wiig (2012) investigated the determinants of Chinese OFDI from 2003-2006 for 104 host countries. They used Chinese OFDI flows to the recipient countries for the whole period as their dependent variable and utilized the OLS estimation technique to conclude the following: 1) market size drove Chinese OFDI to OECD countries but not to non-OECD countries. 2) Trade (total imports and exports as a share of GDP), Inflation, and institutions (Rule of law) were not OFDI determinants in all the specifications. 3) Distance is a deterrent for OFDI to non-OECD countries. 4) Natural resources drove Chinese OFDI to non-OECD countries. 5) The worse the host countries' institutions the bigger the Chinese OFDI was driven by natural resources (fuel in specific) and that was found significant for the non-OECD specification.

Cheung et al. (2011) used the Tobit estimation technique and the Heckman two-stage method to examine the Chinese OFDI determinants in Africa. Their results showed that Chinese OFDI was attracted to Africa by: market motives; GDP and GGDP, economic ties; trade ties or already contracted projects, corruption and low levels of law and order. Seeking natural resources was also a motive behind Chinese OFDI in Africa.

Huang and Wang (2011) using POLS and (Random Effects) REs for data from 2003-2009 for 25 countries to investigate the motives behind Chinese OFDI showed that: the market motive was not evident for Chinese OFDI, but the resource seeking motive was specifically for fuel, ores and metals when non-OECD countries were examined. Chinese OFDI was also found to be attracted by exports from China to the host countries. They concluded that the principal motive behind China's OFDI was not the expansion of production overseas but rather the strengthening of industries at home.

Pradhan (2011) used data from many countries for the 2001-2008 period and utilized a 3-step Censored Quantile Regression (CQR) estimation technique to investigate the determinants of Chinese and Indian OFDI. He found that Chinese OFDI was driven to host countries that enjoy high endowments of natural resources, high exports from China, open economies, offshore financial centers status, bigger strength of currencies and inflation. On the other hand, Chinese OFDI was deterred by distance. Strategic asset seeking motives in terms of patents and secondary school enrollment as well as political stability seemed to play no role when Chinese firms were making their investment decisions.

Kang and Jiang (2012) collected data from eight countries in East and Southeast Asia for thirteen years and used a random effects estimation technique to investigate the host country determinants of Chinese OFDI. Their results showed that OFDI was attracted to developed countries that were characterized by being open, had increasing prices, enjoyed economic freedom and had high bilateral trade flows with China, while they were deterred by developed countries' unit labor costs. With respect to developing countries, Chinese OFDI was attracted to natural resources, cultural distance, bilateral trade flows and was deterred by economic

freedom. Market seeking motives were found insignificant to both groups of countries and so were political influence and FDI restrictions.

Hu (2013) gathered country level data and used a POLS estimation technique to investigate the determinants of Chinese OFDI in 34 OECD countries from 2003 to 2010. Her findings showed that resource endowments, GDP (taken as measuring the gravity relationship not market size) and openness attracted OFDI to those OECD countries, while research and development (strategic asset seeking motive), annual tariff rate and distance discouraged OFDI. Real unit labor cost that is a proxy for an efficiency seeking motive and inflation rate were both found insignificant.

Ross (2015) investigated the determinants of Chinese OFDI into eight African countries from 2003-2012 using the random effects estimation technique. His results showed that Chinese OFDI was attracted by resource endowments (total natural resources rents as a % of GDP) and Infrastructure proxied by mobile cellular subscriptions per 100 people) while it was dissuaded by time to export. Other variables such as GDPPC, GGDP, labor productivity, high technology exports as a % of manufactured exports, electric power consumption, inflation, and openness were all insignificant.

Shirali (2015) examined the Chinese OFDI motives in 57 countries of the Middle East and Africa from 2003 till 2010 using political variables (a human rights variable and casualties of civil wars and revolutions variable) along with the traditional economic variables. Utilizing an OLS pcse (panel corrected standard errors) estimation technique, he found that previous trade relations and strategic resources in host countries had a positive and significant effect on the Chinese FDI to the Middle East and African countries. FDI was also concentrated in countries with low per capita income, since these countries have lower competition, easier market access and high potential for sales growth. Chinese OFDI was also found to be targeting countries that have political instability such as Congo and Sudan, and countries that have a moderate level of dictatorship and less freedom of liberties. This provides an environment that secures Chinese MNCs expansion in host countries without being criticized for a new trend of imperialism.

As seen from above, there is no consensus on which motives best explain Chinese OFDI or even on the proxies used for these motives. A reason could be that most of the studies use a short span of time, only Ross (2015) used ten years but only for eight African countries. Shirali (2015) used eight years but his sample of countries did not include any OECD countries to be able to compare the Middle East and African countries with. Similarly, Hu (2013) used eight years but her sample included only OECD countries. On the other hand, although Buckley et al (2007) and Cheng and Qian (2009) used longer time periods, but most of which were before 2003, when Chinese private firms were still prohibited from investing abroad. We thus believe that the time period we want to study and our sample of countries will add to the insights of the host country determinants of Chinese OFDI. Moreover, as also observed from above, OECD as a group of countries alone or in comparison to non-OECD countries were investigated, the dichotomy between developing and developed countries was also investigated and so was Africa as a region. With the exception of Shirali (2015) no single research attempted to find out China's FDI determinants in MENA. But why MENA?

MENA countries receive less FDI than other regions in general and as partially discussed in section 2. Ernst & Young (2013) argued that whereas global FDI drastically increased from \$ 207 bn in 1990 to \$ 1.25 trillion in 2010, FDI to MENA increased by only 6 fold between 1990 and 2000 and by 12 fold between 2000 and 2010. In 2003, MENA's in stock FDI as a percentage of the world's total in stock FDI was 2% and as a percentage of developing countries' total in stock FDI was 8% (UNCTAD, 2014). The Arab region ranked fifth out of seven regions in the Dhaman Investment Attractiveness Index, which is just above the least

attractive level (the seventh level) by two points. This index evaluates regions based on macroeconomic stability, financial structure, institutional and business environment, market size and accessibility, human and natural resources, cost elements, infrastructure, agglomeration economies and technological environment. (OECD, 2014). Given this claim, we are interested to find out if MENA countries receive less Chinese FDI than other countries based on the model specification we present below and if so why? Or is Chinese investment in MENA different?

MENA countries in general seem to be homes for a number of risks and thus not attractive enough to FDI. Gastanaga et al. (1998) argued that heavy reliance on oil production, the presence of structural economic problems, large population, and state control over economic activities were found to negatively affect FDI to MENA (Bashir & Hassan, 2002; Makdisi et al., 2002). Chan & Gemayel (2004) argued that the high and unstable investment risk has been a significant factor in the downfall of FDI flows into the MENA region because the stability in the degree of investment risk helps investors to incorporate risk more accurately in their estimates and can predict their return on investments much easier and more accurately, while the high unstable risk does the opposite. The Economist Intelligence Unit (2014) produced the China Going Global Investment Index that classified countries according to the OFDI determinants at which China was looking in order to invest in these countries. There were two main determinants used in this report; ‘opportunity determinants’ such as market size, natural resources, intellectual property rights and manufacturing exports in every country and ‘risk determinants’ which included potential risks on the domestic and international arenas, cultural proximity and operational risks. A Middle East country like Saudi Arabia was classified as a country that enjoys high opportunity but associated with high risk. While countries like Qatar and UAE had high opportunities but low risk, Kuwait had both low opportunity and low risk. Other Middle East countries like Algeria, Bahrain, Egypt, Iran, Libya, Morocco, Tunisia and Turkey were classified as high risk but with low investment opportunity. The top ten countries that were classified as having domestic political unrest were Algeria which scored 4th, Libya 5th, Saudi Arabia 9th and Egypt 10th. Egypt scored 4th in the top 10 countries characterised by operational risk. But as discussed earlier Algeria, Egypt and Saudi Arabia are among the top forty recipients of Chinese FDI. Again, given this analysis and such low ranking, should we expect MENA countries and more specifically our MENA_7 to receive less Chinese FDI than other countries according to conventional theory or is Chinese investment less risk averse?

3.3 The hypotheses and the choice of variables

In what follows, we present and use the determinants of Chinese OFDI largely based on Dunning’s four motives and the gravity model’s success both discussed in the theoretical foundations section earlier to formulate our hypotheses, which we test later in this paper.

3.4 Market seeking motive

Factors associated with the market of the host country are the most commonly investigated variables that are believed to influence FDI locations (Kang and Jiang, 2012). A considerable *market size* in a host country allows foreign investors to reduce their costs and achieve economies of scale and scope (Braunerhjelm & Svensson, 1996). The host country is thus more appealing as an OFDI recipient the bigger its market size. In the literature, GDP, GDPPC (GDP per Capita) and sometimes population are used as proxies for market size. *Market growth* is also seen as an attractive factor for OFDI because markets with rapid growth provide bigger opportunities for generating profits than markets that are stagnant or growing slowly (Lim, 1983). The usual proxy used in the literature for market growth is GGDP (Growth of GDP). *Market Openness* is yet another factor that attracts FDI. Vernon (1966) argued that a country was more alluring to foreign investors when its economic alignment matches with more ease the patterns of global production and global trade (Kang & Jiang, 2012). In the literature,

two alternative proxies are commonly used to measure openness; the ratio of inward FDI stocks in a host country to its GDP or the host country's ratio of merchandise exports to its GDP. Buckley et al. (2007) and Ramasamy et al. (2012) viewed Chinese exports to the host country, which measure the intensity of trade between China and the host country, as also an indicator of market openness rather than its size. A number of empirical studies have shown that market seeking was indeed a main motive for Chinese firms to invest abroad as discussed earlier (Buckley et al., 2007; Cheng & Ma, 2007; Cheung & Qian, 2009; Duanmu & Guney, 2009; Amighini et al., 2011; Huang and Wang 2011; Pradhan, 2011; Zhang & Daly 2011; Kang & Jiang, 2012; Ramasamy et al., 2012; Hu, 2013 and many others).

In our model we therefore hypothesize that Chinese OFDI is positively associated with the market size, market growth and market openness of the host economies. *gdp* is used as the proxy for market size because GDPPC could bias a country's income level when it has a huge population (Hu, 2013). *ggdp* is used as the proxy for market growth and the ratio of merchandise exports of a host country to its GDP is used as the proxy for market *openness* (because there were a lot of data missing with regards to inward FDI stocks). The coefficients of the three variables are expected to be positive.

3.5 Resource seeking motive

The Internationalization theory stressed that equity-based control was crucial in the exploitation of limited natural resources (Buckley & Casson, 1976). China's double digit growth in many years thus dictated that the Chinese government used OFDI to guarantee an uninterrupted supply of inputs, mainly energy and raw materials, which were scarce domestically (Ye, 1992; Zhan, 1995). Lunding (2006) conveyed that host countries have been determinedly enticed by Chinese authorities, through the provision of transport and communications infrastructure, the awarding of aid and the strengthening of trade relations, to permit Chinese firms to gain access to strategic raw materials (Duanmu & Gueny, 2009). In the literature investigating Chinese OFDI motives, usually two proxies were used to measure a host country's endowment of natural resources; the ratio of fuel exports and ore and metal exports (whether each separately or added together) to merchandise exports. A number of empirical studies have shown that resource seeking was indeed a main motive for Chinese firms' investment abroad especially in developing countries (Cheung & Qian, 2009; Huang and Wang, 2011; Pradhan, 2011; Kang & Jiang, 2012; and Hu, 2013).

Given that China is the biggest country in the world in terms of population and also one of the fastest growing developing countries and given what has just been discussed, we hypothesize that Chinese OFDI is positively associated with the natural resource endowments of host countries. Both the ratio of fuel exports to merchandise exports – *fuelx* – and the ratio of ore and metal exports to merchandise exports – *oremetx* – are used as proxies in our model for a host country's natural resource endowments. The coefficients of both variables are expected to be positive.

3.6 Efficiency seeking motive

Efficiency seeking is one of the established motives behind industrialized countries' FDI, where firms primarily interested in reducing costs engage in vertical forward integration. However, this motive has rarely been cited as one of the drivers of Chinese FDI mainly because China itself enjoys cheap labor. To the best of our knowledge, only three studies have investigated this efficiency motive as a determinant of Chinese OFDI. Cheung and Qian (2009) used a wage variable as a proxy for cost advantage and found it negative and significant in the specification that included developing countries only but positive and significant in the developed countries specification. They interpreted the former as offering cost advantages while the latter as offering access to advanced technologies which are usually coupled with

higher wages. Hu (2013) used unit labor cost as a proxy for efficiency seeking and found it insignificant and Ross (2015) used GDP per person employed as a proxy for labor productivity but found it insignificant.

Although reducing labor cost might not be a strong motive for China's OFDI (wages in China have been increasing lately), access to countries with higher labor productivity or more skilled labor might be as Ross (2015) postulated. As such in our model we hypothesize that Chinese OFDI is positively related to higher labor productivity. For us labor productivity per person employed in constant USD – *lbrp* – is the proxy for the efficiency seeking motive. The coefficient of this variable is thus expected to be positive.

3.7 Strategic asset seeking motive

In the 1980s, Chinese OFDI had been guided by the acquisition of knowledge and information on how to function globally (Ye, 1992; Zhan, 1995). Recently, 'state-directed' Chinese foreign direct investors conveyed that access to "advanced proprietary technology, immobile strategic assets (e.g. brands, local distribution networks) and other capabilities abroad...through both greenfield entry and acquisition" was a goal probably because it would boost their competitiveness somewhere else (Buckley et al., 2007, p.13). Indeed, according to a recent survey of Chinese enterprises, 'to acquire advanced technology' and 'to learn advanced management methods' were amongst the most important factors of their OFDI decisions (Asia Pacific Foundation of Canada, 2006). This is in accordance to the internationalization theory and it would thus be expected that Chinese OFDI in industrialized countries specifically would be driven by this motive. A number of proxies have been used in the literature inspecting strategic asset seeking as a motive for Chinese OFDI. These include the annual numbers of patent registrations whether for residents alone (Pradhan, 2011) or for residents and non-residents (Buckley et al., 2007), secondary school enrolment (Pradhan, 2011; Amighini et al., 2011), R&D variables whether as a dummy variable that takes the value of 1 if its expenditure exceeds 1% of GDP (Amighini et al., 2011) or its expenditure as a ratio of GDP (Hu, 2013), and host country's exports of high technology as a ratio of host's total exports. Of the above mentioned studies, Amighini et al. (2011) found that Chinese OFDI was attracted by R&D and gross secondary school enrolment in both the manufacturing and the services sectors in the OECD countries. Ramasamy et al. (2012) on the other hand found exports of high technology as a ratio of host's total exports positive and significant for state controlled firms but insignificant for privately owned firms. The rest of the studies found these variables insignificant.

