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The effects of political and financial risks on foreign direct investments to the MENAT countries

Feyza BALAN
Çanakkale Onsekiz Mart University, Turkey
feyzarica@gmail.com

Abstract. *Political risk and financial risk have important effects on many macroeconomic variables in the economy. Among those macroeconomic variables, foreign direct investment is the crucial one. Foreign investors refrain from investing in the countries with high political and financial instability. However, through knowledge and capital accumulation, foreign direct investment (FDI) is expected to lead to higher growth rate in the host country by promoting the incorporation of new production factors and foreign technologies into the production function of the host country. Therefore, in this study the political and financial determinants of FDI inflows to the Middle East and North Africa and Turkey (MENAT countries) are evaluated using annual dataset from the period 1984 to 2014. Using panel data estimations methods, the results reveal that variables of investment profile, religious tensions, and current account balance are the potential determinants of FDI inflows. The analysis also indicates that a positive investment profile, profits repatriation and payment delays, lower religious tensions and lower risk points of current account are associated with higher volumes of FDI flows into the MENAT countries.*

Keywords: foreign direct investments, political risk, financial risk, panel data.

JEL Classification: C33, F10, P16.

Introduction

According to International Monetary Fund definition, foreign direct investment (FDI) reflects the sum of (i) new equity purchased or acquired by parent companies in overseas firms they are considers controlling (including establishment of new subsidiaries) (ii) reinvestment of earnings by controlled firms, and (iii) intra-company loans from parent companies to controlled firms.

There have been many definitions of FDI. OECD (2014) have defined FDI as an investment by a resident entity in one economy that reflects the objective of obtaining the lasting interest in an enterprise resident in another country. At the same time, Lipsey (2002) adds that FDI brings tangible assets as it consists of finance, intermediate inputs, and capital good, which are important for the development of a host country (Nowicki, 2014).

Enterprise resident in another country. FDI is a more reliable source of capital than portfolio investment. Especially, FDI is one of the fundamental sources of employment generation, technology transfer, and managerial capacity building, and increasing market efficiency in any country (Kamga Wafo, 1998). Moreover, FDI contributes positively to balance of payment; reduce import by producing import substitute products. Finally, FDI helps to reduce poverty and promote economic development/growth of host country.

FDI inflows to the MENA region amounted to an average USD 45 billion in 2013. This represents a 52% decrease compared to 2008, which was a top year for FDI in the region, with USD 93 billion of inflows. In the aftermath of the global economic and financial crisis as well as the political upheavals in several Arab Countries, strong FDI growth started falling in 2009/10. These developments have had a negative spillover effect on the investment attractiveness of the entire region with some investors suspending their operations, downscaling their commitments or withdrawing their investments all-together in some countries (OECD, 2014).

It attracts attention that FDI inflows haven't been equally distributed across MENA countries. For instance, the United Arab Emirates and Saudi Arabia remain the main destinations of FDI inflows in the region, with respectively 22% and 20% of total inflows in 2013. Because these countries have a friendlier business and regulatory environment, access to excellent physical infrastructure and logistics facilities, affluent consumer markets, a sophisticated banking industry, good quality institutions and greater political stability. Egypt has been the third largest FDI recipient, benefitting from 12% of total inflows in 2013. Morocco, Iraq and Kuwait also experienced important increases in FDI inflows between 2008 and 2013 (OECD, 2014).

The main purpose of this paper is to investigate the direct linkages between FDI, political and financial risk in the MENAT countries during the period 1984-2014. More specifically, the effects of investment profile, government stability, military in politics, religious tensions, as political variables and current account and foreign debt as financial variables on FDI are examined.

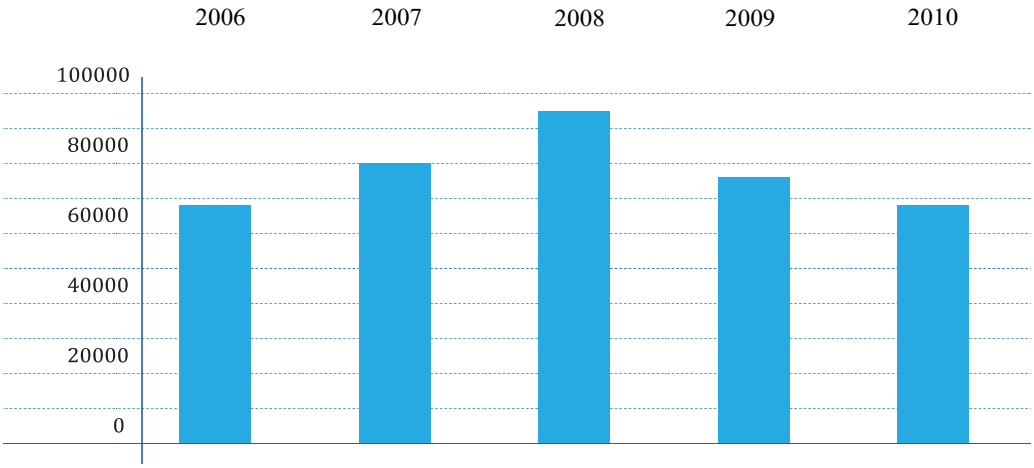
This paper is structured as follows: Theoretical arguments on the relationship between FDI, political and financial risk are offered next. A brief review of literature is presented next. In section 3, the data set and the variables used in the regression are explained. In addition, in section 3, the estimation strategy, the specification of the model and the empirical results are presented by employing various econometric techniques. Finally, section 4 reviews our conclusions.

