Empirical study on the impact of country risk on FDI in MENA region

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Abstract

This article tries to examines the impact of country risk on FDI in MENA region by applying a Panel Data Analysis, during the period 2000 -2014. The Middle East and North Africa region has experienced a decline in foreign direct investment in recent years due mainly to the deterioration of the environment, and the increasing political risks and instability of the governments in place. The results suggest that political risk is not significant this result could be explaind by the fact that foreign investors tend to accept that, risk is an inherent factor of the region. Foreign investors accept a certain degree of risk, adapt and take the necessary measures, as the profitability remains high. The institutional variables in the MENA appear to be more influential on FDI than political risk.

Keys words: country risk, FDI, MENA

Résumé

Cet article tente d'examiner l'impact du risque pays sur l'IDE dans la région MENA en appliquant une analyse des données de panel, au cours de la période 2000-2014. La région du Moyen-Orient et de l'Afrique du Nord a connu une baisse des investissements directs étrangers au cours des dernières années en raison de la détérioration de l'environnement, du risque politique croissant et de l'instabilité des gouvernements en place. Les résultats suggèrent que le risque politique n'est pas significatif ce résultat pourrait s'expliquer par le fait que les investisseurs étrangers ont tendance à accepter ce risque comme un facteur inhérent à la région. Les investisseurs étrangers acceptent un certain niveau de risque, s'adaptent et prennent les mesures nécessaires, car la rentabilité reste élevée. Les variables institutionnelles dans la région MENA semblent avoir plus d'influence sur l'IDE que le risque politique.

Mots clés : risque pays, IDE, MENA.

الملخص:

تهدف هذه المقالة إلى دراسة تأثير مخاطر البلد على الاستثمار الأجنبي المباشر في منطقة الشرق الأوسط وشمال أفريقيا من خلال تطبيق تحليل البيانات خلال الفترة 2000 -2014. شهدت منطقة الشرق الأوسط وشمال أفريقيا انخفاضا في الاستثمار الأجنبي المباشر في السنوات الأخيرة بسبب تدهور البيئة، وتزايد المخاطر السياسية وعدم استقرار الحكومات القائمة. وتشير النتائج إلى أن المخاطر السياسية ليست كبيرة، ويمكن تفسير هذه النتيجة بكون المستثمرين الأجانب يميلون إلى القبول بأن الخطر يشكل عاملا متأصلا في المنطقة. ويقبل المستثمرون الأجانب درجة معينة من المخاطر، ويتكيفون ويتخذون التدابير اللازمة، حيث أن الربحية لا تزال مرتفعة. ويبدو أن المتغيرات المؤسسية في منطقة الشرق الأوسط وشمال أفريقيا أكثر تأثيرا على الاستثمار الأجنبي المباشر من المخاطر السياسية.

الكلمات المفتاحية: خطر الدولة، الاستثمار الأجنبي المباشر، دول شمال افريقيا والشرق الأوسط.

Introduction

The region of North Africa and the Middle East (MENA) is still an unstable region, since the turbulent events that began in Tunisia in 2011 and which are growing in some countries. The turbulence known as the "Arab uprising" has turned the economies of the entire region upside down. Indeed, the consequences are still developing and have affected all Arab countries, without exception. Some countries have been relatively sheltered thanks of their endowment of natural resources, but quickly weakened by the decline in oil prices. The other countries have seen their macroeconomic indicators deteriorate as a result of the increased instability and political risk in the region.

The MENA region has always had the major disability of being isolated from the global economy and fragmented because of its high tariff barriers and its monopoly markets. It accounts for less than 1% of the global non-hydrocarbon export market, far behind Asia (10%) and Latin America (4%) and less than one-tenth of these exports remain in the region.(1)

This lack of openness explains the slow economic modernization, added to this the lack of technological transfers and especially the low levels of competitiveness, innovation and productivity. The region does not benefit from the positves spinoffs of globalization. The Middle East and North Africa region has experienced a decline in foreign investment in recent years due mainly to the deterioration of the environment, and the increasing political risks and instability of the governments in place.

This article examines the impact of country risk in MENA region by applying a panel data analysis. The aim of the study, is to understand if the poor performance of FDI attractiveness of the region and the constant decline of inwads FDI flux is due to the rise of country risk, or to other underlying factors.

Literature review

Recent studies on FDI determinants have observed that countries endowed with a natural resource such as oil, and gas attracted less FDI than poor-resource countries, (Poelhekke, S. and R. Van der Ploeg 2010, 2013, Tim Rugman 2011). According to the economist 2015, ten years ago resource –poor African economies have attracted more FDI than resource-rich economies in terms of FDI as shared of GDP.