Because of lack of data, we decided to use *techx* – calculated as high technology exports as a ratio of merchandise exports – as our strategic asset seeking proxy. We hypothesise that Chinese OFDI is positively associated with *techx* and thus expect its coefficient to be positive.

The above hypotheses with the choice of variables investigated Dunning's four motives. The below hypotheses and choice of variables stem mostly from the gravity model with its many possible variables (geographical, institutional, etc) that affect FDI flows, many of which also have their own theoretical foundations.

3.8 Avoiding risk

3.8.1 Macroeconomic risk – high inflation

Having a low inflation rate is one of the main macroeconomic goals that is taught in basic macroeconomic theory because it affects many activities including investment. Bajo-Rubia and Sosvilla-Rivero (1994) argued that emerging multinationals are reluctant to invest in economies that suffer from high inflation rates because this is probably going to reduce their real earnings in the local currency and is also likely to trigger uncertainty regarding the host

country's overall investing environment (Pradhan, 2011). Zhang and Daly (2011) confirmed the above argument asserting that high inflation rates in a host country signals domestic currency devaluation sometime in the future thus reducing real earnings and shaking the faith of investors with respect to long term planning particularly as related to setting prices and profit expectations. Inflation is thus a variable used to indicate the macroeconomic stability of the host country, where a more stable economy, i.e. one with low or predicted inflation rate, is expected to be more attractive to FDI than a less stable economy. As such we hypothesize that Chinese OFDI is negatively associated with our Inflation variable – *infl* – which is the annual inflation percent calculated from the GDP deflator and thus expect its coefficient to be negative.

3.8.2 Political risk – poor governance

According to the Internationalization theory, firms that are market oriented would prefer remote servicing modes such as licensing or exporting rather than local production in countries suffering from high rates of political risk, while firms that are resources oriented would be dissuaded to carry FDI projects in those countries (Buckley & Casson 1981 & 1999). The same argument should apply to countries that suffer from poor governance in general. Poor governance manifests itself in low voice and accountability, low government effectiveness, low regulatory quality, low political stability, low levels of corruption control and weak rule of law. In the literature, proxies for political risk or poor governance especially the last three, which are more relevant to foreign investors, were used to inspect how they affect Chinese OFDI. Buckley et al. (2007), Cheung and Qian (2009) and Duanmu and Guney (2009) used the political risk rating from ICRG (International Country Risk Guide), while Pradhan (2011) and Ramasamy et al. (2012) used the political stability index from the World Bank's (WB) governance indicators, Cheung et al. (2011) and Amighini et al. (2011) used the WB's control of corruption index, and Huang and Wang (2012) and Kolstad and Wiig (2012) used the WB's rule of law index. We decided to get data for all three governance indicators *polstb*, *corr* and *rlaw* and use the one that is found to be mostly correlated to our dependent variable as the three cannot be used in the same specification since they themselves are highly correlated to each other. We hypothesize that Chinese OFDI is positively related to strong governance and thus expect the coefficients to be positive.

3.9 Smaller distance

According to gravity model, distance is seen as a deterrent to FDI because of coordination and transaction costs. But there is also another view that it might have a positive impact if the FDI is to replace export costs. Most of the findings in the literature have shown that distance is a deterrent factor for Chinese OFDI (Cheng & Ma, 2007; Duanmu & Guney, 2009, Pradhan (2011); Kolstad & Wiig, 2012; and Ramasamy et al., 2012), which gives more strength to the gravity argument. As such we hypothesize that Chinese OFDI is negatively related to the geographical bilateral distance between the capitals of China and the host country, where the larger the distance the less the OFDI. We thus expect the coefficient of the *dist* variable to be negative.

3.10 Trade intensity

China's exports to and imports from the host country are pair specific variables that measure trade intensity between the specified pair of countries while the openness variable discussed above is only a host country specific variable. Amighini et al. (2011) argued based on Buckley and Casson's (1976) argument that imports from the host country could be positively associated with FDI if Chinese firms intend to internalize these imports through the FDI abroad, in other words, through backward vertical FDI. On the other hand, the relationship between imports and FDI could be negative if Chinese companies intend to relocate their production in the host country through FDI. This most probably would involve forward vertical FDI. The literature

gives mixed results (Buckley et al. 2007; Duanmu & Guney, 2009; Huang & Wang, 2011; Zhang and Daly, 2011; Amighini et al., 2011 and Ramasamy et al., 2012) and thus we are unable to hypothesize the relation between Chinese OFDI and our *Rimp* variable, which makes the sign of the coefficient ambiguous.

Regarding exports, according to Wu and Sia (2002), a lot of Chinese OFDI occurred to offer Chinese exporters local support in the host countries in terms of serving customers and increasing their loyalty and also to augment their earnings from hard currency. Cheung and Qian (2009) made the same argument where they stated that China issued a mandate to encourage OFDI that stimulates its exports after the Asian financial crisis. On the other hand, Amighini et al. (2011) argued that alternatively FDI might be a substitute for exports if it were intended to avoid trade restrictions. In the literature examining the determinants of Chinese OFDI, the majority of the studies support the arguments of Wu and Sia and Cheung and Qian (Buckley et al., 2007; Zhang & Dally, 2011; Amighini et al. with respect to the manufacturing sector, 2011; Huang & Wang, 2011; Pradhan, 2011; and Ramasamy et al., 2012). We thus hypothesize that Chinese OFDI and exports are positively related and thus expect the coefficient of our *Rexp* variable to be positive.

3.11 Ease of doing business

Logically speaking, the easier it is to do business in a certain country or the better the business environment the more attractive this country is to FDI. Variables that reflect this argument have been rarely used in the literature addressing Chinese OFDI. Duanmu and Gueny (2009) used corporate tax and they hypothesized that it should deter Chinese OFDI and indeed their findings showed that it did. Ross (2015) used a variable that measured the number of days required to export goods and services and he found it negative and significant, which meant that the more the number of days required to export the less the Chinese OFDI. Both findings above thus confirmed the importance of the business environment. In our model we use two variables to proxy for the ease of doing business; *tenfcnr*, which refers to the time, in number of days, required to enforce contracts in the host country and *corptax*, which refers to corporate tax rate in the host country. We hypothesize that Chinese OFDI is negatively associated with these two variables, where the larger the values of these two variables the less the Chinese OFDI. We thus expect the coefficients of both variables to be negative.

3.12 Agglomeration

Krugman (1997, cited in Cheung and Qian, 2009) called attention to the fact that FDI follows previous investment. Faced with uncertainties, investors deduce signals, direct or indirect, from other investor's past decisions in host countries. When an investor sees that his country has a significant amount of investment in a host country, he would most likely invest in that country as well. Agglomeration has many reasons including but not limited to: knowledge spillovers and linkages between consumers and producers. To the best of our knowledge this variable was only used once in the literature examining the host country determinants of Chinese OFDI. Cheung and Qian (2009) used the agglomeration variable and they found it positive and highly significant for both developing and developed countries but seemed to weaken through time for developing countries which suggested that China began to diversify its OFDI among developing countries after the Asian financial crises. In our model as in Cheung and Qian (2009) we take the *agglom* variable to mean the ratio of China's OFDI stocks in the host country to total Chinese OFDI stocks. We hypothesize that Chinese OFDI is positively associated with *agglom* and thus we expect its coefficient to be positive.

Other than the variables mentioned above, we experimented with some other variables like common language, contingency, cultural proximity but they all were found insignificant and dropping them enhanced the fit of the model. Other variables could have been used like for

instance tariffs, non-tariff barriers, trade costs but we thought the line must be drawn somewhere or else we will fall into an over specification trap. Nevertheless, these are important policy variables that can be investigated in further research.

After discussing all the above hypotheses and determining the variables that are going to be used, we now turn to the model and its results.

4. The Model and the Results

Our preliminary regressions showed that *gdp* is highly correlated with other important independent variables in the model and thus could affect the results, so we dropped it since the other two variables *ggdp* and *openness* could still capture the market seeking motive of Chinese OFDI. Other seemingly highly correlated variables, according to the correlation matrix, were not removed because serious multicollinearity was not detected after the regressions were run. We also found that *rlaw* was the variable mostly correlated with our alternative dependent variables and thus we decided to use it instead of *polstb* and *corr*.

Using the hypotheses from the previous section and the above justifications we developed the following model:

$$FDI = \beta_0 + \beta_1 \textit{ggdp} + \beta_2 \textit{openness} + \beta_3 \textit{fuelx} + \beta_4 \textit{oremetx} + \beta_5 \textit{lbrp} + \beta_6 \textit{techx} + \beta_7 \textit{infl} + \beta_8 \textit{rlaw} + \beta_9 \textit{dist} + \beta_{10} \textit{Rimp} + \beta_{11} \textit{Rexp} + \beta_{12} \textit{tenfcnr} + \beta_{13} \textit{corptax} + \beta_{14} \textit{agglom} + \textit{eit}$$

FDI, the dependent variable, is the value in constant or real USD of annual Chinese net flows or Outflows – Rfdiflows – or alternatively Outstock – Rfdistocks – in the host country at time *t*. Like most studies in the literature, we used outflows as the dependent variable but we also used outstock because as Filippaios, Papanastassiou and Pearce (2003) argued, it provides a more precise measure of the locational distribution of FDI (Kang and Jiang, 2012). The FDI data was obtained online from UNCTAD (2015). Data was collected from 2003 till 2012 for the top forty country recipients of Chinese OFDI – flows and stocks – where top was determined by taking the averages over the entire period. β_0 is the constant term and should capture the home bias and is thus expected to be –ve.

Concerning the independent variables, *ggdp*, *openness*, *fuelx*, *oremetx*, *techx*, *infl*, and *tenfcnr* were all obtained online from the World Bank’s World Development Indicators (WDI). *lbrp* was retrieved from the Total Economy Database (TED, 2015). *rlaw*, which takes values from -2.5 (poor governance) to 2.5 (strong governance) is one of the six governance indicators of the World Bank. *dist* was brought from CEPII – Centre D’Etudes Prospectives Et D’Informations Internationales. *Rimp* is the value of Chinese imports from the host country in real USD while *Rexp* is the value of Chinese exports to the host country also in real USD. Both were retrieved from the United Nations’ Comtrade database. *corptax* was obtained from the Word Bank’s doing business database. *agglom* is calculated from the raw data also from UNCTAD (2015). Appendix 1 provides a summary of all the determinants of Chinese OFDI; their names, definitions, motive behind each one, their expected signs and the sources of data.

Due to serious data non-availability, seven countries were dropped. These were British Virgin Islands, Cayman Islands, Democratic Republic of Congo, Laos, Macao, Mongolia and Myanmar. This left us with thirty three countries in total, where seven of them are MENA countries, namely: Algeria, Egypt, Iran, Saudi Arabia, Sudan, Turkey and United Arab Emirates (UAE). Appendix 2 has the list of all the countries used.

A very small number of observations were missing in *fuelx*, *oremetx*, *techx* and *corptax* for a few other countries so regressions against time were run and estimates for these missing observations were calculated. Estimating these variables is seen as appropriate from our viewpoint because: 1) the values especially for the last three are very small, 2) the differences

between them and the other real observed variables in other years are tiny and thus their effect on the overall outcome is expected to be negligible. Moreover, regressions were run twice with the balanced and the unbalanced data and there was negligible difference in the parameters estimated whether in terms of size, sign or significance. Therefore, we decided to use the balanced data for the thirty three countries to estimate the model. Appendix 3 provides the correlation matrix of all the variables.

Pooled ordinary least squares (POLS), random effects (REs) or fixed effects (FEs) are the most common techniques used in the literature to estimate the coefficients of the host country determinants of Chinese OFDI. We couldn't use FEs because our model includes variables that are time invariant such as distance and a number of time invariant dummy variables that are still going to be introduced later on. To avoid endogeneity problems, the lagged values of the explanatory variables were used. The parameters were first estimated using POLS and then a Variance Inflation Factor (VIF) test was carried out, which showed that the model did not suffer from high multicollinearity since the VIF for each variable was less than 10 and the mean VIF was below 4 as shown in Table 2 for both flows and stocks. A Breusch-Pagan Lagrange Multiplier test (LM) was then conducted to determine whether POLS or REs gave a better fit. The results are shown in Tables 3 and 4 for flows and stocks respectively. In Stata, the null hypothesis of the LM test is that the variance across the units is zero. This basically means that there are no significant differences across the entities or more simply that there is no panel effect. Therefore, a probability that is less than 0.05 would lead us to reject the null hypothesis and would thus indicate that REs is a better estimation technique. A value of 1 in Stata 12 on the other hand means that there are no differences between POLS and REs Generalised Least Squares (GLS) as shown in the results of columns 1 and 2 in Tables 7 (for flows) and 8 (for stocks) and that no panel effect was obvious and so we used POLS.

Tests for heteroscedasticity and serial autocorrelation were undertaken, which showed that the model suffers from both of these problems. To control the heteroscedasticity problem we used robust standard errors as seen in column 3 of Tables 7 and 8 and to limit or fix the serial autocorrelation problem we added a lagged dependent variable, but we had to drop the *agglom* variable because it was highly correlated with the lagged dependent variable as they are more or less measuring the same thing. The results are shown in column 4 in Tables 7 and 8, which we will be interpreting shortly. A quick startling observation is the jump in the R^2 , which might highlight the presence of serious multicollinearity when the lagged dependent variable was added so we carried out the VIF once again as shown in Tables 5 and 6, which both show that the model does not suffer from high multicollinearity to the extent of affecting the parameters. A closer look at Tables 7 and 8 shows that the corrections for heteroscedasticity and serial autocorrelation did not affect the signs of the coefficients but only their sizes and their significance and only in a minor way that does not affect our main results and conclusions.

