Determinants of foreign direct investments in advanced and emerging economies: a comparative assessment

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Abstract

The paper examines the effects of a set of determinants on FDIs inflow in advanced and emerging economies. We used data from the G7 countries (which represent the advanced economies) and 5 emerging countries (Brazil, India, China, South Africa and Turkey) during 1980 – 2010. Previous empirical research highlights the significant effect of economic growth on inward FDIs, while other determinants such as inflation, trade openness, financial sector development, population growth and infrastructure have been included as significant parameters as well. The OLS method with fixed effects which is used in this paper demonstrates significant differences between the samples. For instance, the findings of our study suggest that GDP growth have a significant effect on growth in advanced economies, while its importance in emerging economies is moderate. Likewise, population growth, trade openness, inflation, fuel exports and financial sector development affect entirely differently the attraction of FDIs in the two examined groups. Infrastructure is the only determinant with positive and significant effect in both samples. Empirical research may be more focused on countries with analogous economic characteristics while policy makers should be more skeptical regarding the elements which constitute the competitive advantage in attracting inward FDIs.

1. **Introductory observations and paper objectives**

The relationship between Foreign Direct Investments and various determinants is thought to be an exceptional interesting but ambiguous field of study for academics, policy makers and management of a Multinational Enterprise. The last examine every economy thoroughly in order to be aware of every potential opportunity or threat, the competitiveness of the market and future perspectives of the candidate country. But the increase of FDIs inflows in emerging and advanced economies has shown that that these countries should be examined more thoroughly. Despite the fact that these sets of countries have totally different economic structure, we opt to compare the differences among them regarding the determinants on FDIs inflows.

In many cases, emerging and advanced economies have adopted certain liberalization programs in order to attract FDIs. For instance, China has developed certain strategies in order to promote inward and outward FDIs. Chinese governments initiated open – door policies from 1970s (Fornes *et al.*, 2010). More precisely, Chinese economy needed economic adjustments in order to follow the growth of the neighbor countries. Since 1957, per capita

GNP had grown at an average rate of 2.5 – 3%, which was well below the average growth of neighboring countries such as Japan and South Korea (Chen *et al.*, 1995). As a result, in 1980s Chinese governments established four special economic zones (SEZ). In 1982, the open up of the Chinese economy was established officially. The significance of these changes can be seen by the fact that until the end of 1981, actual FDIs amounted to $679 million which was equal to 7% of global FDIs inflows of that period. Certain reforms, such as simplifying of joint – venture approval process, magnified the promotion of FDIs inflows. As a result, FDIs inflows mounted at $185 billion in 2010 (World Bank, 2011).

Nevertheless, the competitiveness between countries in attracting FDIs is growing. Every country promotes certain policies in order to be attractive to FDIs inflows. Steep reforms are necessary in enhancing the competitive advantages of an economy. Healthy financial system which can ensure the liquidity of the internal market is one of the fundamental features of every economy. Likewise, the stability of the economic environment, which can be seen by the fluctuation of the inflation, can ensure the long term profitability of the MNEs. Low inflation can ensure the stability of wages and prices. With a stable pricing policy, MNEs are able to calculate their future profits of their activities. For instance, Turkish economy was unstable until the 1980s. Inflation rate peaked at 100%. After the application of the liberalization programs from January 1980, the Turkish economy started to attract FDIs from the advanced economies. The competitive advantage which was exploited was the low wages. Moreover, advanced infrastructure, trade openness of the economy, economic growth and population growth are fundamental determinants of FDI inflows.

In this paper we will examine and compare the effect of selected determinants of FDIs inflows in advanced and emerging countries. Advanced economies are represented by G7 countries (UK, USA, Canada, France, Germany, Italy and Japan), since these countries are the most advanced economies globally. Brazil, China, India, South Africa (BRICS) and Turkey represent the emerging economies. We couldn't include Russia and Indonesia in the sample due to data limitations. We add Turkey to the emerging countries sample, since the country's growth and promotion of FDIs are similar to BRICS (Ilgun *et al.*, 2010). The outcome of our study could influence policy makers to promote certain policies in favor of FDIs. In our study, we could include many other determinants such as level of wages and real exchange rate. The selection of the variables used was based on the availability of integrated data.