1. The linkages between FDI, political risk and financial risk

FDIs occur when a firm invests to produce a product in a foreign country or when a firm buys an existing enterprise in a foreign country. Since the 1980s barriers to foreign investment have fallen gradually to leave the place to open, globalized markets. The interest was mainly on flows of FDI originating in advanced economies, but the role of developing countries has increased substantially in recent years.

Especially, FDI inflow to MENA countries occurred a very fast increase since 2001. Total FDI inflows in 2008 attained a new record high of USD 95 billion, which represents 14.4% of total inflows to developing countries, compared to USD 5.6 billion in 2000 that represents 2.2% of FDI inflow to developing countries. This positive picture in FDI inflows to the MENA countries reflects positive economic situations, the progress in the business environment, and the regulatory framework, in addition to the privatization of state-owned enterprises in several countries. However, as can be seen from Figure 1, this positive trend was interrupted by the global economic and financial crisis, with FDI flows decreasing 25% in 2009 and a further 12% in 2010 (Chauvin, 2013).

Figure 1. *MENA Region FDI Inflows (2006-2010) (in millions of current USD)*



Source: UNCTAD (2011), World Investment Report.

Thus, FDI flows are likely to decline temporarily as investors wait for uncertainty to be resolved. In the medium-run, however, growth prospects and FDI inflows are likely to improve, especially if the political changes are associated with more open and accountable governance and more rapid reforms (World Bank, 2011, Barbour et al., 2012).

From the review of the literature, many economic studies for MENA countries suggest that some of the determinants of FDI flows to developing countries, such as the rate of return, infrastructure, and economic fundamentals, are not relevant to explain FDI flows to these countries. Especially, corruption and political instability are the most significant two factors to explain why the MENA region receives less FDI than other developing regions (Batra et al., 2000).

Many researchers and economists would agree that political institutions have important role in economic policy choices. A better understanding of the political driving forces behind the adoption of certain policies may hold the key to a better understanding of what institutional environments help promote the right kind of policies for successful economic performance and economic development.

Theoretically, political instability can be defined as unpredictable demands rise by foreign state or society on the assets, returns or cash available for shareholders from corporation international investment. According to Simmonds and Robock (1973), political risk in international investment exists when discontinuities occur in the business environment, when they are difficult to anticipate, and when they result from political change (Kamga Wafo, 1998).

The high political risk in a country increases uncertainty in the decisions of the institutions, which leads to uncertainty in economic policy. Uncertainty experienced in economic policy adversely affects economic performance over time.

As political risk, financial risk is generally accepted to have been vitally important to the global economy. Both political risk and financial risk represent a great loss of profitable opportunities in the host countries and a serious threat on the attractiveness of FDI in almost all developing countries. Economies with stronger currency show eagerness to invest in the countries which containing weaker currency in order to get maximum advantage (Ali et al., 2014).

Foreign debt, which is accepted as a financial risk indicator, can be considered in the form of additional resources, financial, technical and managerial requirements. Foreign debt can be taken to support the development process and to enhance more conducive environment as well as infrastructure to attract foreign investors as suggested by Ajisafe et al. (2006). Therefore, increase in infrastructural growth may attract foreign investor to invest and eventually foreign investment increases (Ali et al., 2014).

Other financial risk indicator, current account deficit has an important role on economic growth for developing countries. According to Gosh and Ramakrishan (2012), countries that have current account deficit have more fast economic development/growth. When countries has good economic growth trend, they are more likely to get attracted by foreign investor, so this improvement allows foreign capital to increase.

2. Review of prior studies

While the economic determinants of FDI flows to developing countries have been analyzed to a considerable degree, the changes in political and financial risk in host countries have received relatively little attention.

Singh and Jun (1995) empirically analyzed the effects of political risk, business conditions, and various macroeconomic variables on FDI into developing countries. Using a pooled model, Singh and Jun (1995) observed that political risk and business operating conditions have been important determinants of FDI for countries with historically attracted high FDI. For countries that have been relatively low FDI, a key determinant was the degree of sociopolitical instability, which is measured as work hours lost in industrial disputes.

Laura et al. (2002) examined the relationship between the FDI spillovers, financial markets, and economic development, and they observed a positive significant relationship between foreign capital flows and the role of financial markets. In addition, they showed a significant relationship between foreign capital flows and well-developed financial markets.

Chan and Gemayel (2004) empirically studied various factors – including economic, financial and political risk indices of the ICRG – that have influenced FDI inflows into the MENA region. The study indicated that the degree of instability associated with investment risk is a much more critical determinant of foreign investment in the MENA countries than it is for developing countries with lower level investment risk.

Busse and Hefeker (2005) examined the linkages between political risk, institutions and FDI inflows into 83 developing countries for the period 1984-2013. The results showed that government stability, the absence of internal conflict and ethnic tensions, basic democratic rights, ensuring law and order and investment profile are closely associated with FDI.

The study by Daude and Stein (2007) showed that better institutions have overall a positive and economically significant effect on FDI. In particular, the unpredictability of laws, regulations and policies, excessive regulatory burden, government instability and lack of commitment are a major obstacles impeding FDI. Similarly, Clarke and Logan (2008) showed that FDI flows are greatest to countries that have less political risk and better physical infrastructure.

Khrawish and Saim (2010) found out that real GDP growth, budget balance, current account balance, inflation rate as well as exchange rate stability and foreign debt services have significant positive impacts on FDI using multiple regression models in Jordan over the period 1997-2007. Similarly, Al-Eitan (2012) explored the determinants of foreign direct investment inflows into Jordan from 1996 to 2010. The empirical results revealed that economic risk, the price of stock market sectors, inflation and GDP significantly caused inward FDI in Jordan.