Table 7 presents the estimation results of the host country determinants of Chinese OFDI flows from 2003-2012. Column 4 shows that the coefficient of the lagged dependent variable is both positive and highly significant. On its own it is responsible for explaining almost 20% of the model as seen in the jump of the R^2 from column 3 to column 4. *openness* is found positive and significant, confirming our hypothesis that Chinese OFDI is attracted to open economies and thus has market seeking motives. This is because open economies are more outward oriented and relatively also more open to inward FDI than inward oriented or closed economies, which for China means a new market, especially if the entry mode is horizontal or forward vertical FDI. This finding is in contrast to some extent to the majority of evidence found in the literature. For instance Buckley et al. (2007), Kolstad and Wiig (2011) and Ramasamy et al. (2012) found it insignificant but this may be because the proxy they used was the ratio of inward FDI stocks to GDP not the ratio of merchandise exports to GDP as we have it here.

Dunaumu and Guney (2009) who take openness to mean the ratio of the sum of exports and imports to the country's GDP on the other hand found it positive and significant. This underlines the importance of the definitions of the variables used and subsequently the outcomes expected from them. *oremex* is also found positive and significant, which is more evidence that China is attracted to countries with natural resources and thus has resource seeking motives as was found in the studies of Cheng and Ma (2007), Huang and Wang (2011), Pradhan (2011), Amighini et al. (2011), Ramasamy et al. (2012) and Hu (2013). Chinese FDI flows are also attracted to countries with high labor productivity as *lbrp* is found positive and significant. This finding highlights that China is also efficiency seeking. This motive has been mostly neglected in the literature when China is the foreign direct investor investigated because it is believed that China itself is an efficient producer of goods and services since its wages are usually low compared to other countries. However, Chinese wages have been recently increasing and it is only logical that China seeks efficiency outside its borders. Efficiency here is taken to mean higher productivity and not necessarily lower wages. There is a counter argument that Chinese OFDI is accompanied by Chinese labor. This might be true but only to an extent because as mentioned earlier, Miniesy and Adams (Forthcoming in 2016) as well as JCEFTS (Forthcoming in 2016) proved that China does create jobs in the countries in which they invest. In the literature, only Ross (2015) attempted to estimate productivity and he found it insignificant but that is maybe because his recipient countries were all African countries, where labor productivity might not be the strongest advantage.

Rexp although tiny is found positive and significant, which confirms the findings of other studies that China 'follows' its exports as was found by Buckley et al. (2007), Cheung and Qian (2009), Zhang and Daly (2011), Huang and Wang (2011), Amighini et al. (2011) and Ramasamy et al. (2012). *tenfcnr*, which has never been used in the literature is found also positive and significant, which is in contrast to our hypothesis. A closer inspection of the data shows that the countries that take more days to enforce contracts are to a great extent the same countries that China is attracted to because of their natural resources such as Zambia, South Africa, Brazil, and Nigeria. But of course this is a finding that needs further research. Unlike the finding of Duanmu and Guney (2009) and in contrast to our hypothesis, *corptax*, which is a variable that is rarely used in the literature, is found positive and significant. In contrast to our hypothesis, Chinese OFDI is found to be attracted to countries with poor governance since *rlaw* is found negative and significant. This result confirms the results of Buckley et al. (2007) although they were referring to political risk in general and not necessarily the rule of law and also Cheung et al. (2011) although they were using corruption. Buckley et al. (2007) argued that FDI might still flow to countries with high risk if the return on investment is also high. It might also be that *rlaw* is negative and significant because it is just associated with countries highly endowed with natural resources, which China is after, or that highly naturally endowed countries are already satiated with other investors and thus China is pushed to the 'frontier ones' which happen to suffer from poor governance or that China specifically targets highly naturally endowed countries with poor governance. To test this we introduced an interaction term between *rlaw* and *fuelx* and *oremex* each separately, if the stated hypothesis is true then we should expect the coefficient of this variable to be negative. The results show however that the interaction term is positive and significant with *oremex* (insignificant with *fuelx* and thus not shown). This implies that *oremex* attract Chinese FDI in countries with strong governance (+ve index) and not necessarily ones with poor governance, in other words, China does not necessarily look for countries that have poor governance (*rlaw*) to go invest in their natural resources (*oremex*).

Table 7 also shows that Chinese OFDI is deterred by distance since *dist* is found negative and significant as postulated by the gravity model and as found by Cheng and Ma (2007), Duanmu

and Guney (2009), Kolstad and Wiig (2012) and many others. This basically means that the closer the country the more the Chinese FDI flows. *Rimp* although very small is also found negative and significant as was found by Buckley et al. (2007), which they took to mean that Chinese investors relocate in other developing countries possibly to evade barriers to trade in third markets, which according to the OECD (2008) is a strategy widely adopted by Chinese firms in many developing countries.

ggdp is found insignificant as in the findings of Buckley et al. (2007), Cheung and Qian (2009), Kang and Jiang (2012), Hu (2013) and Ross (2015). *infl* is also found insignificant, which goes hand in hand with the findings of Duanmu and Guney (2009), Amighini et al. (2011), Zhang and Daly (2011), Kolstad and Wiig (2012), and Ramasamy et al. (2012). Surprisingly *fuelx* is also found insignificant but that endorses the findings of Kolstad and Wiig (2012). Alternatively, it might mean as the argument in Amighini et al. (2011) that there is not enough variation within this group of countries to render this variable significant.

Table 8 presents the estimation results of the host country determinants of Chinese OFDI stocks from 2003-2012. Some of the findings in column 4 are similar to those found in Table 7. For instance the coefficients of the lagged dependent variable (but now for stocks) and those of *openness*, *oremetx*, *lbrp*, *Rexp*, and *rlaw_oremetx* are all found positive and significant. The coefficients of *rlaw* and *Rimp* are found negative and significant. The interaction between *rlaw* and *oremetx* is also positive and significant. The coefficients of *ggdp*, *infl* and *fuelx* are still insignificant and now those of *dist*, *tenfcnr*, and *corptax* as well although they still have the same signs. This means that with respect to Chinese OFDI stocks, they are neither affected by distance nor time to enforce contracts nor corporate tax. This might be a more valid conclusion than the one given above with respect to flows because as mentioned earlier stocks give a more precise measure of the locational distribution of FDI. *techx* although still negative now became significant, which is in contrast to our prediction and which probably pinpoints the fact that China has more stocks in developing countries a big percentage of which are not high technology exporters but are actually technology importers. This sheds light on the accuracy of using *techx* as a proxy in regressions that contain both developing and developed countries, because it might underestimate and even bias its coefficient.

Now after taking account of the general host country determinants of Chinese OFDI, let's have a closer look on the MENA countries. Since we only have seven in our sample of countries, it was not possible to run regressions for them separately as all the coefficients were highly correlated. So, we decided to introduce a regional dummy – *mena* (which takes the value of 1 if the country is a MENA_7 country and 0 otherwise) – to investigate if being a MENA country affects Chinese OFDI flows or stocks to this region or in other words, they receive less Chinese OFDI compared to other countries or regions. We also added other regional dummy variables to see how they compare to MENA_7. Before we discuss these results, it is also worth noting that we introduced other dummy variables to represent other types of countries (developing vs. OECD vs. high income, each on its own) but none of their coefficients were significant whether with flows or stocks as the dependent variable and so their results are not reported.

Tables 9 and 9.1 present the estimation results of the host country determinants of Chinese OFDI flows and stocks respectively from 2003-2012 with regional dummy variables using POLS with robust standard errors and after adding the lagged dependent variable. Basically we ran the specification in column 4 in Tables 7 and 8 for flows and stocks respectively but after adding the regional dummy variables. Beginning with the regressions with flows as the dependent variable, there are no changes with respect to the signs of the variables compared to column 4 of Table 7 and to a great extent the variables that were significant remained significant with only very few exceptions. The variables that were insignificant remained all

insignificant. *mena* is found both negative and significant, indicating that MENA_7 countries were receiving significantly less Chinese OFDI flows than other countries. We will attempt to explain later why this might be the case. Looking at other regional dummies, we see that the coefficient of *E_SE_Asia* (taking the value of 1 if the country is Cambodia, Hong Kong, Indonesia, Japan, South Korea, Singapore, Thailand and Vietnam and 0 otherwise) is positive and significant, indicating that East and South East Asian countries are receiving significantly more Chinese OFDI flows than other countries given our model's specification. This is probably because of physical and cultural proximity, whether because of common borders or having a considerable percent of residents from Chinese background as well as the presence of common language. In 2012, these eight countries received 65 % of Chinese OFDI flows and had 62% of its outstock (UNCTAD, 2015). The coefficient of *E_SE_Asia2* (which now includes Kazakhstan and Russia together with the above eight countries) is also positive and significant. All the other regional dummies are found insignificant, even for the offshore financial centers, which are not really a regional dummy but it includes countries that could affect Chinese OFDI decisions given their financial status that could provide China with many privileges.

Concerning stocks as the dependent variable, we only included *mena* and *E_SE_Asia* because the coefficients of all the other regions are insignificant. The coefficient of *mena* remained negative but now insignificant. The coefficient of *E_SE_Asia* remained positive and significant as expected. There were no changes in the signs of any of the other variables compared to column 4 of Table 8. Again, all the variables that were significant remained significant although with very few changes in the significance level itself. The variables that were insignificant remained all insignificant.

Why is *mena's* coefficient negative and significant with respect to Chinese outflows in Table 9? We had three possibilities. First, we investigated if there was a certain year or years that was the cause of this and many years could be suspects for creating this negative coefficient; the world financial crisis of 2007/8, policies enacted by China itself in the first half of 2009 and the political turbulence in the MENA region starting at the end of 2010 in Tunisia and spreading to the region to what has become later known as the Arab Spring. Rosen & Hanemann (2009) argued that although China announced a number of measures in early 2009 that advertised its appetite for international investment, yet the consequences of the financial crisis caused many Chinese firms to scale back their OFDI and the Chinese government itself became more cautious; denying approval for FDI projects in the financial sector and reprimanding publicly firms of high profile for their OFDI plans. Accordingly, we introduced nine *mena_year* interaction terms, from 2004-2012 since 2003 is not possible because of our lagged explanatory variables. None of these interaction terms were significant so we have not included their results in the paper.

Second, maybe including *mena* as a whole is not appropriate and may result in some kind of bias because there are five of them that are significant energy/fuel exporters and two that are not. So, we decided to break the MENA_7 into *mena_energix* (MENA_7 energy exporters) which include: Algeria, Iran, Saudi Arabia, Sudan and UAE, and *mena_nonenergix* (MENA_7 non-energy exporters), which include Egypt and Turkey. We ran the regressions in Table 9 again but this time with *mena_energix* and *mena_nonenergix* as alternative dummies. We ran them once for flows as the dependent variable and once for stocks. The ones for stocks showed no significance for any of these two dummies so we didn't include their results in the paper. The ones for flows are shown in Table 10. As you can see the coefficient of *mena_energix* is negative and significant at 10.6%, while that of *mena_nonenergix* is negative but not significant. This basically means that the non-energy exporters of the MENA_7 do not significantly receive less FDI flows than other countries, while the energy

exporters of the MENA_7 receive less FDI flows than other countries. There are no changes in any of the significance in any of the other variables compared to column 1 in Table 9. Again, the same question is asked; why are the MENA_7 energy exporters receive less FDI flows than other countries? Again, we introduced *mena_energyx_year* interaction terms but none showed any significance so the results are also not shown.

Third, we introduced interaction terms between *mena* and the other explanatory variables. Table 11 presents the estimation results of the host country determinants of Chinese OFDI flows from 2003-2012 with *mena_explanatory variables* interaction terms using POLS with robust standard errors and after adding the lagged dependent variable. Although we tried *mena*'s interaction terms with all the main explanatory variables, we only included in Table 11 the ones that are significant. The coefficient of the *mena_openness* interaction term is negative and significant, indicating that one of the reasons that MENA_7 countries might have been receiving significantly less Chinese OFDI flows compared to other non-MENA_7 countries in the model is perhaps due to their relatively less open economies. Our data shows that on average, the ratio of *openness* of the MENA_7 countries is 0.34 compared to 0.41 for the other non-MENA_7 countries. The coefficient of *mena_lbrp* is also negative and significant demonstrating that MENA's countries lower labor productivity is perhaps one of the reasons for receiving less Chinese OFDI flows compared to other non-MENA_7 countries. Our data shows that on average, the *lbrp* of the MENA_7 countries is \$19,805 compared to \$31,143 for the other non-MENA_7 countries. The coefficient of *mena_Rexp* is also negative and significant exhibiting that MENA_7's countries' lower exports from China is perhaps one of the reasons for receiving less Chinese OFDI flows compared to other non-MENA_7 countries but it must be noted that its value is very small so the effect might not be that big. Our data shows that on average, the *Rexp* of the MENA_7 countries is \$7 bn compared to \$ 34 bn for the other non-MENA_7 countries.

But as we just discussed, MENA_7 that are energy exporters are the ones that received less FDI flows so the interaction terms with the explanatory terms must be done for them as well and not just for the whole of the MENA_7. This is also shown in Table 11, where only the coefficients of the significant variables are reported. The results show that the coefficients of *mena_energyx* interaction with *openness*, *lbrp*, *Rexp* and *oremetx*, are all negative and significant at 10%. For *mena_energyx_oremetx* the result is logical because none of those energy exporters are significant ores and metals exporters. The other results are a bit concerning because of the five energy exporters, Saudi Arabia and UAE are relative to the three other countries, very open, have high labor productivity and import heavily from China. Could it be that the other three developing countries (Algeria, Iran and Sudan) as opposed to Saudi Arabia and the UAE (high income countries) be the ones responsible for these negative and significant coefficients?