The paper is structured as followed: Section 2 analyzes the empirical results of the literature regarding the determinants of Foreign Direct Investments. Section 3 presents the selected data and the implied econometric methodology. Section 4 analyzes the empirical findings of our study, providing thorough arguments for academics, researchers and policy makers. Finally, section 5 includes the conclusion of our study and suggests items for further research.

1. Literature review

Foreign Direct Investments (FDIs) are thought to have an increasingly important role for the host countries and Multi National Enterprises (MNEs) as well. According to the international literature, FDIs are affected by several factors such as inflation, economic growth and openness. However, other variables which were found to be important cannot be ignored. In this section, we demonstrate the role, significance and effect of each determinant

on FDIs taking into account the empirical results of previous research work on FDIs in advanced and emerging economies.

One of the most significant and ambiguous determinants of FDIs is Financial Sector Development which could be defined as the improvement in the quality, quantity and efficiency of the financial system. Financial development depends on the financial structure of the economy and the interaction of many activities, like capital flows and market liquidity, and institutions such as private banks, central banks and non bank financial intermediates. This means that financial development can't be computed and estimated by a single variable - proxy (Al Nasser & Gomez, 2009).

It is suggested that one of the main features of a country's attractiveness is financial sector development. It is addressed that external funding of the local and foreign firms is crucial in every country (Atkin and Glen, 1992). Thus, a strong and developed financial system would contribute positively and significantly in the attractiveness of the host country. MNEs could have the opportunity of ensuring low – cost financing via a rational and developed financial system. Al Nasser and Gomez (2009) supported that FDIs is strongly and positively correlated with private credit offered by the host country's banking sector. Korgaonkar (2012) applied data mining techniques of attribute analysis, association and classification in 78 countries for the period 1980 – 2010 and found a positive and significant relationship between various proxies of financial and banking sector development and FDIs.

On the contrary, evidence support that financial sector development could have a negative effect on inward FDI inflows. MNEs originate from developed economies, where financial sector is more developed. According to this theory, positive or negative correlation between FDIs and financial sector development depends on the maturity of the financial system of the host country. In addition, internal finance of the operations of MNEs in other countries is in common practice. Firms in G7 for example is proved to be independent and financed from their own funds (Atkin and Glen, 1992). Hausmann and Fernandez (2000) also suggested that MNEs tend to promote inward FDIs to countries which have volatile and underdeveloped financial system. The cause of that decision is to avoid unnecessary and avoidable transaction costs with local suppliers.

In addition, financial sector development could have a negative effect on inward FDIs on another aspect. An integrated financial system is secured by providing liquidity insurance. This type of security covers the financial system of financial crises but decreases the liquidity of the market. In other words, an integrated financial system offers limited availability of capital which is negative associated with inward FDIs.

Inflation is also considered as an important and traditional determinant of FDIs. It reflects the consumption rates of an economy but also the potential instability of the political and economic environment of the country. In the earliest case, high consumption rates promote economies of scale, leading to a massive decrease of the production costs and maximizing profits. As Tabsoba (2012) suggests, inflation has a positive and significant effect on inward FDIs in emerging economies and used as a pull factor in attracting inward FDIs.

On the contrary, it is suggested that high inflation rates, which are usually caused by economic and political instability, have a negative effect on inward FDIs. In this case, MNEs, which prefer to promote long – term investments to more stable countries, a negatively affected by high inflation rates. Ahn *et al.* (1998) suggested that countries which did not succeed in reducing inflation rates in moderate levels, tended to be unattractive to MNEs for long – term investments.

Trade openness is also a significant determinant of FDIs but its effect on inward FDIs is inconclusive due to the various trade agreements reduction of tariffs promoted from different sets of countries. Trade openness represents the easiness the country allows exports and imports of goods and services. It is suggested that MNEs which tend to locate their production activities in a host country and export their goods to other neighbor economies would be positive affected by increased openness of the host economy. Seim (2009) supports that market – seeking and efficiency – seeking FDIs are positive affected by greater degree of openness of the host country. Biglaiser and deRouen (2006) also found a positive relationship between openness and inward FDIs in Latin America. But the significance of openness on the dependent variable was found to be very low. Ponce (2006), on the other hand, found that trade openness has a positive and significant effect on inward FDIs in 17 countries of Latin America by using a panel data model with feasible generalized least squares estimators.