There are FDI studies (Mina (2009) and Gani and Al-Abri (2013)) that focus only on Gulf Cooperation Council (GCC) countries. Few FDI studies have been investigated the FDI flows and institutional quality relationship that focus on the Middle East and North Africa (MENA) region (Mina (2009 and 2012) Mohamed and Sidiropoulos

(1) Malik, Adeel, and Bassem Awadallah, (2013), “The Economics of the Arab Spring,” World Development, Vol. 45 (May), p. 296–313.

2010, Rogmans and Ebbers (2013) and Helmy (2013)).(1) Those studies tries to focus on the determinants of FDI in Arab countries.

The findings from existing literature on the influence of country risk on FDI inflow are mixed. Some studies found that political risk discourages FDI (Asiedu, 2006; Baek & Qian, 2011; Dunning, 1998; Hayakawa, Kimura, & Lee, 2011), while others indicate that high-politica lrisk environments attract FDI (Dar-Hsin, Feng-Shun, & Chun-Da, 2005; Janeba, 2002; Okafor et al., 2011). A third group found an insignificant relationship between political risk and FDI flow (Jadhav, 2012; Wei, 2000). Additionally, others also argue that MNE home-country political risk influences FDI location decisions (Aguiar et al., 2012; Sauvant, Maschek, & McAllister, 2009).(2)

For MENA countries, Méom & Sekkat (2004) pointed that in the past there have been cases in which FDI into the region was sensible to political turmoil. We posit that not only major violence episodes, like terrorism, in a country might negatively affect FDI (Abadie & Gardeazabal, 2008), but also what occurs in neighbor countries. On one hand, major violence episodes from one country might have a negative impact on neighbors by making the region more unstable and less economically attractive. On the other hand, it is also possible that instability in neighbor countries might direct FDI into more stable countries from a region. Paniagua (2013), who considers the determinants of greenfield investments at the world level, finds evidence supporting this last hypothesis.

The results of Ritab Al-Khouri (2015) support the agglomeration effect, which indicates that MENA countries which have already had FDI attract more FDI in the future. Economic risk affects FDI significantly and negatively, whereas trade openness has a significant and positive impact on FDI. Of the political risk factors considered,

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(1) Omar Aziz, Institutional Quality and FDI Infows in Arab Economies, *Finance Research Letters,* (2017), doi: 10.1016/j.frl.2017.10.026

(2) Ellis L. C. Osabutey Chris Okoro, Political Risk and Foreign Direct Investment in Africa: The Case of the Nigerian Telecommunications Industry, **Thunderbird International Business Review,** Volume 57, Issue 6 November/December 2015 Pages 417–429.

three of them, namely, law and order, ethnic tension and internal conflict, significantly affect FDI.

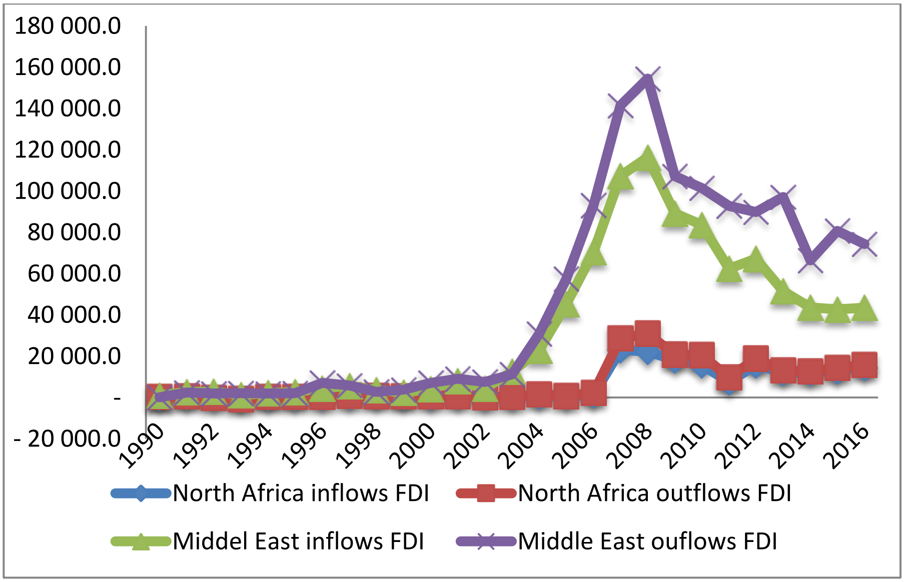
1- FDI and country risk in MENA region

1-

The figure 1 show the inwards and outwards FDI in the region. As we can see, the countries of the Middle East seem to be more attractive than the countries of North Africa. Inward and outward FDI have increased from 2003 to 2006.