We thus decided to repeat the regressions again but this time with further divisions; *mena_energyx_highm* (MENA_7 energy exporter high income countries namely; Saudi Arabia and UAE) and *mena_energyx_devg* (MENA_7 energy exporter developing countries namely; Algeria, Iran and Sudan). The latter dummy was insignificant and so the result is not included, while the former one was negative and significant and thus we tried the year interaction terms with *mena_energyx_highm* but they were all insignificant so none are reported. We then tried *mena_energyx_highm* interaction with all the explanatory variables and reported only the ones that are significant in Table 11. Once again the coefficients of the *mena_energyx_highm* interactions with *openness* and *Rexp* are negative and significant at 11 % and 10% respectively. Since *mena_energyx_highm* is composed of only two countries, so we decided to separate them to see if one or both are responsible for these negative and significant coefficients. We ran the regression again but this time with *Saudi* and *UAE*

interactions with all the explanatory variables, *Saudi*'s interaction are all insignificant so are not reported while UAE's interactions with *openness*, *lbrp*, and *Rexp* are all negative and significant as shown in Table 12. This seems like an unexpected outcome, however, it might not be that peculiar for the following reasons: As discussed in the literature section, MNCs seek the FDI option when there are limitations to exporting and/or licensing. Data shows however that UAE is one of China's top importing partners (UN, 2015) and for UAE, China is its third largest exporter (Wang, 2013) so maybe there are no factors limiting Chinese exports to UAE and thus FDI is not sought. Moreover, Wang (2013) discussed how there wasn't much awareness and understanding of UAE in China but that this is changing. In fact, in December, 2015, crown prince of Abu Dhabi, who is also Deputy Supreme Commander of the Armed forces, Sheikh Mohammed bin Zayed visited China and signed a number of bilateral agreements that would augment Chinese investment in UAE, especially with the highly rising labor costs in China and the becoming highly restrictive environmental regulations (Saadi, 2015). Furthermore, maybe because UAE and especially Dubai is so open for FDI from many countries, Chinese firms find this prohibitive because they are going to compete with so many other MNCs and postponed this entry till later on when they have established themselves as worthy foreign direct investors, or since China is a late comer to investment in UAE, there are not much investment opportunities left, in other words, other FDI from other MNCs have crowded out Chinese FDI in UAE. This whole UAE issue warrants further research.

We then decided just as we did with UAE, to take a closer look at the rest of the MENA_7 countries individually and we introduced a country dummy variable for each of them as shown in Table 13. Table 13 presents the estimation results of the host country determinants of Chinese OFDI flows (on the left hand side of the table) and stocks (on the right hand side of the table) from 2003-2012 with MENA_7 countries' dummy variables using POLS with robust standard errors and after adding the lagged dependent variable. As is clear from the left hand side, none of the separate country dummies are significant. Concerning the left hand side, *Sudan*'s coefficient is positive and significant indicating that Sudan has Chinese OFDI stocks significantly more than other countries as predicted by the model. This is expected as it is well known that Sudan is one of the highest recipients of Chinese OFDI especially as related to its natural resources and its stocks amounted alone to \$1.9 bn by 2014 (fdi intelligence, 2014). On the other hand, *UAE*'s coefficient is negative and significant demonstrating that UAE has Chinese OFDI stocks significantly less than other countries as predicted by the model. A closer look at our data shows that although Chinese OFDI stocks in the UAE have in total increased from 2003 till 2012, yet its OFDI flows, which eventually affect its stocks, significantly dropped from \$350 million in 2010 till \$105 million in 2012 as UAE was one of the countries badly hit by the world financial crisis. As for *Egypt*'s coefficient, it is positive but insignificant. All other remaining MENA_7 countries' dummy variables that are not included are negative but insignificant.

In conclusion, it is apparent that China neither specifically care about a certain region (Africa, North America, etc) (of course East and South East Asian countries are an exception for reasons discussed above), nor about a certain type of country (developing, OECD, high income), but it only cares about investing in the country that best suits its motives be it resource seeking, or efficiency seeking. There are factors that encourage China to invest in a certain country like openness of the country and its imports from China and poor governance and there are factors that discourage China from investing in a certain country like its exports to China. Concerning MENA_7, it seemed at first that China invests less in MENA_7 compared to the other countries because of the relatively less openness of their economies, lower labour productivity and them importing less from China compared to their counterparts. However, with careful inspection,

it turned out that UAE might be the reason behind this and not any other country for reasons discussed earlier.

5. Conclusion

This section briefly summarizes the paper and the results, pinpoints research limitations and gives ideas for further research and finally discusses a number of policy implications.

5.1 Summary of research

This research has two objectives: to examine the host country determinants of Chinese OFDI and to examine if Chinese OFDI in MENA is different than elsewhere.

China's OFDI has been increasing substantially making it the third largest foreign direct investor worldwide. The most targeted sectors have been wholesale and retail trade and mining. Lately, financial intermediation became the first targeted sector followed by mining. Most Chinese OFDI stocks are concentrated in the developing countries and particularly in East Asia. Chinese outstocks in MENA has been increasing since 2003 and the bulk of it goes to the MENA_7 countries. Chinese investment in MENA is important because many MENA countries do not receive much FDI from the top FDI source countries while China is becoming a competitive player with its investment funds and job creation prospects.

Many theories have been developed to try to explain FDI. One of most famous theories is Dunning's eclectic paradigm with its four motivations (market, resource, efficiency and strategic asset seeking motives) underlying the locational advantages. The gravity model with its extensions has also been empirically used recently to understand the reasons and directions of FDI.

Research on the host country determinants of Chinese OFDI has been limited and gives mixed results. Some studies have showed that Chinese OFDI is market seeking or resource seeking but others have showed that it is not. Some showed that poor governance or political risk is irrelevant in Chinese firms' decisions to invest abroad others showed that they are actually more attracted to countries that are risky or have poor governance. MENA countries on the other hand have been shown to attract less FDI because of economic problems as well as political instability.

We tested our hypotheses on thirty three countries, seven of which belong to MENA from 2003-2012. Using a POLS estimation technique, on lagged explanatory variables to avoid endogeneity issues, with robust standard errors and with adding a lagged dependent variable to fix the serial autocorrelation problem we found the following: Chinese OFDI is market seeking but just to openness. It is also resource seeking but just to ores and metal exports and not fuel exports. Chinese OFDI is efficiency seeking. It is neither affected by inflation or deterred by poor governance but on the contrary is attracted to it. Chinese OFDI follows its exports and relocates probably to avoid tariffs and other trade barriers in third markets. Chinese OFDI is not affected by the lack of ease of doing business and is positively affected by its previous flows or stocks in host countries.

We also found that the MENA_7 countries seemingly receive significantly less Chinese OFDI flows compared to other countries because they are less open, have lower labor productivity and do not import as much on average from China as other non-MENA_7 countries do. With careful inspection however, it turned out that this all maybe because of the UAE, which is already trading a lot with China and thus China might not need to physically invest there, or because Chinese firms do not have much awareness and understanding of UAE as portrayed earlier, or because UAE is already satiated with FDI from other countries or that China views FDI already existing in UAE to be very competitive and is just waiting for the right time to invest there. Our research has a number of limitations that are explained next.

5.2 Limitations and suggestions for further research

The number of countries used (33, 7 of which are MENA countries) and the number of years used (9 because of using lagged variables) are not big enough. This means that no generalization on the whole MENA region from our results is possible. It is also possible that adding more years and adding more countries will change the overall results. Moreover, dividing the bigger sample into MENA vs. non-MENA, or developing vs. developed, or OECD vs. non-OECD or any other similar division might give better indications to the true motives of Chinese OFDI. Cheung and Qian (2009) have actually recommended dividing the samples as using all of the countries with different characteristics in the same regression might lead to misleading inferences as for instance with our *techx* variable which was significant but negative. We have tried to divide the sample into MENA and non-MENA as mentioned earlier but the VIF was extraordinarily high for most of the variables because of the very small sample. We also tried to divide the data into developing and developed, OECD and non-OECD, but we also faced the same problem. A much bigger sample should avoid all these problems and should ensure more reliable results.

A study that would utilize a much bigger sample of countries or even the entire Chinese OFDI recipient countries and years from 2003 till the release of the 2015 OFDI data and that would allow the different division of the sample mentioned above is thus recommended.

One of the limitations we also faced is the non-availability of much of the data. Regarding Chinese OFDI itself there is no easily retrievable data before 2003. Any data before that time is also calculated in a way that does not match international standards which were only applied from 2003. Data on many countries but especially some MENA countries does not exist. We for instance included other proxies for the strategic asset seeking like school enrolment or number of patent applications or R&D as a % of GDP but because data for these variables were absent for many countries and not just in the MENA countries we had to drop them and instead use *techx*. Not being able to get data disaggregated by sector was also a disadvantage and could have helped in shedding better light on the motives behind Chinese OFDI.

Other variables that might have been added or maybe alternatively used might have rendered different or better results but the problem is some of these variables do not have a unified system if they even exist. For instance, we wanted to add a variable that would capture the active seeking of Chinese FDI by the host country itself but we are not aware of the existence of a consistent variable that measures this. This has also been recommended by Buckley et al. (2007) and Zhang and Daly (2011). We also wanted to add a variable that would capture the depth of the historical relations between China and the host countries but we are not aware of one that does just that in a universally accepted way. The development of these two variables would add further depth to the research. Many other variables that measure political motives can also be added.

5.3 Policy Implications

The growing role of Chinese OFDI in the world is an opportunity for all developing countries and to the MENA countries in specific, given the relatively deteriorating economic conditions of many of them, and given that China is still eager to explore new opportunities for investment abroad. As discussed earlier, for MENA, Chinese OFDI has three comparative advantages relative to other FDI source countries: First, China has no political prejudice against any of the MENA countries and thus invests in countries which almost no other country invests in, like Sudan and Iran. Second, for other MENA countries, China is becoming increasingly competitive, with more outflows and outstocks into these countries than from other top FDI source countries. Third, previous research and the results of this paper highlight the fact that China is not deterred by economic instability or political instability or other forms of poor

governance, which means in a region characterized by rampant turmoil, Chinese OFDI would provide not only much needed investment funds but would help create jobs, which should translate into higher economic growth. As other FDI, China could bring about to the host countries foreign currency and technological spillovers.

This research showed that MENA countries, with the exception of UAE, do not really receive less FDI from China than their counterparts and that China is only moved by its motives and is encouraged by a country's openness, labor productivity, and imports from China. So if MENA countries want to attract more Chinese FDI they should work on these three issues.

The importance of high standard vocational education and training to augment labor productivity has been emphasized in many studies before and is highlighted here once again. The quest for openness underlines once again the importance of an effective MENA economic regional integration which should solve the openness and the imports problems since China would be looking at the entire region not just at one country, which will also increase its potential market size, but given the political conditions in the region this seems like a far-fetched pursuit at least in the near future.

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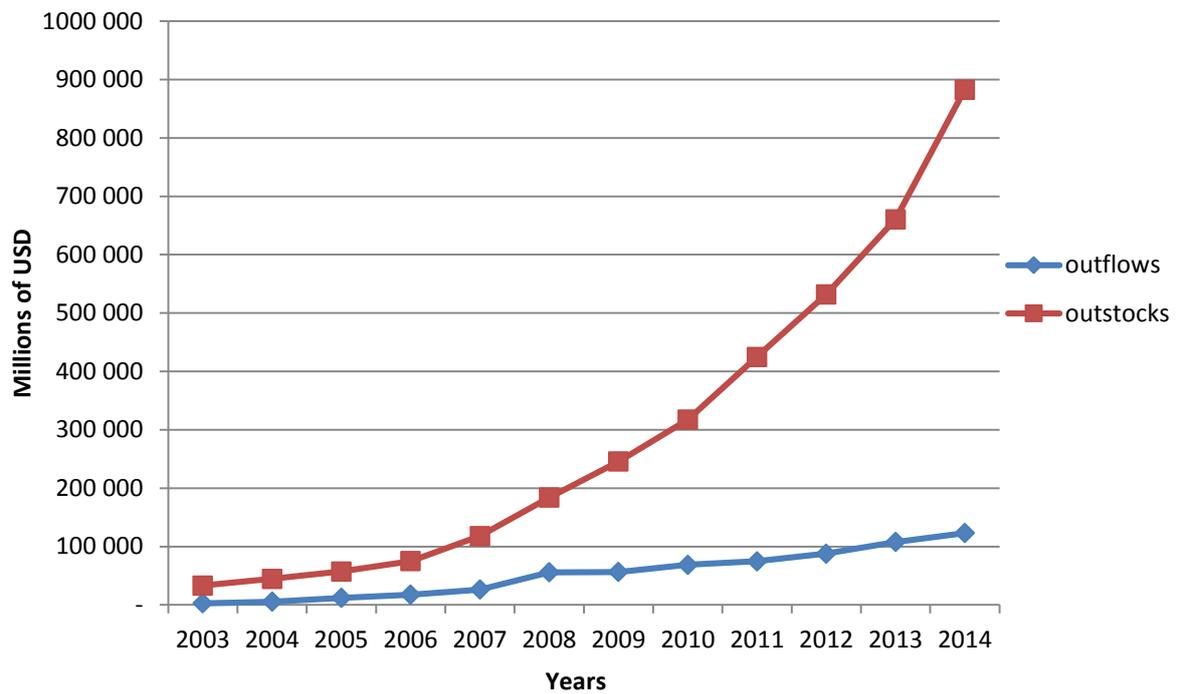
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Figure 1: Chinese FDI Outflows and Outstocks from 2003 till 2014



Source: Flows and Stocks data from UNCTAD. Figures created by authors.