On the contrary, evidence support that there is a negative association between openness and inward FDIs. Trade restrictions and high trade costs, which mean limited openness of the host economy, could drive MNEs to promote inward FDIs rather than imports. Asiedu (2002) argues that MNEs which seek to serve local markets may decide to set up subsidiaries in the host country if it is difficult to import their goods in the country.

The existence of natural recourses in a country could be beneficial in attracting inward FDIs under certain circumstances. Natural recourses are thought to be one of the most significant inputs especially in manufacturing industries. Low-cost recourses can be a significant asset for certain economies in a6ttractinf inward FDIs. Asiedu (2006) suggests that African countries with high levels of under soil endowments attract inward FDIs. Kinoshita and Campos (2003) also found that abundance of natural recourses is one of the most significant explanatory variables in attracting inward FDIs in transition economies.

On the contrary, there are evidence that support that there is no link between recourse endowments and inward FDIs. Poelhekke *et al.* (2010) suggests that natural recourses are significantly related only to recourse – seeking FDIs which tend to export the subsoil assets of the host country, effecting negatively the promotion of other kinds of FDIs. Moreover, countries with rich recourse endowments lack of democracy and transparency which are negatively related with all types of inward FDIs. It is supported that lack of macroeconomic stability discourages MNEs to promote long term investments in countries with high recourse endowments (Mlambo and Oshikova, 2001).

Market size and development is also a determinant whose effect on inward FDIs is still under research but most of the researchers conclude that inward FDIs are positively affected by economic growth. Large markets and high GDP growth can promote high consumption rates which could maximize production and minimize costs through economies of scale. Basu

et al. (2003) suggest that there is a positive and significant relationship between inward FDIs and economic growth in 23 developing countries. Culem (1986) also proved that inward FDIs from United Stated to EEC countries are positively significantly related to GDP growth. In this particular study, Generalized Least Squares method is used. Aristotelous and Fountas (1996) have also proved that inward FDIs in European Union are positively affected from market size and GDP growth. Nonnenberg and Mendonca (2004) also state that among the determinants of inward FDIs in emerging economies, GDP growth is a powerful stimulant to the inflow of FDIs.

Another important determinant of inward FDIs is infrastructure in the host economy. It is believed that high quality of infrastructure (roads, telephone lines, internet connection) can minimize transportation and communication costs and could be a strong incentive for MNEs to promote inward FDIs. Cheng and Kwan (2000) used three different proxies in order to capture the effect of infrastructure on inward FDIs in China and by using a dynamic panel regression analysis; they proved that there is a positive relationship between inward FDIs and infrastructure. Bartlett and Ghoshal (1998) also suggested that MNEs depend on high quality of telecommunication which enables them to share information globally. Kok and Arsoy (2009) also proved that infrastructure is the most significant determinant of inward FDIs in emerging countries.

On the contrary, Fung et al. (2005) suggested that infrastructure is less important than economic reforms in attracting inward FDIs in China. In this study it is proved that the economic reforms in China helped to boost inward FDIs whereas infrastructure was not significant.

Population growth is also a crucial factor of attraction of FDIs but the literature on the effect of this determinant on inward FDIs concluded to mixed results. This certain determinant is included as a feature of market size. According to Wadhwa *et al.* (2011), population growth has a negative effect of FDIs. More specifically, in this particular study, population growth is a market seeking factor for FDIs in Developing Asian countries. Panel regression analysis was used and it was supported that there is a negative impact of population growth on FDIs which means that FDIs promoted to these countries are not market seeking.