Using firm-level data across 77 developing countries, Kinda (2010) showed that constraints in terms of investment climate dampen the flow of FDI. In particular, physical infrastructure problems, financing constraints, and institutional problems impede FDI.

Baek and Qian (2011) used the 12 individual components of the political risk and found that a host economy with good democratic accountability and a good investment profile can attract significantly more FDI in both industrialized and developing countries. On the

other hand, ethnic tensions and military in politics significantly affect FDI in industrialized countries, but not in developing countries. In addition, they observed that better law and order, low religious tension and more stable government are likely to attract more FDI into a host economy.

Payaslioglu and Polat (2013) investigated the exchange rate instability as a financial risk indicator on FDI inflows into Turkey over the period 2004-2012. The findings showed that real exchange rate uncertainty, real exchange rate, inflation, transportation and communication index, policy interest rate are important determinants of FDI.

Abumangosha (2014) investigated empirically the determinants of FDI into the MENA countries. The results indicated that geographical distance, common borders and bilateral investment treaties play important roles in explaining the level of FDI between MENA countries.

Nowicki (2014) studied on the determinants of FDI inflows for Poland. The results showed that trade openness, GDP per capita positively affects FDI inflows to Poland; however labour cost ratio, and control of corruption index negatively affects FDI inflows. In addition, according to the results, there has been no significance between political risk and FDI rate. But, according to the author the reason of this correlation being not significant may be the fact that Foreign Direct Investors making the decision on investing in Poland do not consider this issue anymore as the country is located in Europe, belongs to many international alliances such as NATO and United Nations, all the transition reforms have been implemented smoothly (Nowicki, 2014).

In other study of Kariuki (2015), the factors influencing foreign direct investment flows into African countries were analyzed. Estimation results showed that both political risk and financial risk have a negative but insignificant impact on FDI inflows while economic risk has a negative and significant effect on FDI flows into Africa.

More recently, Dutta and Roy (2017) explored the role of political risk in the association between financial development and FDI inflows into 97 countries. They concluded from their investigations that an efficient financial infrastructure will achieve little in terms of attracting foreign investment, if the country suffers from political instability.

In view of these findings, it is reasonable to believe that the level of FDI inflows to MENA countries is likely to be affected by the degree of political and financial stability.

3. Econometric method

To test the presence of the causal and co-integration relationships among some selected political and financial variables and foreign direct investments, it has been selected a sample of 18 Middle East and North Africa and Turkey (MENAT countries) member countries with Islamic as an official religion (Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) covering the period 1984 to 2014.

3.1. Model and data

In the analyzing of the short-run and long-run relationships between the variables by incorporating a balanced panel from the seventeen leading oil- importing countries this study considers the linear panel data specification as follows:

$$Log(FDI)_{it} = \delta_0 + \delta_1 invest_{it} + \delta_2 religion_{it} + \delta_3 military_{it} + \delta_4 govern_{it} + \delta_5 ca_{it} + \delta_6 fdebt_{it} + u_{it}$$

The variables used in this study are:

Selected some political risk variables: The political risk data are from the International Country Risk Guide (ICRG) (2010). These data are available from 1984 onwards. *Investment profile* is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to very low risk and a score of 0 points to very high risk. Its subcomponents are contract viability/expropriation, profits repatriation and payment delays. *The variable of military in politics* gives information about democratic accountability of a country. Because, the military is not elected by anyone. Therefore, its involvement in politics, even at a peripheral level, is a diminution of democratic accountability. Lower risk ratings indicate a greater degree of military participation in politics and a higher level of political risk. Other political risk variable, *religious tensions* may stem from the domination of society and/or governance by a single religious group. *Government stability* is defined as an assessment both of the government's ability to carry out its declared program, and its ability to stay in office. This risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to very low risk and a score of 0 points to very high risk. Its subcomponents are government unity, legislative strength and popular support.

Selected some financial risk variables: *Current Account as a Percentage of Exports of Goods and Services* is the balance of the current account of the balance of payments for a given year, converted into US dollars at the average exchange rate for that year, is expressed as a percentage of the sum of the estimated total exports of goods and services for that year, converted into US dollars at the average exchange rate for that year. Other financial risk variable, *Foreign Debt as a Percentage of GDP* is the estimated gross foreign debt in a given year, converted into US dollars at the average exchange rate for that year, is expressed as a percentage of the gross domestic product converted into US dollars at the average exchange rate for that year.

Foreign Direct Investment (FDI) net inflows data. The data were collected from World Bank's Worldwide Governance Indicators database.

Table 1 will give us the overall descriptive statistics of all variables in the model for the 18 MENAT member countries.