Figure 2: Sectoral Distribution of Chinese FDI Outstocks from 2004 till 2013

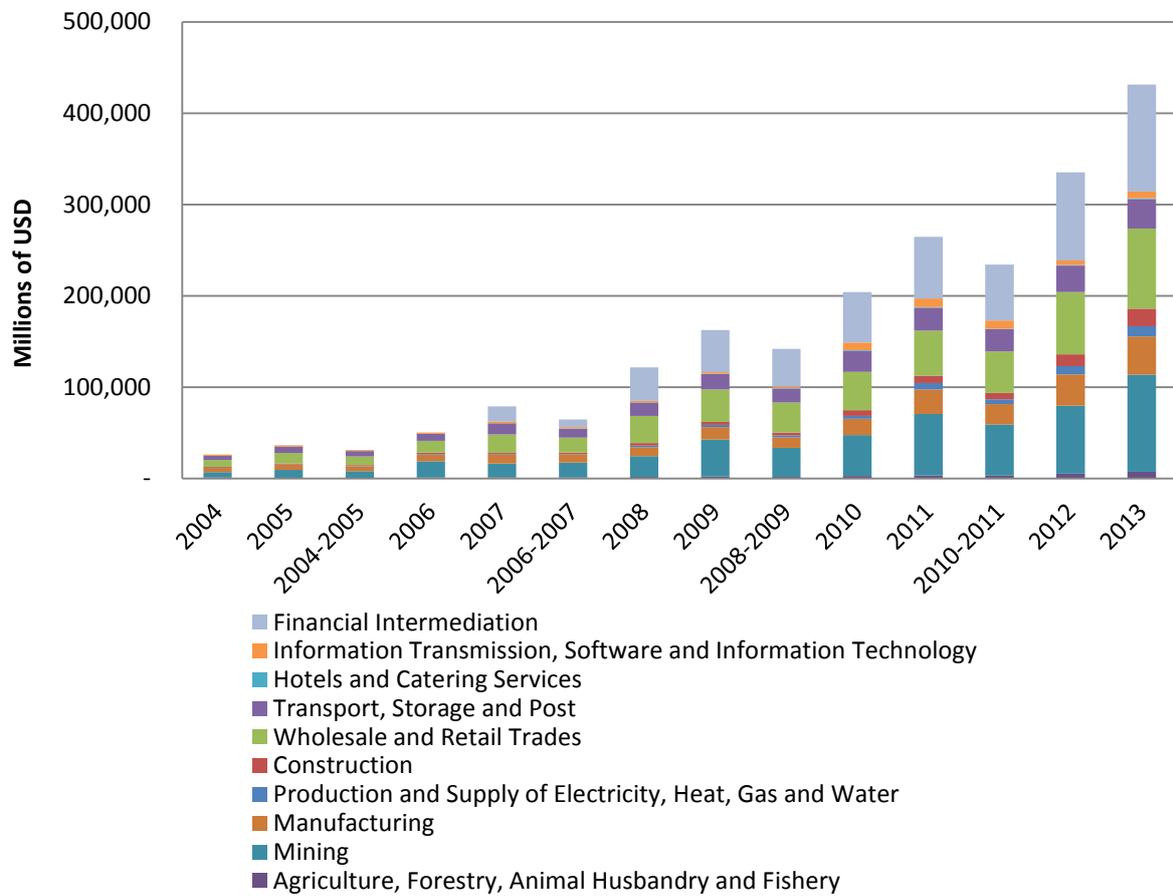


Figure 3: China's OFDI Flows by Geographical Destination from 2003 till 2012

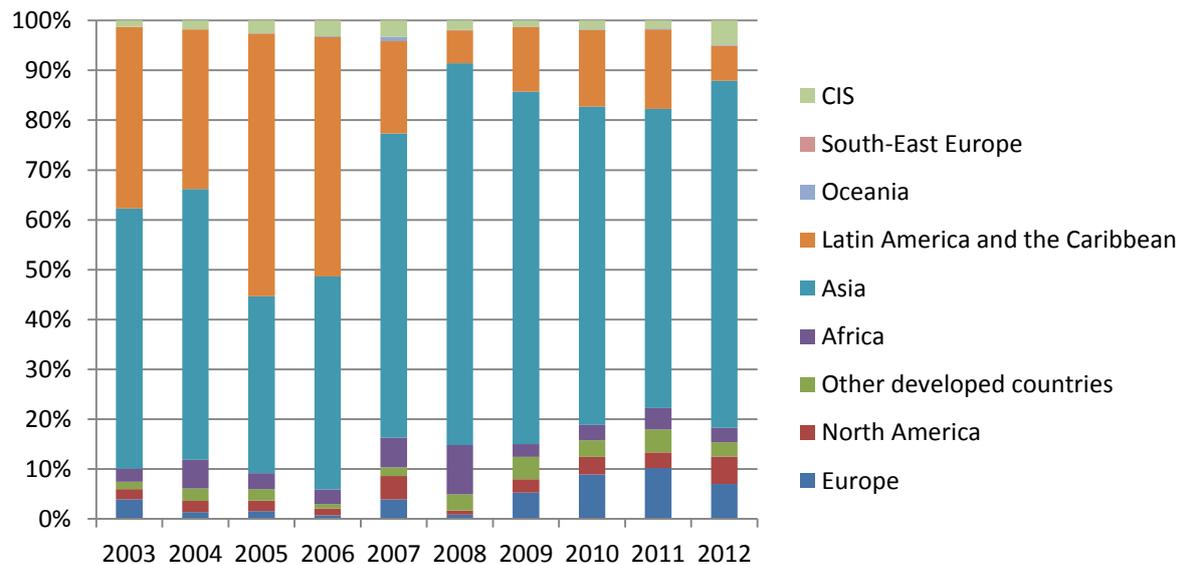
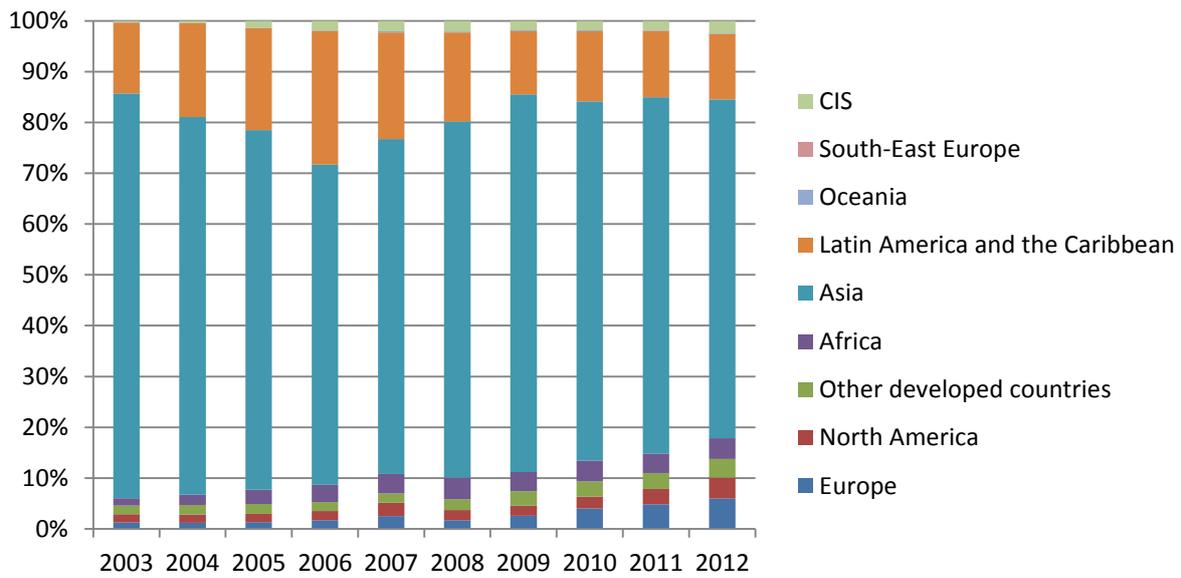
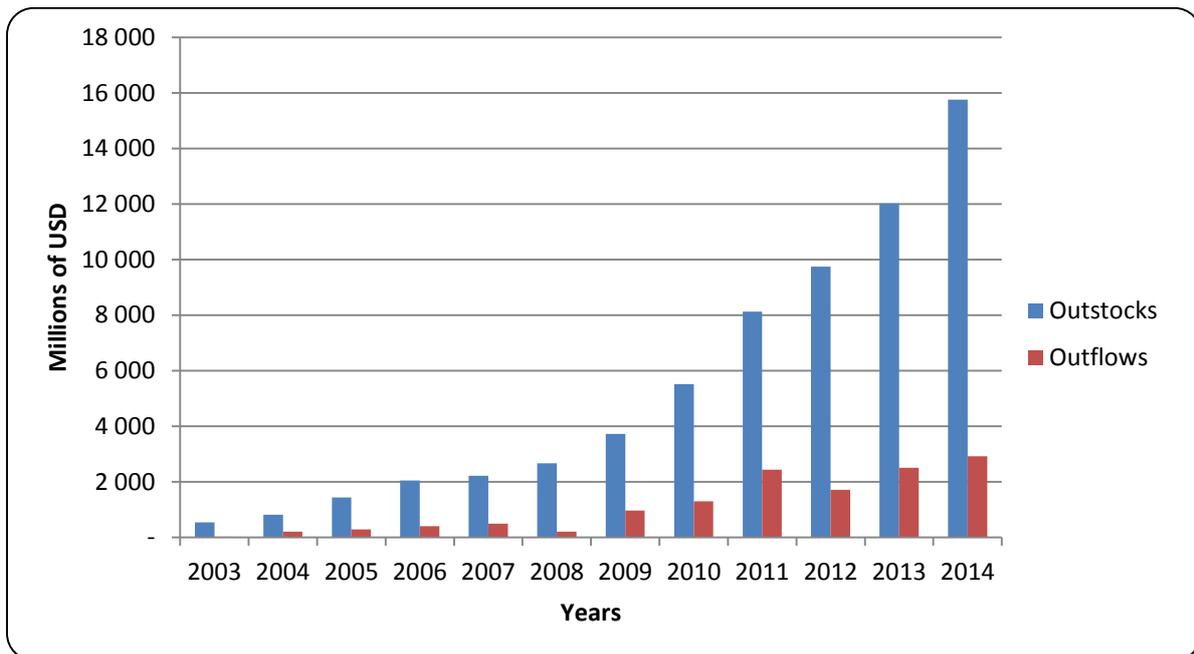


Figure 4: China's OFDI Stocks by Geographical Destination from 2003 till 2012



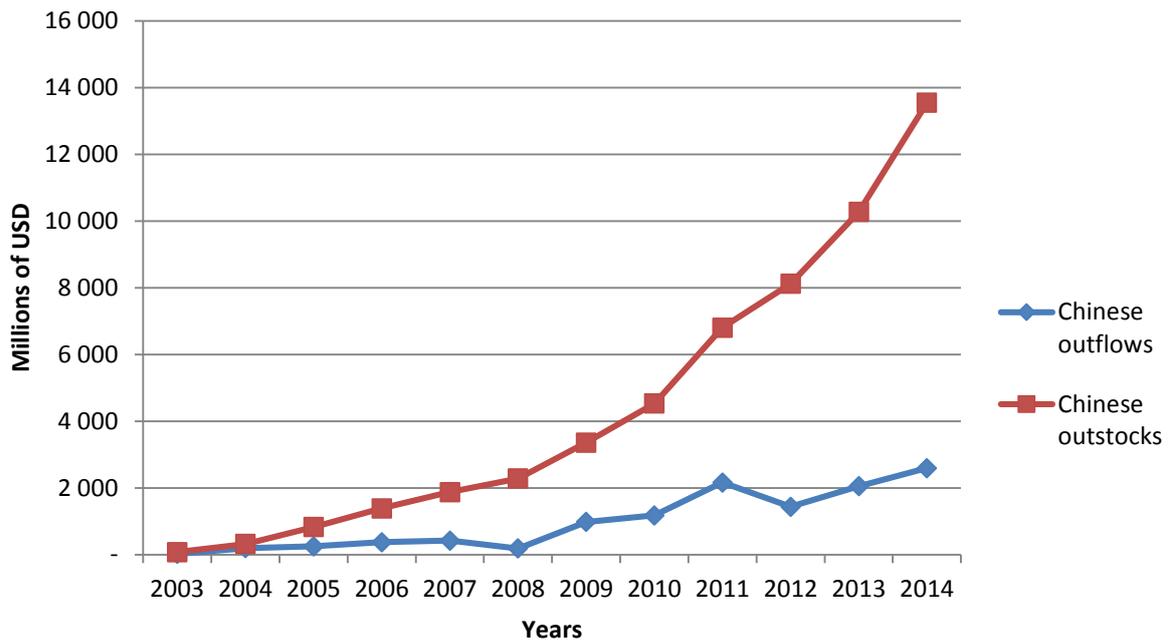
Source: Flows and Stocks data from UNCTAD. Figures created by authors.

Figure 5: Chinese FDI outflows and outstocks in MENA countries from 2003 till 2014



Source: Flows and Stocks data from UNCTAD. Figures created by authors.

Figure 6: Chinese FDI Outflows and Outstocks in MENA_7 from 2003 till 2014



Source: Flows and Stocks data from UNCTAD. Figures created by authors.

Figure 7: Chinese FDI Outflows in MENA_7 from 2003 till 2014

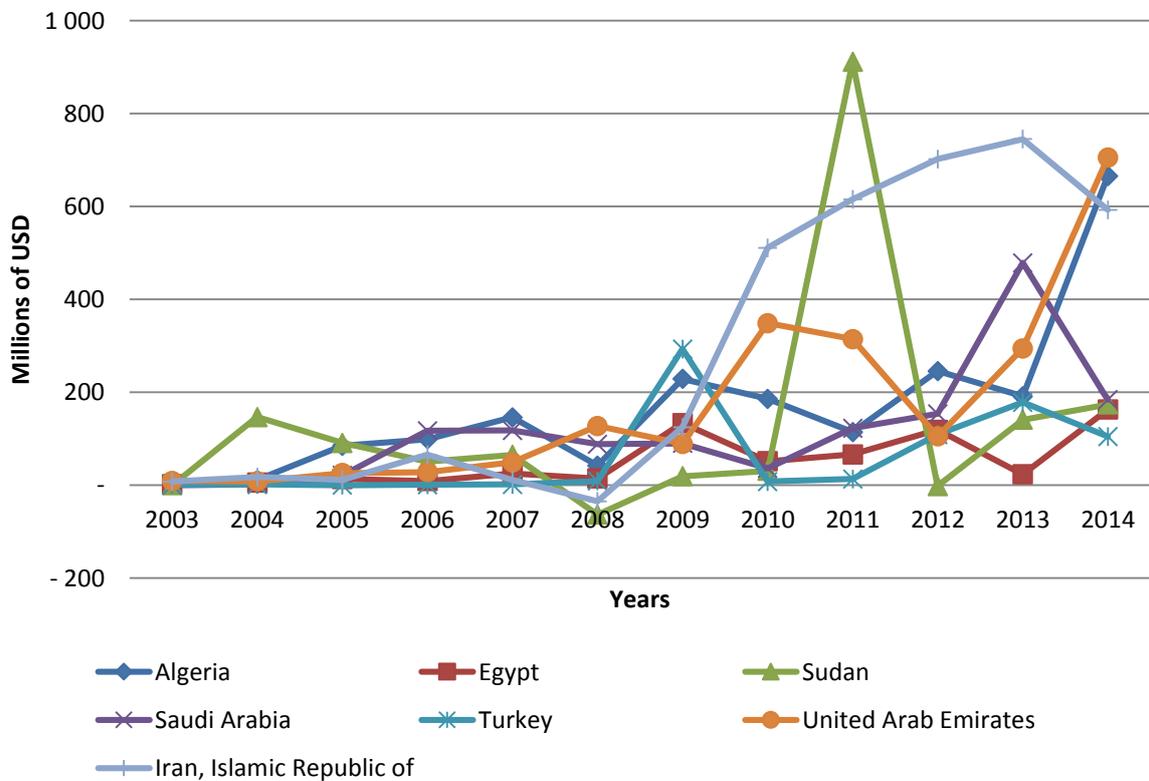
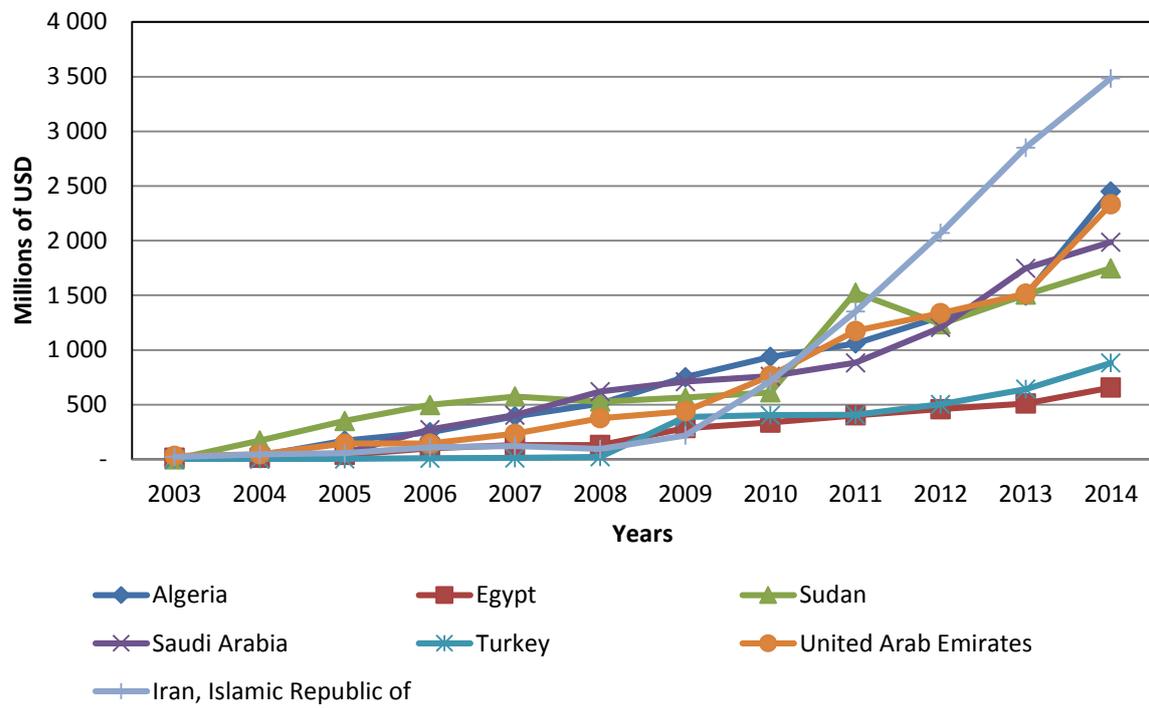