Inward and outward FDI are at the same level in North Africa, while outflows are larger in the Middle East than inward flows.

2- Figure n°1 : FDI inflows and FDI outflows in MENA region



Source : UNCTAD data base

Nevertheless, the FDI outflows have declined significantly since 2008, a result of the recession that has characterized several countries in the world, particularly in America and Europe. They rose from US $ 38 079.3 million in 2008 to US $ 30 844.3 million in 2016, a decrease of 26%. We observe the same think for the FDI inflows.

3- Varaibles and empirical approach

From the literature review, it appears that not all studies agree on the significance of the different components of country risk in developing countries. It is worth mentioning that some studies place more emphasis on market (macroeconomic) variables, while others focus on (institutional) political risk variables. For our part, we will take into account these two categories of variables, macroeconomic and institutional factors. In other words, we will take into account in our analysis, both the determinants of FDI but also and above all the component variables of country risk. This will allow us, on the one hand, to study what determines FDI in the region, but also the impact of country risk on incoming FDI flows.

Table n°1 : Variables of the study

Dependant variable	**Abréviations**	**Signification**	**Sources des données**
FDI/GDP	FDIGDP	Foreign direct investment as a percentage of GDP	CNUCED data base
Independent variables			
GDP Per Capita	GDPPC	Measure the wealth held by each inhabitant in a given country	CNUCED data base
Economic Openess	OPEN	The sum of imports and exports as a% of GDP: used as a variable « *market seeking determinant* »	IMF date base
Oil Production	OILPRD	Oil production thousands of barrels a day: measures the factorial endowment in oil	BP data base
Oil price	OILPR	Take into account the average evolution of oil	BP data base

		prices	
Political risk	Political risk	Measures the stability of government, and the probability of bursting internal and external conflicts as well as the risk of terrorism.	World Bank Gouvernance Indicators
Gouvernement effectiveness	GE	Measures the competence and quality of the public services offered, as well as the degree of bureaucracy.	
Controle of corruption	CC	Mesure l'expropriation du pouvoir public des gains privés ; mesure le degré de contrôle de corruption.	
Business freedom	BusF	Measures the opportunity to start and close a business quickly and easily.	Economic Freedom Index developed by Heritage Foundation and Wall Street Journal
Financial freedom	Fin-F	Measure of banking security and independence of the banking sector from state control.	

As the structure of the region's economies is heterogeneous, we have found it necessary to conduct a deeper study on the impact of political instability on exporting and non-oil exporting countries. Indeed, it is assumed that the implications of rising risk in this region will not affect in the same way the countries whose natural resources endowments are appreciable, and the countries which are not well endowed.

The equation to estimate is :

FDI/GDP= β0+ β1 GDPPC +β2 OPEN+ β3 OILPR+ β4 OILPRD+ β5 Political risk + β6 Business freedom + β7 investment freedom+ β8 Control of corruption + β9 Gouvernemental effectiveness +ξit

Our study sample is made up of 18 countries(1) over a period from 2000 to 2014. Thus with N = 18 and T = 15, we will obtain a panel with 270 observations. (NxT = 270). We rely on a panel data analysis. With panel data analysis, different effects on FDI across countries and over time can be investigated, allowing for heterogeneity control. Panel data analysis also provides more, more variability, more degrees of freedom, efficiency and less collinearity among predictor variables (Badi H. Baltagi 2008).

Panel data possess some advantages over cross-sectional or time series data. Panel data can address issues that cannot be addressed by cross-sectional or time-series data alone. Baltagi (2008)(2) highlighted the following advantages of panel data over cross sectional or time-series data:

- (i) Panel data control for heterogeneity, they give more informative data, more variability, less collinearity among the variables, more degrees of freedom and more efficiency
- (ii) They study better, the dynamics of adjustment.
- (iii) They are able to identify and measure effects that are simply not detectable in pure cross-sectional or pure time series data.

(1) Algeria, Bahreïn, Egypt, Iran, Irak, Jordan, Koweït, Libannon, Libya, Maroc, Oman, Qatar, Arabia Saoudia, Syria, Tunisia, UAE Unis, et le Yemen
(2) Baltagi, B. H. (2008). Econometric Analysis of Panel Data. Fourth Edition. John Wiley & Sons Ltd

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- (iv) Panel data models allow us to construct and test more complicated behavioural models than purely cross-sectional or time-series data. (M.I. Ekum and D.A. Farinde, 2014)[(1)].