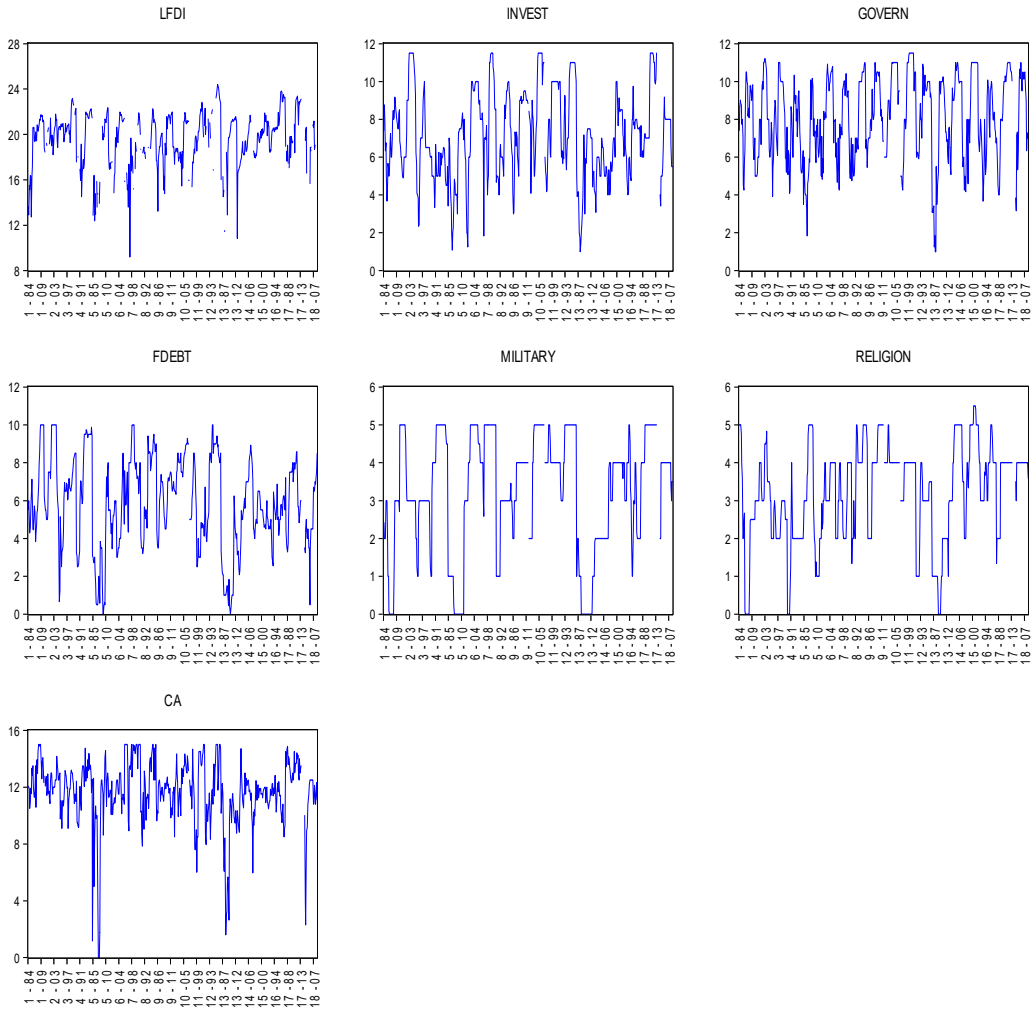
Table 1. *Descriptive statistics*

Statistics	FDI	INVEST	MILITARY	GOVERN	RELIGION	CA	FDEBT
Mean	1.60E+09	7.181679	3.249387	8.115196	3.213235	11.69646	5.865454
Median	2.94E+08	7.000000	4.000000	8.062500	3.500000	11.91667	5.875000
Max.	3.95E+10	11.50000	5.000000	11.50000	5.500000	15.00000	10.00000
Min.	-1.88E+09	1.000000	0.000000	1.000000	0.000000	0.000000	0.000000
Std. Dev.	4.00E+09	2.330994	1.581274	2.212514	1.283855	2.332986	2.396884

Source: Author' estimations.

Figure 2 illustrates the trend of the seven variables for the MENAT countries over the period 1984 to 2014. Table 1 presents the descriptive statistics of these variables. Before it is conducted the causality and co-integration tests between the variables of interest, it is necessary to perform cross-section dependency and unit root tests.

Figure 2. *FDI inflows to the Middle East and North Africa and Turkey and its political, financial risk determinants for 1991-2014*



3.2. Cross-sectional dependence and slope homogeneity tests

A growing body of the panel data literature reveals the conclusion that panel data sets are likely to show substantial cross-sectional dependence, which may arise due to the presence of common shocks and unobserved components. Especially, there are strong interdependencies between cross-sectional units due to globalization and increasing economic and financial integration of countries and financial entities. Hence, it should be necessary to control.

In this study, $CDLM_{BP}$, Lagrange multiplier test statistic, developed by Breusch and Pagan (1980) is used in order to control the presence of cross-sectional dependence among the MENAT countries.

The test can be performed on the following panel data model:

$$y_{it} = \alpha_i + \beta_i' x_{it} + \mu_{it} \text{ for i = 1, 2,…, N; t = 1, 2,…, T} \quad (1)$$

where α_i is unit-specific intercept and bounded on a compact set, x_{it} is a kx1 vector of strictly exogenous regressors, β_i is a kx1 vector of slope coefficients. In the cross-sectional dependence tests considered, the null and the alternative hypotheses of no cross-sectional dependence are as follows:

$H_0 : Cov(\mu_{it,}\mu_{jt}) = 0$ for all t and $i \neq j$

$H_0 : Cov(\mu_{it,}\mu_{jt}) \neq 0$ for some $i \neq j$

The test statistic which developed by Breusch and Pagan (1980) is follows:

$$CDLM_{BP} = T.\sum_{i=1}^{N-1} \sum_{j=i+1}^{N} \hat{\rho}_{ij}^2 \sim \chi^2_{N.(N-1)/2}$$

where $\hat{\rho}_{ij}$ shows the point estimation of the correlation coefficient among the residuals obtained from individual OLS estimations of Equation (1). Under the null hypothesis of no cross-sectional dependency, the $CDLM_{BP}$ test is used when N is fixed and T goes to infinity (T is large relative to N) and it is asymptotically distributed as chi-squared with N.(N-1)/2 degrees of freedom.

When analyzing panel data, the other crucial issue to consider is the testing of slope homogeneity. In the study, it is investigated with Pesaran and Yamagata's (2008) homogeneity tests. Pesaran and Yamagata (2008) proposed a standardized version of Swamy's test of slope homogeneity for panel data models. Pesaran and Yamagata (2008) take into account the equation (1). The null hypothesis and the alternative hypothesis of interest are

$H_0 : \beta_i = \beta$ for all i,

$H_1 : \beta_i \neq \beta_j$ for a non-zero fraction of pairwise slopes for $i \neq j$.