Figure 8: Chinese FDI Outstocks in MENA_7 from 2003 till 2014



Source: Flows and Stocks data from UNCTAD. Figures created by authors.

Table 1: FDI Outstocks of the 12 Top Source Countries Worldwide in the MENA_7 from 2001 till 2012*, in millions of USD

Algeria												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..	36	133	45	0			0			3629	
2002	..	..	102	48	0			0			3384	
2003	..	60	212	71	0			0			4080	6
2004	..	..	232	132	0			0			3602	34
2005	..	230	440	147	0			0			4975	171
2006	..	239	689	117	0			0			5461	247
2007	..	192	1281	188	323			0			5092	394
2008	0	178	1571	260	642			0			4919	509
2009	35	0	2389	369	1087			0			4854	751
2010	35	..	2495	365	2522			0			5360	937
2011	22	..	2570	399	4069			449			5084	1 059
2012	7	..	2719	..	0			0			6117	1 305
Egypt												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..	23	377	330	0		958	0		359	2557	
2002	..	..	488	386	0		1034	0		298	2682	
2003	..	..	532	460	0		1449	0		273	3524	14
2004	..	20	685	470	0		1591	0		310	4526	14
2005	..	137	879	455	0		848	0		409	5475	40
2006	..	217	1055	489	0		965	774		435	5564	100
2007	..	322	1856	549	2557		287	876		481	7023	132
2008	0	337	2724	720	3139		319	941		1576	7804	131
2009	670	366	6195	935	4383		247	1108		1618	10257	285
2010	688	..	6465	1086	4836		307	1098		2147	12599	337
2011	453	..	5000	1378	5544		293	1101		1823	14950	403
2012	373	..	5894	1296	5723		385	1089		1930	17134	459
Sudan												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..				0						14	
2002	..				0						14	
2003	..				0						3	1
2004	..				0						3	172
2005	..				0						3	352
2006	..				0						3	497
2007	..				-2						0	575
2008	0				46						0	528
2009	0				47						0	564
2010	..				45						0	613
2011	-5				42						0	1 526
2012	-5				0						0	1 237
Iran												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001			0	33	0	4	0				0	
2002			1483	43	0	5	0				0	
2003			567	61	0	5	0				0	22
2004			1132	104	0	5	0				..	47
2005			468	136	0	5	0				..	56
2006			544	278	0	4	0				..	111
2007			1036	318	704	5	0				2	122
2008			1042	568	951	6	454				1	94
2009			605	723	1213	6	378				-1	218
2010			462	740	437	7	335				-1	715
2011			320	804	1064	7	337				-1	1 352
2012			409	..	0	7	356				-1	2 070
Saudi Arabia												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..		421	106	0	805	244			134	3570	
2002	..		542	149	0	817	936			136	4930	
2003	..		706	116	0	802	1310			196	3140	-
2004	..		943	154	0	856	1648			188	3657	2
2005	..		1068	182	0	1433	1847			135	3830	58
2006	..		1424	245	0	1753	2334			258	4410	273
2007	..		1708	405	451	2565	2675			132	5012	404
2008	0		1994	586	668	3463	2826			575	5126	621
2009	153		1978	733	1142	3653	2719			647	7530	711
2010	249		2332	795	2483	3908	3195			553	7436	761
2011	387		2502	923	5155	4008	2364			864	8250	883
2012	274		2804	..	0	3799	2028			1037	9692	1 206

Table 1: Continued

Turkey												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..	411	907	1392	0		850	0	0	602	1641	
2002	..	424	1178	1675	0		1176	0	..	752	1869	
2003	..	521	1622	3332	0		1796	0	1252	913	2213	2
2004	..	631	1877	4611	0		1444	0	1814	1238	2682	3
2005	..	802	2829	4679	0		1883	405	1885	1605	2563	4
2006	..	967	4332	5622	0		2033	623	2914	1536	3141	10
2007	..	1507	4472	8490	2642		5570	2170	..	2346	5584	12
2008	0	1386	5635	7963	1906		5505	2111	..	2994	4542	22
2009	4459	1706	6911	8841	3917		5241	2623	1827	3016	3675	386
2010	4653	..	8887	9842	3877		4914	3236	1937	2943	4155	404
2011	4455	..	4661	9681	5031		5105	7524	1742	2819	4851	406
2012	2471	..	5138	11916	6436		5175	8599	2306	2871	6028	503
UAE												
	Belgium	Canada	France	Germany	Italy	Japan	Nether.	Spain	Sweden	Switzer.	USA	China
2001	..	45	559	196	0	13	94			195	834	
2002	..	3	1296	220	0	43	211			303	1087	
2003	..	2	769	330	0	44	282			506	1934	31
2004	..	2	1718	331	0	39	272			465	2962	47
2005	..	3	1825	488	0	184	257			432	2285	145
2006	..	118	2463	793	0	183	150			551	2670	145
2007	..	66	2594	1078	851	252	236			300	2967	234
2008	0	0	3987	1709	1695	302	519			8290	3337	376
2009	311	67	4029	1889	2253	338	635			6917	4118	440
2010	1366	..	4287	2182	3078	377	1078			4583	4935	764
2011	929	..	10937	2532	4426	409	865			7724	5864	1 175
2012	950	..	11322	..	0	328	530			9770	7826	1 337

Note: * None of these countries appeared in the UK's list of FDI outstocks recipients

Source: Data from UNCTAD. Authors' compilation and presentation

Table 2: Variance Inflation Factor Test* after col.(1)

Variable	VIF	1/VIF
lbrp (t-1)	8.64	0.115777
rlaw (t-1)	7.06	0.141681
agglom (t-1)	4.4	0.227369
openness (t-1)	4.3	0.23256
techx (t-1)	3.53	0.283181
Rexp (t-1)	3.36	0.297889
Rimp (t-1)	2.78	0.3598
dist (t-1)	2.5	0.40062
tenfcnr (t-1)	2.33	0.429147
fuelx (t-1)	2.3	0.434364
corptax (t-1)	2.04	0.489761
oremetx (t-1)	1.76	0.567209
infl (t-1)	1.63	0.611938
ggdp (t-1)	1.33	0.753407
Mean VIF	3.43	

Notes: * for both flows and stocks

Table 3: Breusch and Pagan Lagrangian Multiplier Test for Random Effects

Rfdifflows [cnum,t] = Xb + u[cnum] + e[cnum,t]		
Estimated results:		
	var	sd = sqrt(Var)
Rfdifflows	3.16E+15	5.62E+07
e	4.88E+14	2.21E+07
u	0	0
Test: Var(u) = 0		
chi2(1)	=	0.00
Prob > chi2	=	1.0000

Table 4: Breusch and Pagan Lagrangian Multiplier Test for Random Effects

Rfdistocks [cnum,t] = Xb + u[cnum] + e[cnum,t]		
Estimated results:		
	var	sd = sqrt(Var)
Rfdistocks	9.24E+16	3.04E+08
e	1.35E+16	1.16E+08
u	0	0
Test: Var(u) = 0		
chi2(1)	=	0.00
Prob > chi2	=	1.0000

Table 5: Variance Inflation Factor Test after col.(4) of Table 9

Variable	VIF	1/VIF
lbrp (t-1)	8.17	0.122383
rlaw (t-1)	6.81	0.146815
Rexp (t-1)	3.31	0.301973
openness (t-1)	3.04	0.329334
Rimp (t-1)	2.83	0.352999
techx (t-1)	2.66	0.376436
Rfdifflows (t-1)	2.6	0.384064
dist (t-1)	2.44	0.409176
tenfcnr (t-1)	2.36	0.423963
fuelx (t-1)	2.12	0.470726
corptax (t-1)	1.98	0.506089
oremetx (t-1)	1.79	0.557593
infl (t-1)	1.62	0.616438
ggdp (t-1)	1.34	0.745143
Mean VIF	3.08	

Table 6: Variance Inflation Factor Test after col.(4) of Table 10

Variable	VIF	1/VIF
lbrp (t-1)	8.27	0.120892
rlaw (t-1)	6.89	0.145224
Rexp (t-1)	3.49	0.286345
openness (t-1)	3.17	0.315356
fdistocks (t-1)	2.94	0.340309
Rimp (t-1)	2.86	0.34991
techx (t-1)	2.69	0.371559
dist (t-1)	2.48	0.403769
tenfcnr (t-1)	2.4	0.41644
fuelx (t-1)	2.13	0.4685
corptax (t-1)	2	0.501151
oremetx (t-1)	1.81	0.553359
infl (t-1)	1.62	0.616459
ggdp (t-1)	1.33	0.750062
Mean VIF	3.14	

Table 7: Results for Host Country Determinants of Chinese OFDI flows from 2003 to 2012

(1) POLS			(2) REs			(3) POLS (R. std.err.)			(4) POLS (R. std.err. & lag.dep.)			(5) POLS (R. std.err., lag.dep., and inter.)
	Coef. Std. Err.		Coef. Std. Err.		Coef. R.Std.Err.		Coef. R.Std.Err.		Coef. R.Std.Err.		Coef. R.Std.Err.	
Rfdiflows (t-1)							0.8807088 ***		0.8668473 ***			
							0.1025145		0.1028799			
ggdp (t-1)	-831692.1 502824		-831692.1 502824		-831692.1 491447.2		-53006.82 143846.5		-72399.09 143802.3			
openness (t-1)	4.76E+07 *** 1.02E+07		4.76E+07 *** 1.02E+07		4.76E+07 ** 1.75E+07		2.32E+07 * 1.07E+07		2.39E+07 * 1.09E+07			
fuelx (t-1)	-1.28E+07 7932915		-1.28E+07 7932915		-1.28E+07 ** 5645432		-7761283 4272286		-8322426 4374946			
oremetx (t-1)	5.46E+07 *** 1.66E+07		5.46E+07 *** 1.66E+07		5.46E+07 ** 1.97E+07		1.67E+07 ** 7105630		2.41E+07 ** 9795354			
lbrp (t-1)	973.9467 *** 281.188		973.9467 *** 281.188		973.9467 *** 343.4175		394.7242 * 177.7401		373.8035 * 173.2312			
techx (t-1)	-9.74E+07 ** 3.50E+07		-9.74E+07 *** 3.50E+07		-9.74E+07 ** 3.88E+07		-5.96E+07 3.09E+07		-5.17E+07 2.98E+07			
infl (t-1)	115772.5 231224.3		115772.5 231224.3		115772.5 118000.9		35290.5 54154.82		45024.66 52076.86			
rlaw (t-1)	-1.28E+07 *** 4061325		-1.28E+07 *** 4061325		-1.28E+07 ** 4771645		-4715817 * 2225297		-5983368 ** 2544311			
dist (t-1)	-1876.784 ** 676.0454		-1876.784 ** 676.0454		-1876.784 ** 761.5234		-806.6166 * 383.1003		-847.2833 * 389.8121			
Rimp (t-1)	-0.0003384 *** 0.0000913		-0.0003384 *** 0.0000913		-0.0003384 ** 0.0001323		-0.0001226 * 0.0000575		-0.0001458 ** 0.0000642			
Rexp (t-1)	0.0004672 *** 0.0000656		0.0004672 *** 0.0000656		0.0004672 ** 0.0001853		0.0001921 ** 0.0000836		0.0002097 ** 0.0000887			
tenfcnr (t-1)	43300.69 *** 14278.32		43300.69 *** 14278.32		43300.69 ** 17132.15		13798.07 * 6297.135		14419.88 * 6466.69			
corptax (t-1)	2.91E+07 * 1.32E+07		2.91E+07 * 1.32E+07		2.91E+07 ** 1.25E+07		1.38E+07 * 6706672		1.36E+07 * 6636071			
agglom (t-1)	1.74E+08 *** 3.40E+07		1.74E+08 *** 3.40E+07		1.74E+08 1.28E+08							
rlaw_oremetx(t-1)									2.13E+07 *			
									1.05E+07			
_cons	-5.26E+07 *** 1.42E+07		-5.26E+07 *** 1.42E+07		-5.26E+07 ** 2.02E+07		-2.00E+07 ** 8854219		-2.04E+07 ** 8942274			
No. of Obs.	297		297		297		297		297			
Adj. R2	0.7059		No. of groups = 33 R2 overall =0.7198		R2= 0.7198		R2=0.9082		R2= 0.9091			

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively.