Basically, the static panel data models can be estimated using :

1. Ordinary Least Square (OLS)
2. Fixed Effects (FE) and
3. Random Effects (RE)

Results and discussion

The results of the regression provide several insights into the influence of FDI variables in the MENA region : The table n°2 shows our empirical results :

4- Table n° 2: Empirical results

5-

Variables	**Model 1** **Random Effect Model**
Constant	*0,0021769* *(0,015465)*
GDPPC	*0,000192* *(0,0001364)*
OILPRD	***-0,0000116*** ***(5,78^{E}06)*****
OILPR	*0,000101*

(1) M.I. Ekum and D.A. Farinde, Application of Panel Data to the Effect of Five (5) World Development Indicators (WDI) on GDP Per Capita of Twenty (20) African Union (AU) Countries (1981-2011), Developing Country Studies www.iiste.org ISSN 2224-607X (Paper) ISSN 2225-0565 (Online) Vol.4, No.21, 2014

	(0,0000636)
OPEN	***0,0000109*** ***(5,56E06)****
Political Risk	*0,0000386* *(0001508)*
Ivestment freedom	-*0,0000179* *(0,0000349)*
Business freedom	***-0,0002997*** ***(0,0001369)****
Gouvernment effectiveness	***0,0002364*** ***(0,0001103)****
Control corruption	***0,0003804*** ***(0,0001436)****
Num of observations	270
F (Fitsher)	2,34
Prob (F statistique)	**0,0001***
R square	0.31
Lagrange Multiplier Breusch and Pagen Test	**0.0000***
Hausman Test	**0,9018**

Source : Own calculataions

Notes : ***Significat at 1%, ** at 5%, * at 10%. Standard errors between ()

The Lagrange Multiplier Breusch and Pagen test is associated with a probability of 0.0000, which indicates the existence of random effects in the model. Since the P value is below 5%. As a result, we assume that the most appropriate model is the random effect model. This finding is further reinforced by the results of the Hausman test, which has a probability of 0.9018, greater than 0.05.

Oil production is significant and correlates with FDI / GDP in model 1. This result confirms Dunning's (1980) assumption that factor endowment attracts FDI flows, and that oil-rich countries tend to attract FDI.

The variable oil price is found to be insignificant, and has no influence on FDI in the MENA. But it is true that this result is not satisfactory, because the variable in itself seems to be insufficient, since FDI flows are not necessarily in the hydrocarbon sector. It would therefore be necessary to restrict the panel to oil exporting OPEC countries to judge the significance of this variable. In addition, it would also be interesting to take into account the variation of oil prices and not taken in absolute terms, this would be a good way to estimate the impact of the change in oil prices on FDI.

Economic openness is also positively significant. This result is similar to the results of Jun & Singh (1995), which explain that an export-oriented economy attracts more FDI than an economy with high international trade barriers.

The freedom of business variable is also significant and influences the dependent variable. This confirms the importance of the freedom of economic actors in a given country.

An improvement in business freedom therefore leads to an increase in FDI. Corruption control also seems to influence FDI in the region. This was predictable. A country with control over corruption tends to attract foreign investors easily. Government effectiveness is also significant. Bureaucracy and the quality of services provided by the State are vectors of attractiveness of FDI in the MENA. A country with effective government in its decision-making will be attracted to FDI flows

However, it is not expected to find that political risk is not a determining factor in the region. It is true that we expected a result contrary to that one. What could possibly explain this result is the fact that foreign investors tend to accept that, risk is an inherent factor of the region.

In other words, foreign investors accept a certain degree of risk, adapt and take the necessary measures, but continue to invest despite the unstable environment, because profitability remains high. In addition, the governments of the various states tend to grant risk guarantees during periods of high interest, thus reassuring investors.

We can note at this stage, that institutional variables in the MENA appear to be more influential on FDI than political risk. In other words, among the components of country risk, financial risk and economic risk have a greater impact on FDI than political risk.

Conclusion

In this paper we examine the impact of country risk in MENA region. We used a panal data analysis as a methodology of investigation. The problem was asked in the following terms: Is the downward trend of FDI in the MENA region, a direct consequence of the rise in country risk?

Country risk analysis has become an important step for investors who want to invest in foreign countries. Indeed, the country risk analysis allows investors to mitigate their risk exposure and ensure their profitability in the medium and long term. The MENA region is characterized by rising country risk since the Arab uprising of 2011. The unpredictability of events in the region, gives the country risk analysis a fundamental role for not only to investors but also to the leaders of the different states.

Institutional variables in the MENA appear to be more influential on FDI than political risk. In other words, among the components of country risk, financial risk and economic risk have a greater impact on FDI than political risk. The authorities of MENA countries must now aim to correct political, economic and financial dysfunctions, and implement serious institutional reforms to take advantage of their economic openness.

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