Under the null hypothesis $\tilde{\Delta} \to_d N(0,1)$ as $(N,T) \overset{j}{\to} \infty$ so long as $\sqrt{N}/T^2 \to 0$,

where the standardized dispersion statistic, $\tilde{\Delta}$ is defined by $\tilde{\Delta} = \sqrt{N}.\left(\frac{N^{-1}\tilde{S} - k}{\sqrt{2k}}\right)$ where $\tilde{S}$ is the Swamy's statistic and it is valid for a fixed N and as $T \to \infty$. Pesaran and Yamagata (2008) also proposed the adjusted version of $\tilde{\Delta}$ for the small samples.

$$\tilde{\Delta}_{adj} = \sqrt{N}.\left(\frac{N^{-1}\tilde{S} - E(\tilde{z}_{it})}{\sqrt{Var(\tilde{z}_{it})}}\right)$$

where $E(\tilde{z}_{it}) = k$, $Var(\tilde{z}_{it}) = \frac{2k.(T-k-1)}{T+1}$.

The empirical findings of cross-sectional dependence and slope homogeneity tests are presented in Table 2. It is clear that the null of no cross-sectional dependence across the MENAT countries is strongly rejected from Table 2. Also, the result of the delta test statistic indicate that the slope coefficients are homogeneous.

Table 2. *Results for cross-sectional dependence test*

Variable	CD_{LM} test statistic	prob. value
fdi	371,09***	0,00
invest	343,58***	0,00
religion	352,42***	0,00
military	431,73***	0,00
govern	224,79***	0,00
ca	240,68***	0,00
fdebt	272,24***	0,00
Model	$\tilde{\Delta}_{adj}$ test statistic	prob. value
Equation 1	-3,024	0,99

*** Indicates rejection of the null hypothesis at the 1% level of significance.
Source: Authors' estimations.

3.3. Panel stationarity test

After analyzing cross-section dependency, it must be controlled whether there exists unit root in the series to obtain unbiased estimations. It is well known that power of univariate time series tests for unit root and stationarity is lower than that of panel data tests (Baltagi, 2008). In this paper, we shall use recent panel stationarity test proposed by Hadri and Kurozumi (2012).

Hadri and Kurozumi (2012) proposed the Z_A^{SPC} test statistic and consider the below equation:

$$y_{it} = z_t^{'}\delta_i + f_t.\gamma_i + \varepsilon_{it},\ \varepsilon_{it} = \phi_{i1}.\varepsilon_{it-1} + ... + \phi_{ip}.\varepsilon_{it-p} + v_{it}, \text{ for I =1,..., N, t = 1,..., T}$$

where z'_t is deterministic, $z'_t\delta_i$ is the individual effect while f_t is a one-dimensional unobserved common factor, γ_i is the loading factor, and ε_{it} is the individual-specific error, following an AR(p) process.

For the correction of cross-sectional dependence, for each i, Hadri and Kurozumi (2012) regress y_{it} on $w_t = \left[z'_t, \overline{y}_t, \overline{y}_{t-1}, ..., \overline{y}_{t-p} \right]$ and construct the following test statistic:

$$Z_A = \frac{\sqrt{N}(\overline{ST} - \xi)}{\zeta} \quad \text{where} \quad \overline{ST} = 1/N.\sum_{i=1}^{N} ST_i \quad \text{with} \quad ST_i = \frac{1}{\hat{\sigma}_i^2.T^2}\sum_{t=1}^{T} S^w{}_{it} \quad , \quad \text{where}$$

$S_{it}{}^w = \sum_{s=1}^{t} \hat{\varepsilon}_{is}$, $\hat{\sigma}_i^2$ is the estimator of the long-run variance.

and
$$\begin{cases} \xi = \xi_m = 1/6 \qquad \zeta^2 = \zeta_m{}^2 = 1/45 \qquad \textit{when} \quad z_t = z^m{}_t = 1 \\ \xi = \xi_\tau = 1/15 \quad \zeta^2 = \zeta_\tau{}^2 = 11/6300 \qquad \textit{when} \quad z_t = z^\tau{}_t = [1, t]' \end{cases}$$

Z_A statistic is called as the panel-augmented KPSS test statistic by Hadri and Kurozumi (2012). Because ST is the average of the Kwiatkowski et al. (1992) test statistic across i.

Hadri and Kurozumi (2012) divide the numerator of each ST_i by a consistent estimator of the long-run variance σ_i^2 to correct for serial correlation and estimate the AR(p) model augmented by the lags of $\overline{y}_t$ for each i by the least-squares method,

$$y_{it} = z'_t\hat{\delta}_i + \hat{\varphi}_{i1}.y_{it-1} + ... + \hat{\varphi}_{ip}.y_{it-p} + \hat{\Psi}_{i0}\overline{y}_t + ... + \hat{\Psi}_{ip}\overline{y}_{t-p} + \hat{v}_{it}.$$

Hadri and Kurozumi (2012) obtain the estimator of the long-run variance by

$$\hat{\sigma}^2_{iSPC} = \frac{\hat{\sigma}^2_{vi}}{(1-\hat{\varphi}_i)^2} \text{ where } \hat{\sigma}^2_{vi} = 1/T.\sum_{t=1}^{T}\hat{v}^2_{it} \text{ and } \hat{\varphi}_i = \min\left\{1 - \frac{1}{\sqrt{T}}, \sum_{j=1}^{p}\hat{\varphi}_{ij}\right\}.$$

Finally, Hadri and Kurozumi (2012) create the test statistic of $Z_A{}^{SPC}$ as follows:

$$Z_A{}^{SPC} = \frac{1}{\hat{\sigma}^2_{iSPC}.T^2}\sum_{t=1}^{T}(S_{it}{}^w)^2$$

This test states that under a null hypothesis, series do not contain unit root, while an alternative hypothesis states that series contain unit root. Furthermore, the null distribution of statistic $Z_A{}^{SPC}$ is asymptotically standard normal, while it diverges to infinity under the alternative hypothesis. In addition, this test allowing serial correlation and cross-sectional dependence can be used in which both T < N and T > N.