Table 8: Results for host country determinants of Chinese OFDI *stocks* from 2003 to 2012

(1) POLs	(2)		(3)		(4)		(5)	
	REs		POLs (R. std.err.)		POLs (R. std.err. & lag.dep.)		POLs (R. std.err., lag.dep., and inter.)	
	Coef. Std. Err.	Coef. Std. Err.	Coef. R.Std.Err.	Coef. R.Std.Err.	Coef. R.Std.Err.	Coef. R.Std.Err.	Coef. R.Std.Err.	Coef. R.Std.Err.
Rfdistocks (t-1)					1.147348 ***		1.14396 ***	
					0.053638		0.053969	
ggdp (t-1)	-3993796	-3993796	-3993796		-239867.2		-259112.9	
	2680833	2680833	2287693		319520.8		319738.4	
openness (t-1)	2.49E+08 ***	2.49E+08 ***	2.49E+08 **		4.22E+07 *		4.31E+07 *	
	5.44E+07	5.44E+07	9.73E+07		2.07E+07		2.08E+07	
		-						
fuelx (t-1)	-6.32E+07	6.32E+07	-6.32E+07 *		-1.52E+07		-1.59E+07	
	4.23E+07	4.23E+07	2.94E+07		8012351		8133202	
oremetx (t-1)	2.97E+08 ***	2.97E+08 ***	2.97E+08 **		2.34E+07 *		3.22E+07 **	
	8.82E+07	8.82E+07	1.16E+08		1.08E+07		1.30E+07	
lbrp (t-1)	5179.402 ***	5179.402 ***	5179.402 **		712.0632 *		689.1464 *	
	1499.169	1499.169	1955.983		318.8919		313.7198	
		-						
techx (t-1)	-4.66E+08 **	4.66E+08 **	-4.66E+08 **		-1.21E+08 *		-1.12E+08	
	1.87E+08	1.87E+08	2.02E+08		6.05E+07		5.90E+07	
infl (t-1)	516343.9	516343.9	516343.9		-42665.54		-30886.82	
	1232785	1232785	682929.1		121948		117351.3	
		-						
rlaw (t-1)	-7.07E+07 ***	7.07E+07 ***	-7.07E+07 **		-8487262 *		-1.00E+07 *	
	2.17E+07	2.17E+07	2.68E+07		4194447		4540873	
dist (t-1)	-10252.02 ***	-10252.02 ***	-10252.02 **		-1086.752		-1140.923	
	3604.372	3604.372	4416.097		579.61		589.0857	
		-						
Rimp (t-1)	-0.0017539 ***	0.0017539 ***	0.0017539 **		-0.0001823 *		-0.0002102 **	
	0.0004867	0.0004867	0.0007531		0.0000847		0.0000933	
Rexp (t-1)	0.0024663 ***	0.0024663 ***	0.0024663 **		0.0003029 **		0.0003248 **	
	0.0003499	0.0003499	0.0010522		0.0001289		0.0001356	
tenfcnr (t-1)	261632.1 ***	261632.1 ***	261632.1 **		13387.85		14291.95	
	76125.62	76125.62	106417.8		8654.308		8887.082	
corptax (t-1)	1.58E+08 *	1.58E+08 **	1.58E+08 *		2.02E+07		2.01E+07	
	7.04E+07	7.04E+07	7.22E+07		1.09E+07		1.08E+07	
agglom (t-1)	1.02E+09 ***	1.02E+09 ***	1.02E+09					
	1.81E+08	1.81E+08	5.94E+08					
rlaw_oremetx (t-1)							2.52E+07 **	
							9825980	
		-						
_cons	-3.05E+08 ***	3.05E+08 ***	-3.05E+08 **		-2.71E+07		-2.77E+07 *	
	7.58E+07	7.58E+07	1.23E+08		1.38E+07		1.39E+07	
No. of Obs.	297	297	297		297		297	
Adj. R2	0.7143	No.of groups= 33	R2=0.7279		R2=0.9917		R2=0.9917	
		R2						
		overall=0.7279						

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively.

offshore																	-280280.5			
																	2241655			
_cons	-2.08E+07	**	-2.23E+07	**	-1.95E+07	**	-2.09E+07	**	-1.57E+07	*	-2.74E+07	**	-2.53E+07	**	-1.52E+07	*	-1.79E+07	*	-2.00E+07	**
	9073009		9942004		8625546		8869876		7537849		1.17E+07		1.06E+07		7286909		8030199		8868986	
No. of Obs.	297		297		297		297		297		297		297		297		297		297	
R2	0.9084		0.9085		0.9084		0.9082		0.9083		0.909		0.9084		0.9086		0.9084		0.9082	

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively. 3) mena includes: Algeria, Egypt, Iran, Saudi Arabia, Sudan, Turkey and United Arab Emirates (UAE). 4) Africa includes: Nigeria, South Africa and Zambia. 5) Africa2 includes: Algeria, Egypt, Nigeria, South Africa, Sudan, and Zambia. 6) Asia includes: Cambodia, Hong Kong, Indonesia, Japan, Kazakhstan, South Korea, Pakistan, Russia, Singapore, Thailand, and Vietnam. 7) Asia 2 includes: Cambodia, Hong Kong, Indonesia, Iran, Japan, Kazakhstan, South Korea, Pakistan, Russia, Saudi Arabia, Singapore, Thailand, Turkey, UAE, and Vietnam. 8) E_SE_Asia includes: Cambodia, Hong Kong, Indonesia, Japan, South Korea, Singapore, Thailand, and Vietnam. 9) E_SE_Asia2 includes: Cambodia, Hong Kong, Indonesia, Japan, South Korea, Singapore, Thailand, and Vietnam in addition to Kazakhstan and Russia. 10) LatinAm includes: Argentina, Brazil, and Venezuela. 11) EU_NA_AUS includes: France, Germany, Luxembourg, Netherlands, Sweden, UK, Canada, USA, and Australia. 12) Offshore includes: Hong Kong, Luxembourg, Singapore and UAE. 13) All other regional dummies were tried when the dependent variable was Rfdistocks but all their coefficients were insignificant and so results are not shown.

Table 9.1: Results for Host Country Determinants of Chinese OFDI Stocks from 2003 to 2012 with Regional Dummies Using POLS with Robust Std.errors

	Rfdistocks			Rfdistocks	
	Coef.	R. Std. Err.		Coef.	R. Std. Err.
Rfdistocks (t-1)	1.14667		***	1.14414	***
	0.05391			0.05444	
ggdp (t-1)	-241010.8			-256136.4	
	315937.6			324338.1	
openness (t-1)	4.25E+07		*	3.63E+07	*
	2.09E+07			1.81E+07	
fuelx (t-1)	-1.30E+07			-8770464	
	7144871			5352775	
oremetx (t-1)	2.32E+07		*	3.21E+07	**
	1.07E+07			1.42E+07	
lbrp (t-1)	726.95		*	878.49	*
	325.35			392.76	
techx (t-1)	-1.24E+08		*	-1.29E+08	*
	6.17E+07			6.41E+07	
infl (t-1)	-50231.3			-17622.22	
	119875			118984.8	
rlaw (t-1)	-8410897		*	-7675463	*
	4171383			3848287	
dist (t-1)	-1184.92			-819.3882	
	621.8287			472.6006	
Rimp (t-1)	-0.00018		*	-0.00025	**
	0.00008			0.00011	
Rexp (t-1)	0.00030		**	0.00030	**
	0.00013			0.00013	
tenfcnr (t-1)	16846.87			20062.88	
	10016.25			11207.34	
corptax (t-1)	2.04E+07			2.08E+07	
	1.09E+07			1.10E+07	
mena	-3670599				
	2190116				
E_SE_Asia				1.38E+07	*
				6628689	
_cons	-2.82E+07		*	-3.94E+07	*
	1.42E+07			1.90E+07	
No. of Obs.	297			297	
R2	0.9917			0.9917	

Table 10: Results for Host Country Determinants of Chinese OFDI flows from 2003 to 2012 with Different MENA Dummies Using POLS with Robust Std.errors

	Rfdifflows			Rfdifflows	
	Coef.	R. Std. Err.		Coef.	R. Std. Err.
Rfdifflows (t-1)	0.878765		***	0.8804582	***
	0.1029869			0.1026951	
ggdp (t-1)	-68910.52			-45764.54	
	142860.2			144512.1	
openness (t-1)	2.36E+07		*	2.31E+07	*
	1.09E+07			1.07E+07	
fuelx (t-1)	-5584243			-7986940	
	3885831			4375022	
oremetx (t-1)	1.67E+07		**	1.66E+07	**
	7057467			7085183	
lbrp (t-1)	396.0171		*	399.6538	*
	178.117			179.9231	
techx (t-1)	-6.06E+07			-6.00E+07	
	3.13E+07			3.11E+07	
infl (t-1)	24512.5			37690.35	
	52106.49			54489.84	
rlaw (t-1)	-4614863		*	-4733448	*
	2206226			2235810	
dist (t-1)	-836.1519		*	-829.4545	*
	391.1981			393.1031	
Rimp (t-1)	-0.0001207		*	-0.000124	*
	0.0000572			0.0000581	
Rexp (t-1)	0.000192		**	0.0001919	**
	0.0000835			0.0000836	
tenfcnr (t-1)	15096.44		**	14479.95	*
	6602.092			6636.744	
corptax (t-1)	1.36E+07		*	1.40E+07	*
	6647304			6770113	
mena_energyx	-2867143		♣		
	1473799				
mena_nonenergyx				-1425435	
				1109298	
_cons	-2.06E+07		**	-2.02E+07	**
	8981983			8923032	
No. of Obs.	297			297	
R2	0.9083			0.9082	

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively. 3) mena_energyx includes: Algeria, Iran, Saudi Arabia, Sudan and United Arab Emirates (UAE). 4) mena_nonenergyx includes: Egypt and Turkey. 5) ♣ the variable is significant at 10.6%

Table 11: Results for Host Country Determinants of Chinese OFDI Flows from 2003 to 2012 with mena, mena_energyx, and mena_eng_highm Interaction Terms Using POLS with Robust Std. Errors

	Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.	
Rfdiflows (t-1)	0.8745753 0.1040721	***	0.8777299 0.1033772	***	0.8754549 0.1040444	***	0.8750602 0.1040095	***	0.8794016 0.1029285	***	0.8770999 0.1035352	***	0.8759738 0.1040013	***	0.8762501 0.1039557	***	0.8760516 0.1039973	***
ggdp (t-1)	-77759.02 141826.2		-41486.09 140595.2		-79234.37 143491.4		-85353.86 143002		-68986.81 144542.8		-58377.95 140562.9		-81671.74 144284.3		-60211.63 140476.8		-80136.17 144094.3	
openness (t-1)	2.46E+07 1.13E+07	*	2.36E+07 1.09E+07	*	2.46E+07 1.14E+07	*	2.47E+07 1.14E+07	*	2.33E+07 1.08E+07	*	2.42E+07 1.11E+07	*	2.46E+07 1.14E+07	*	2.46E+07 1.14E+07	*	2.46E+07 1.14E+07	*
fuelx (t-1)	-4824156 3279719		-6643820 3865039		-6676191 3845939		-4655249 3252738		-6894726 4031009		-5429581 3514259		-6646099 3823687		-6604596 3797672		-6764976 3866283	
oremetx (t-1)	1.54E+07 6644839	**	1.58E+07 6809272	**	1.44E+07 6454213	*	1.56E+07 6708600	**	1.70E+07 7168800	**	1.61E+07 6878867	**	1.45E+07 6484693	*	1.42E+07 6440554	*	1.44E+07 6475764	*
lbrp (t-1)	393.3846 177.3083	*	419.6281 187.341	*	390.8599 176.3168	*	387.7761 175.3086	*	397.5731 178.8945	*	414.7617 184.9604	*	387.4163 175.0174	*	394.5184 177.5719	*	386.3041 174.624	*
techx (t-1)	-6.52E+07 3.34E+07		-6.39E+07 3.28E+07		-6.51E+07 3.35E+07		-6.44E+07 3.30E+07		-6.00E+07 3.11E+07		-6.34E+07 3.26E+07		-6.49E+07 3.35E+07		-6.52E+07 3.37E+07		-6.49E+07 3.35E+07	
infl (t-1)	27510.46 48464.41		34093.12 51064.75		36691.69 49173.22		25200.87 48753.93		36453.62 52042.56		28473.55 50403.44		35107.86 49224.95		35087.08 48825.56		34724.3 49563.27	
rlaw (t-1)	-4279126 2093140	*	-4720691 2229185	*	-4327412 2095869	*	-4269932 2090192	*	-4725755 2230150	*	-4632983 2199085	*	-4333599 2095633	*	-4334165 2094201	*	-4320223 2091114	*
dist (t-1)	-826.5329 389.2172	*	-851.9134 399.1359	*	-743.1742 364.9673	*	-801.5873 381.5228	*	-843.6134 396.8741	*	-816.4293 386.9484	*	-731.1404 362.1489	*	-720.8512 360.0043	*	-724.8441 360.6135	*
Rimp (t-1)	-0.000112 0.0000549	*	-0.000118 0.0000563	*	-0.000108 0.0000541	*	-0.000111 0.0000548	*	-0.000125 0.0000583	*	-0.000113 0.0000554	*	-0.000108 0.0000542	*	-0.000106 0.0000539	*	-0.000108 0.0000541	*
Rexp (t-1)	0.0001888 0.0000822	**	0.0001873 0.000082	**	0.0001877 0.0000819	**	0.0001893 0.0000824	**	0.0001929 0.0000839	**	0.0001872 0.000082	**	0.0001877 0.000082	**	0.000186 0.0000815	**	0.0001876 0.000082	**
tenfcnr (t-1)	16220.51 6987.026	**	15715.62 6874.586	**	15490.13 6768.274	**	15502.56 6759.059	**	13913.96 6333.014	*	15585.65 6783.324	**	14691.86 6523.264	**	15044.59 6628.747	**	14651.55 6512.064	**
corptax (t-1)	1.24E+07 6237697	*	1.29E+07 6398312	*	1.05E+07 5790309		1.23E+07 6215780	*	1.40E+07 6766351	*	1.23E+07 6228651	*	1.06E+07 5820380	*	1.00E+07 5739281	*	1.05E+07 5816277	*
mena_opennessL	-1.14E+07 5112364	*																
mena_lbrpL			-136.3407 67.6315	*														
mena_RexpL					-0.000526 0.0002525	*												
mena_energyx_opennessL							-1.09E+07 5023660	*										
mena_energyx_oremetxL									-1.50E+08 7.52E+07	*								
mena_energyx_lbrpL											-184.1014 89.75799	*						
mena_energyx_RexpL													-0.000500 0.000249	*				
mena_eng_highm_opennessL															-1.06E+07 5501954	□		
mena_eng_highm_RexpL																	-0.000495 0.0002487	*
_cons	-2.05E+07 8987803	**	-2.04E+07 8981824	**	-1.97E+07 8752138	**	-2.04E+07 8960413	**	-1.99E+07 8822354	**	-2.09E+07 9120031	**	-1.94E+07 8659809	*	-1.97E+07 8747499	**	-1.94E+07 8657863	*