Table 3 reports the results of the Hadri-Kurozumi (2012) test. The null hypothesis that all the panel series are stationary is not rejected in Table 3, at all the usual levels of significance, indicating that all the series are stationary.

Table 3. *Results for the Hadri-Kurozumi (2012) stationary test*

Constant		
Variable	Z_A^{SPC} Statistic	p-value
fdi	0,96	0,16
invest	-0,98	0,83
religion	0,15	0,43
military	0,34	0,36
govern	-2,43	0,99
ca	-1,91	0,97
fdebt	-2,57	0,99

Source: Authors' estimations.

3.4. Panel non-causality test

In this paper, possible causal relationships are investigated selected political and financial risk variables with foreign direct investments for the MENAT countries via the Dumitrescu and Hurlin (2012)'s non-causality test. The test can also be used when T > N and when N > T. The test takes in below panel data model into account:

$$y_{i,t} = \alpha_i + \sum_{k=1}^{K} \gamma_i^{(k)} y_{i,t-k} + \sum_{k=1}^{K} \beta_i^{(k)} x_{i,t-k} + \varepsilon_{i,t}$$

i = 1,..., N, t = 1,...,T

where $x_i = (x_{i1,...,} x_{iT})'$ and $y_i = (y_{i1,...,} y_{iT})'$ are stationary variables in T periods. $\beta_i = (\beta^{(1)}{}_i, ..., \beta^{(k)}{}_i)'$. It is assumed that lag orders K are identical for all cross-section units of the panel and the panel is balanced. Besides, it is allowed that autoregressive parameters $\gamma_i^{(k)}$ and the regression coefficients slopes $\beta_i^{(k)}$ are constant in time, but vary across groups. The hypotheses of the test are formulated as follows:

$$H_0 : \beta_i = 0 \quad \forall_i = 1, ..., N$$

$$H_1 : \beta_i = 0 \quad \forall_i = 1, ..., N_1$$

$$\beta_i \neq 0 \quad \forall_i = N_1 + 1, ..., N$$

Under the null hypothesis, it is assumed that there is no individual causality relationship from x to y exists. This hypothesis is denoted the Homogeneous Non Causality (HNC) hypothesis. Thus under the null hypothesis of HNC, there is no causal relationship for any of the cross-section units of the panel. The alternative hypothesis is denoted the Heterogeneous Non Causality (HENC) hypothesis. Under the alternative hypothesis, it is assumed that there is a causal relationship from x to y for a subgroup of individuals and

β_i may differ across groups. Dumitrescu and Hurlin (2012) propose the average statistic $W_{N,T}^{HnC}$ associated with the null HNC hypothesis, as follows:

$W_{N,T}^{HnC} = 1/N.\sum_{i=1}^{N} W_{i,T}$, here $W_{i,T}$ denotes the individual Wald statistics.

$Z_{N,T}^{Hnc}$, the standardized average statistic, which has asymptotic distribution, for $T,N \to \infty$ denotes the fact that $T \to \infty$ first and then $N \to \infty$ is as follows: $Z_{N,T}^{Hnc} = \sqrt{N/2K}.(W_{N,T}^{HnC} - K) \to N(0,1)$

Z_N^{HnC}, the standardized average statistic, which has semi-asymptotic distribution, for a fixed T dimension with T f $5+2K$ converges in distribution:

$$Z_N^{HnC} = \sqrt{\frac{N}{2K}}.\sqrt{\frac{T-2K-5}{T-K-3}}.\left[\left(\frac{T-2K-3}{T-2K-1}\right).W_{N,T}^{HnC} - K\right] \underset{N\to\infty}{\overset{d}{\to}} N(0,1)$$

We used the test statistic with asymptotic distribution because of larger T than N in order to investigate possible the causal relationships among the selected variables in this study.

The Dumitrescu and Hurlin (2012) panel non-causality test results are given in Table 4. According to the results illustrated in Table 4, investment profile, religious tensions and current account do Granger cause foreign direct investment net inflows. Also, foreign direct investment net inflows do Granger cause both current account and foreign debt for the MENAT countries.

Table 4. *Results for the Dumitrescu and Hurlin (2012) Panel Granger Non-Causality Test*

Direction of Causality	Z_N^{HnC} Test stat.	p-value
fdi ≠> invest	-1,52	0,12
invest ≠> fdi	3,57***	0,00
fdi ≠> religion	0,49	0,35
religion ≠> fdi	3,13***	0,00
fdi ≠> military	-0,99	0,24
military ≠> fdi	-0,51	0,34
fdi ≠> govern	0,11	0,39
govern ≠> fdi	1,41	0,14
fdi ≠> ca	4,40***	0,00
ca ≠> fdi	2,92***	0,00
fdi ≠> fdebt	2,05**	0,04
fdebt ≠> fdi	0,48	0,35

***, **, * indicate rejection of the null hypothesis at the 1%, 5% and 10% levels of significance, respectively.

Based on existing causal relationships between FDI, invest, religion and ca, we also estimate the relationship between the variables using panel least squares estimator. Before estimating the regression coefficients in (1), it is aimed to diminish the degree of cross-sectional dependence of the three variables. To perform this aim, we used the time-demeaned fdi, invest, religion and ca series, which have the following transformations. In

order to see these transformations, consider a model with a single explanatory variable: for each i,

$$y_{it} = \beta_1 . x_{it} + u_{it}, \quad t = 1, 2,..., T \tag{2}$$

Now, for each i, average this equation over time. We get

$$\overline{y}_{it} = \beta_1 . \overline{x}_{it} + \overline{u}_{it}, \quad t = 1, 2,..., T \tag{3}$$

where

$$\overline{y}_{it} = T^{-1} \sum_{t=1}^{T} y_{it}$$

, and so on.