No. of Obs.	297	297	297	297	297	297	297	297	297
R2	0.9088	0.9085	0.9087	0.9087	0.9083	0.9085	0.9087	0.9086	0.9086

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively. 3) All other mena and mena + interactions were tried. All their coefficients were insignificant and so results are not shown. 4) □□ the variable is significant at 11%

Table 12: Results for Host Country Determinants of Chinese OFDI Flows from 2003 to 2012 with UAE Interaction Terms Using POLS with Robust Std. Errors

	Coef. R. Std. Err.		Coef. R. Std. Err.		Coef. R. Std. Err.	
Rdfiflows (t-1)	0.8775612 0.1035595	***	0.8780695 0.103436	***	0.8772824 0.1036236	***
ggdp (t-1)	-77850.4 145205.7		-66731.49 143422.9		-87584.79 147248.6	
openness (t-1)	2.40E+07 1.11E+07	*	2.38E+07 1.10E+07	*	2.40E+07 1.11E+07	*
fuelx (t-1)	-7237239 4060577		-7305543 4084741		-7220619 4056230	
oremetx (t-1)	1.50E+07 6609187	**	1.50E+07 6631982	**	1.50E+07 6621986	**
lbrp (t-1)	366.411 168.0322	*	369.3818 168.9188	*	366.2717 168.0148	*
techx (t-1)	-6.26E+07 3.24E+07		-6.24E+07 3.23E+07		-6.26E+07 3.24E+07	
infl (t-1)	38752.01 49986.54		38752.5 50109.9		38683.28 50163.84	
rlaw (t-1)	-4227099 2064790	*	-4259776 2073215	*	-4242127 2069605	*
dist (t-1)	-753.9352 367.6775	*	-758.8383 369.0213	*	-753.7741 367.5738	*
Rimp (t-1)	-0.0001167 0.000056	*	-0.0001173 0.0000561	*	-0.0001167 0.000056	*
Rexp (t-1)	0.0001922 0.0000836	**	0.000192 0.0000836	**	0.0001924 0.0000837	**
tenfcnr (t-1)	13507.85 6217.727	*	13521.07 6223.602	*	13527.67 6220.994	*
corptax (t-1)	1.20E+07 6162780		1.21E+07 6188295		1.20E+07 6172852	
UAE_opennessL	-9692588 4888794	*				
UAE_lbrpL			-284.7267 150.477	□		
UAE_RexpL					-0.0004379 0.0002163	*
_cons	-1.87E+07 8444055	*	-1.88E+07 8470585	*	-1.87E+07 8449374	*
No. of Obs.	297		297		297	
R2	0.9085		0.9085		0.9085	

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively. 3) All other UAE interactions were tried. All their coefficients were insignificant and so results are not shown. 4) □ □ the variable is significant at 12%.

Table 13: Results for Host Country Determinants of Chinese OFDI Flows and Stocks from 2003 to 2012 with MENA Countries' Dummies using POLS with Robust Std.Errors

	Rfdiflows						Rfdistocks					
	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	Coef. R. Std. Err.	
Rfdiflows (t-1)	0.8802221 *** 0.1025177	0.8796509 *** 0.1028208	0.8806122 *** 0.1027008	0.8802796 *** 0.1028277	0.878975 *** 0.1032893	0.8807404 *** 0.102683	Rfdistocks (t-1)	1.147526 *** 0.0536216	1.146518 *** 0.0538032	1.146128 *** 0.0539233		
ggdp (t-1)	-48790.14 144698.2	-69150.65 144977.7	-54668.08 144145	-44321.65 142682.7	-52484.58 145672.4	-50293.47 143673.6	ggdp (t-1)	-245163.1 323355.5	-237764.6 322677.3	-275555.8 322149		
openness (t-1)	2.33E+07 * 1.08E+07	2.35E+07 * 1.09E+07	2.32E+07 * 1.07E+07	2.35E+07 * 1.09E+07	2.37E+07 * 1.10E+07	2.32E+07 * 1.07E+07	openness (t-1)	4.21E+07 * 2.07E+07	4.32E+07 * 2.12E+07	4.36E+07 * 2.13E+07		
fuelx (t-1)	-7746069 4283697	-6750039 4103230	-7630880 4270521	-7492257 4171623	-8630895 4740312	-7899798 4447072	fuelx (t-1)	-1.52E+07 8030815	-1.72E+07 8934810	-1.42E+07 7592584		
oremetx (t-1)	1.70E+07 ** 7242290	1.76E+07 ** 7425855	1.68E+07 ** 7160686	1.65E+07 ** 7059386	1.69E+07 ** 7186038	1.66E+07 ** 7087367	oremetx (t-1)	2.31E+07 * 1.08E+07	2.38E+07 * 1.10E+07	1.99E+07 * 9592136		
lbrp (t-1)	399.0528 * 178.8023	384.3224 * 175.18	396.8916 * 178.8297	408.4396 * 183.5273	396.175 * 178.9514	396.0342 * 179.1738	lbrp (t-1)	706.1593 * 317.7446	715.8587 * 320.9372	657.6923 * 296.7999		
techx (t-1)	-5.91E+07 3.10E+07	-5.94E+07 3.10E+07	-5.95E+07 3.10E+07	-6.06E+07 3.15E+07	-6.19E+07 3.23E+07	-6.00E+07 3.15E+07	techx (t-1)	-1.22E+08 * 6.08E+07	-1.27E+08 * 6.32E+07	-1.27E+08 * 6.34E+07		
infl (t-1)	37821.32 55267.02	25620.67 56532	36894.7 54118.04	32774.13 54524.07	46761 55017.2	35772.28 54010.92	infl (t-1)	-45899.77 123066	-16076.35 117507.6	-36460.55 111096.6		
rlaw (t-1)	-4699989 * 2229458	-4584707 * 2200507	-4739549 * 2235918	-4785898 * 2252083	-4600811 * 2173974	-4732029 * 2241081	rlaw (t-1)	-8502187 * 4204992	-8227569 * 4080018	-7526084 * 3821596		
dist (t-1)	-834.9991 * 392.8933	-844.1229 * 398.2454	-819.2247 * 390.9691	-793.7916 * 381.0272	-807.4318 * 384.5461	-809.619 * 385.7516	dist (t-1)	-1049.746 577.9624	-1090.142 582.9772	-985.5866 540.9764		
Rimp (t-1)	-0.000123 * 0.0000578	-0.000124 * 0.000058	-0.000124 * 0.0000575	-0.000118 * 0.0000565	-0.000111 * 0.0000565	-0.000123 * 0.0000578	Rimp (t-1)	-0.000181 * 0.0000848	-0.000176 * 0.0000823	-0.000171 * 0.0000813		
Rexp (t-1)	0.0001929 ** 0.0000839	0.0001939 ** 0.0000841	0.0001922 ** 0.0000838	0.0001893 ** 0.0000832	0.0001897 ** 0.0000825	0.0001917 ** 0.0000836	Rexp (t-1)	0.0003017 ** 0.000129	0.0002976 ** 0.0001265	0.0003034 ** 0.0001287		
tenfcnr (t-1)	15364.77 * 7450.387	13833.06 * 6302.175	13767.14 * 6301.208	14489.78 * 6488.721	12496.77 * 5894.046	13622.9 * 6322.959	tenfcnr (t-1)	11371.18 9211.635	10420.77 7643.955	12848.61 8446.264		
corptax (t-1)	1.40E+07 * 6774737	1.57E+07 * 7558276	1.39E+07 * 6768076	1.30E+07 * 6563697	1.43E+07 * 6966779	1.38E+07 * 6719837	corptax (t-1)	1.99E+07 1.08E+07	2.15E+07 1.14E+07	1.66E+07 9530514		
Egypt	-2280514 2386426						Egypt	2906152 2973293				
Algeria		-3573942 2115862					Sudan		1.25E+07 * 5945312			
Iran			-984536.9 1090132				UAE			-1.35E+07 * 6523804		
Saudi				-2484671 2107377								
Sudan					5401841 3179107							
Turkey						-839593.2 1616562						
_cons	-2.08E+07 ** 9210134	-2.05E+07 ** 9037242	-2.00E+07 ** 8863105	-2.05E+07 ** 9025756	-1.96E+07 ** 8719789	-1.98E+07 * 8828317	_cons	-2.60E+07 1.38E+07	-2.62E+07 1.35E+07	-2.45E+07 1.28E+07		
No. of Obs.	297	297	297	297	297	297	No. of Obs.	297	297	297		
R2	0.9082	0.9082	0.9082	0.9082	0.9084	0.9082	R2	0.9917	0.9917	0.9917		

Notes: 1) The first numbers represent the coefficients while the numbers beneath them are the robust standard errors. 2) ***, ** & * represent the levels of significance at 1%, 5%, and 10% respectively. 3) All other mena country dummies were tried when the dependent variable was Rfdistocks. 4) All their coefficients were negative but insignificant and so results are not shown.

Appendix 1: The determinants of Chinese OFDI

Name of variable	Definition of variable	Motive behind variable	Expected sign of variable	Source of data
Rfdiflows	Chinese net outflows in constant prices	dependent variable		UNCTAD
Rfdistocks	Chinese net outstocks in constant prices	alternative dependent variable		UNCTAD
ggdp	percentage growth in GDP	market seeking	+	WDI
openness	hosts' ratio of merchandise exports to GDP	market seeking	+	WDI
fuelx	fuel exports as a ratio of merchandise exports	resource seeking	+	WDI
oremex	Ores and metals exports as a ratio of merchandise exports	resource seeking	+	WDI
lbrp	labour productivity per person employed in constant \$	efficiency seeking	+	Total Economy Database (TED)
techx	high technology exports as a ratio of merchandise exports	strategic asset seeking	+	Calculated, raw from WDI
infl	annual inflation percent calculated from the GDP deflator	risk avoidance	-	WDI
rlaw	Rule of law. It takes values from -2.5 (poor governance) to 2.5 (strong governance)	risk avoidance	+	Governance indicators, World Bank
dist	the geographical bilateral distance between the capitals of China and the host country	gravity variable	-	CEPII – Centre D'Etudes Prospectives Et D'Informations Internationales.
Rimp	the \$ value of Chinese imports from the host country in constant prices	trade intensity	ambiguous	Comtrade, UN
Rexp	the \$ value of Chinese exports to the host country in constant prices	trade intensity	+	Comtrade, UN
tenfcnr	time, in days, to enforce contracts in the host country	ease of doing business	-	WDI
corptax	corporate tax rate in host countries	ease of doing business	-	Doing business, World Bank
agglom	the ratio of China's OFDI stock in the host country to total Chinese OFDI stock	previous investment	+	Calculated, raw from UNCTAD

Appendix 2: List of Countries

Algeria	Hong Kong	Pakistan	United Arab Emirates
Argentina	Indonesia	Russia	United Kingdom
Australia	Iran	Saudi Arabia	United States
Brazil	Japan	Singapore	Venezuela
Cambodia	Kazakhstan	South Africa	Viet Nam
Canada	Korea, Republic of	Sudan	Zambia
Egypt	Luxemborg	Sweden	
France	Netherlands	Thailand	
Germany	Nigeria	Turkey	

Appendix 3: Correlation Matrix

	fdiflows	fdistocks	agglom	ggdp	fuelx	oremetx	lbrp	techx	infl	rlaw	dist	imp	exp	openness	tenfcnr	corptax
fdiflows	1															
fdistocks	0.9633	1														
agglom	0.7521	0.7582	1													
ggdp	-0.0585	-0.0408	0.0033	1												
fuelx	-0.1149	-0.1136	-0.1477	0.1954	1											
oremetx	0.0343	0.034	-0.0006	0.1049	-0.2002	1										
lbrp	0.2746	0.2659	0.2938	-0.3576	-0.367	-0.1744	1									
techx	-0.0891	-0.091	-0.1109	-0.1679	-0.4464	-0.19	0.4984	1								
infl	-0.1044	-0.1001	-0.1565	0.2227	0.4328	0.0577	-0.4468	-0.3905	1							
rlaw	0.1809	0.1741	0.2127	-0.374	-0.515	-0.0237	0.8526	0.4636	-0.539	1						
dist	-0.181	-0.1854	-0.2389	-0.0016	0.1191	0.239	-0.0677	-0.268	0.2491	-0.0751	1					
imp	-0.0027	-0.0015	-0.0238	-0.22	-0.2242	-0.0609	0.3802	0.417	-0.2711	0.215	-0.2335	1				
exp	0.5443	0.5536	0.5088	-0.1993	-0.2703	-0.075	0.5538	0.2237	-0.2723	0.3876	-0.1556	0.575	1			
openness	0.5099	0.5168	0.6148	0.1459	-0.0661	-0.1086	0.2375	0.2992	-0.1834	0.2569	-0.4026	-0.1086	0.2493	1		
tenfcnr	-0.1703	-0.1577	-0.239	0.0833	0.2942	0.0407	-0.5472	-0.526	0.2507	-0.4047	0.3399	-0.339	-0.3651	-0.4368	1	
corptax	-0.1439	-0.1446	-0.175	-0.1212	-0.0031	-0.1976	0.0079	-0.0381	0.1242	-0.0829	0.5284	0.0306	-0.0639	-0.4026	0.1797	1