We substract (3) from (2) for each t, we wind up with

$$\ddot{y}_{it} = \beta_1 . \ddot{x}_{it} + \ddot{u}_{it}, \quad t = 1, 2,..., T \tag{4}$$

where $\ddot{y}_{it} = y_{it} - \overline{y}_{it}$ is the time-demeaned data on y, and similarly for $\ddot{x}_{it}$ and $\ddot{u}_{it}$.

Finally, the equation (4) was estimated by the OLS estimator. The results of panel estimation are summarized in Table 5. According to Table 5, current account risk point, investment profile risk point and religious tensions point have statistically positive effects on foreign direct investment net inflows of the MENAT countries with Islamic as an official religion. From these empirical findings, we can say that a positive investment profile, profits repatriation and payment delays, lower religious tensions and lower risk points of current account are associated with higher volumes of FDI flows into the MENAT countries.

Table 5. *Results for panel least squares method*

Dependent Variable: log(fdi)
Method: Panel Least Squares
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ca	0.153341	0.037510	4.088008***	0.0001
religion	0.248994	0.086866	2.866428***	0.0043
invest	0.431805	0.061064	7.071303***	0.0000
c	13.80520	0.510709	27.03146***	0.0000

*** indicates rejection of the null hypothesis at the 1% level of significance.

It is also found that the estimated country-specific effects on foreign direct investment net inflows are negative for most of the MENAT countries in the sample as shown in Table 6. Country-specific effects reflect differences in country-specific features of social, cultural, demographic structure, labor markets, tax-benefit systems etc., which are excluded from the regression model. According to Table 6, most of the MENAT countries have negative country-specific effects on FDI. When examining these countries, are Algeria, Bahrain, Iraq, Jordan, Kuwait, Libya, Morocco, Oman, Qatar, Syria, United Arab Emirates and Yemen, it has been seen that there is a quite considerable degree of political instability in these countries.

Table 6. *Country-specific Effects on FDI*

No.	Country	Country-specific effects
1	Algeria	-0.296427
2	Bahrain	-0.504119
3	Egypt	2.166664
4	Iran	1.010129
5	Iraq	-0.641617
6	Jordan	-0.559636
7	Kuwait	-2.620185
8	Libya	-0.377183
9	Morocco	-0.507311
10	Oman	-1.436783
11	Qatar	-0.693224
12	Saudi Arabia	1.686186
13	Sudan	1.167563
14	Syria	-0.436278
15	Tunisia	0.136132
16	Turkey	1.878562
17	United Arab Emirates	-0.082418
18	Yemen	-0.143231

Conclusion

Foreign Direct Investment is currently a fundamental element of economic growth in economies across the world due to the worldwide integration and development. Indeed, since the 1980s barriers to foreign investment have fallen gradually to leave the place to open, globalized markets (Chauvin, 2013).

Foreign direct investments are the most desirable form of capital inflows to emerging and developing countries because they are less susceptible to crises and sudden stops. The goal of this paper was to explore in detail the roles of political and financial risk in the MENAT countries as determinants of foreign direct investment (Busse and Hefeker, 2005).

The need to account for stability in investment risk is particularly important for countries in the MENA region, which historically have a higher level of instability associated with investment risk than developed countries.

Short-term FDI prospects for the MENA region are subject to a variety of risks, due to continued armed conflicts and political and social tensions in a number of countries and modest global and regional growth prospects. Several MENA countries –such as Morocco, Egypt and the United Arab Emirates-- are nevertheless likely to continue to benefit from an upward FDI trend. Policy uncertainty in some Arab Countries in Transition remains a key obstacle to foreign investment, particularly in the non-oil tradable manufacturing and services sectors which play a key role in deepening these countries' integration into world markets. FDI in these sectors also has a significant job creation potential which could lead to ensuing socio-economic and social benefits for the local population (OECD, 2014).

In this study, it was examined the empirical link between political risk, financial risk and FDI using the most recent panel data (1984-2014) of the MENAT countries. The

empirical findings showed that variables of investment profile, religious tensions, and current account balance are the potential determinants of FDI inflows. The analysis also indicates that a positive investment profile, profits repatriation and payment delays, lower religious tensions and lower risk points of current account are associated with higher volumes of FDI flows into the MENAT countries.

Future research could usefully explore the causality of the exchange rate instability, human capital, GDP, trade openness, financial development, policy interest rate and investigate their impact on FDI in the MENAT region.

References

Abumangosha, S., 2014. Determinants of Foreign Direct Investment in MENA Region, Bournemouth University, Doctor of Philosophy Thesis.

Ajisafe, R.A., Nassar, M.L., Fatokun, O., Soile, O.I. and Gidado, O.K., 2006. External debt and foreign private investment in Nigeria: A test for causality, *African Economic and Business Review*, 4(1), pp. 1109-5609.

Al-Eitan, G.N., 2012. A dynamic model for determining inward foreign direct investment in Jordan. The twenty-fifth PhD conference in economics and business, The University of Western Australia, 7th-9th November.

Ali, M., Asfand, Y., Bakhtiyar, K. and Raja, H.A., 2014. Financial Risk and Foreign Direct Investment: Evidence from Pakistan Economy, *International Journal of Business Management and Economic Studies*, Vol. 1, Issue 1, 2014.

Baek, K. and Qian, X., 2011. An Analysis on Political Risks and the Flow of Foreign Direct Investment in Developing and Industrial Economies, *Economics, Management and Financial Markets*, 6(4), pp. 60-91.

Baltagi, B.H., 2008. *Econometric Analysis of Panel Data*. Chichester, Wiley.

Barbour, P., Economou, P., Jensen, N. and Villar, D., 2012. The Arab Spring: How soon will foreign investors return?. Vale Columbia Center on Sustainable International Investment.

Batra, G., Kaufmann, D. and Stone, A., 2000. The Investment Climate around the World: Voices of Firms from the World Business Environment Survey. Technical Report. Washington DC: The World Bank.

Breusch, T.S. and Pagan, A.R., 1980. The Lagrange Multiplier Test and its Applications to Model Specification in Econometrics. *The Review of Economic Studies*, Vol. 47, No. 1, Econometrics Issue, pp. 239-253.

Busse, M. and Hefeker, C., 2007. Political risk, institutions and foreign direct investment, *European Journal of Political Economy*, 23(2), pp. 397-415.

Chan, K.K. and Gemayel, E.R., 2004. Risk Instability and the Pattern of Foreign Direct Investment in the Middle East and North Africa Region, IMF Working Paper Middle East and Central Asia Department.

Chauvin, N. and Depetris. M., 2013. FDI Flows In the MENA Region: Features and Impacts, IEMS Emerging Market Brief, January.

Clarke, R. and Logan, T-M., 2008. Emerging FDI Patterns in the CARICOM Region, *Journal of International Business Research,* Vol. 8, No. 1, January, pp. 16-23.

Daude, C. and Stein, E.O., 2007. The Quality of Institutions and Foreign Direct Investment, *Economics and Politics,* Vol. 19, No. 3, November, pp. 317-344.

Dumitrescu, E.-I. and Hurlin, C., 2012. Testing for Granger non-causality in heterogeneous panels. *Economic Modelling*, 29(4), pp. 1450-1460.

Dutta, N. and Sanjukta, R., 2011. Foreign Direct Investment, Financial Development and Political Risks, *The Journal Of Developing Areas*, Vol. 44, No. 2, Spring, pp. 303-327.

Ghosh, A. and Ramakrishan, U., 2012. Current Account Deficits: Is There a Problem? Retrieved from <http://www.imf.org/external/pubs/ft/fandd/basics/current.htm>

Hadri, K. and Kurozumi, E., 2012. A Simple Panel Stationarity Test in the Presence of Serial Correlation and a Common Factor, *Economics Letters*, 115, pp. 31-34.

Kamga, W. and Guy, L., 1998. Political Risk and Foreign Direct Investment, Faculty of Economics and Statistics University of Konstanz.

Kariuki, C., 2015. The Determinants of Foreign Direct Investment in the African Union, *Journal of Economics, Business and Management*, Vol. 3, No. 3, March 2015.

Khrawish, H.A. and Siam, W.Z., 2010. Determinants of direct foreign investment: Evidence from Jordan, *Business and Economic Horizons*, 1(1), pp. 1-9.

Kinda, T., 2010. Investment Climate and FDI in Developing Countries: Firm-Level Evidence, *World Development,* Vol. 38, No. 4, pp. 498-513.

Kwiatkowski, D., Phillips, P., Schmidt, P. and Shin, Y., 1992. Testing the null hypothesis of stationarity against the alternative of a unit root, *Journal of Econometrics* 54, pp. 159-178.

Laura, A., Areendam, C., Sebnem, K.O. and Selin, S., 2002. FDI Spillovers, Financial Markets, and Economic Development. Working paper, IFM.

Lipsey, R.E., 1999. *The Role of FDI in International Capital Flows*, in M. Feldstein (ed.) International Capital Flows, Chicago: Chicago University Press.

Nowicki, A., 2014. The key determinants of Foreign Direct Investment Inflows to polish market after fall of the Iron Curtain, BA (Hons) International Business Management Bachelor Dissertation Business School University of Wolverhampton.

OECD, 2014. MENA-OECD Investment Programme Draft, Recent FDI Trends in the MENA Region, LAS-OECD Regional Conference and MENA-OECD Regional Investment Working Group.

Payaslioglu, C. and Polat, B., 2013. The Impact of exchange rate uncertainty on FDI inwards into Turkey, International Academic Conference Proceedings, pp. 163-177.

Pesaran, M.H. and Yamagata, T., 2008. Testing slope homogeneity in large panels. Journal of Econometrics 142, pp. 50-93.

PRS Group, 2005. About ICRG: The Political Risk Rating, Internet Posting: <http:// www.icrgonline.com/page.aspx?page=icrgmethods>

PRS Group, 2005. About ICRG: The Financial Risk Rating, Internet Posting: <http:// www.icrgonline.com/page.aspx?page=icrgmethods>

Robock, S.H. and Simmonds, K., 1973. *International Business and Multinational Enterprise,* R. Irwin, Homewood

Singh, H. and Jun, K.W., 1995. Some new evidence on determinants of foreign direct investment in developing countries, World Bank Policy Research Paper 1531, World Bank, Washington D.C.

World Bank, 2011. World Bank Middle East and North Africa Region, Regional Economic Update May 2011, MENA Facing Challenges and Opportunities.