On the other hand, population growth shows the growth of the number of consumers who need more products in order to cover their needs. If we take into account the GDP growth as well, it could mean that these consumers have increasing consumer potentials. MNEs are able to track the growing needs of a country and decide to promote FDIs. Nunnenkamp (2002) used data from 28 developing countries and suggested that there is a strong positive connection between population growth and FDIs which is stronger than that between GDP and FDIs. In this particular study, FDIs are separated into three broad categories: recourse – seeking, market – seeking and efficiency – seeking FDIs and it is supported that population growth is among the traditional determinants of FDIs which affects positively all three categories.

On the contrary, Sethi *et al.* (2003) found that population growth was insignificant by using data on US FDI in Western Europe and Asia during 1980 – 2000.

3. Data and Methodology
3.1. Data specification

In order to specify the effects of the selected determinants on inward FDIs to countries with different economic level we opt to construct two comparative samples; the first sample consists of 5 developing countries (Brazil, India, China, South Africa and Turkey) while the second one represents the countries of G7 (France, United Kingdom, United States., Germany, Italy, Japan and Canada). We study an extended period of time considering annual data from 1980 to 2010. The database of The World Bank (World Databank) was used in order to collect all the available data both for the examined determinants and growth rates.

To calculate the financial sector development, two different proxies were used since that variable cannot be captured nor calculated by a single measure (Al Nasser *et al.* 2009). These proxies are as follows:

I.   Domestic Credit provided by banking sector (as % of GDP), (Saini *et al.*, 2010) - all credit to various sectors on a gross basis, with the exception of credit to the central government (World Bank).

II. Domestic Credit to private sector (as % of GDP), (Levine *et al.*, 2000) - financial resources provided to the private sector, such as through loans, purchases of no equity securities, trade credits and other accounts receivable (World Bank).

Similarly, in order to capture the effect of economic development on inward FDIs, two different proxies were used. These proxies are the following:

I.   GDP growth (as % of GDP) - Annual percentage growth rate of GDP at market prices based on constant local currency (World Bank).

II.   GDP per capita (current US$) - gross domestic product divided by midyear population (World Bank).

Finally, in order to capture the effect of the level of infrastructure on promotion on inward FDIs, telephone lines per 100 people was used (World Bank).

3.2. Empirical methodology

In our study, we perform a panel data analysis in order to examine the way inward FDIs (INFDI) is affected by several economic and non economic factors, including financial sector development proxies (DOMCR1 and DOMCR2), fuel exports (FEXPORTS), GDP growth (GDPGR), GDP per capita (GDPPC), inflation (INF), population growth (POP), trade openness (OPENNESS) and infrastructure (TLINES). The total number of panel observations is 155 for the emerging economies and 217 for the advanced economies.

Our estimations generally rely on the following panel data regression model

$$INFDI_{it} = \beta_{0i} + \beta_{1i}DOMCR1_{it} + \beta_{2i}DOMCR2_{it} + \beta_{3i}FUELEXPORTS_{it} + \beta_{4i}GDPPC_{it} +$$
$$\beta_{5i}GDPGR_{it} + \beta_{6i}INF_{it} + \beta_{7i}OPENNESS_{it} + \beta_{8i}POP_{it} + \beta_{9i}TLINES_{it} + \varepsilon_{it}$$

Where

INFDI = inward FDI (as % of GDP)
DOMCR1 = Domestic Credit to private sector (as % of GDP)
DOMCR2 = Domestic Credit provided by banking sector (as % of GDP)
FUELEXPORTS = Fuel exports (in US$)
GDPPC = Gross Domestic Product per capita (current US$)
GDPGR = Gross Domestic Product Growth (as % of GDP)
INF = inflation, consumer prices (annual %)
POP = Total population
OPENNESS = (imports + exports)/GDP
TLINES = telephone lines (per 100 people)
ε = error term

Panel estimation model used in our analysis has an advantage of allowing us to resolve omitted variable bias, which is either captured as time – invariant factors and individual – invariant factors. We chose to estimate our model with fixed cross - section effects. Fixed effects models only estimate within effects and cannot suffer from heterogeneity bias. In the fixed effect model is also assumed that the individual effect is correlated with the specific variables (Ezeoha and Cattaneo, 2011).

3.3. Pairwise correlation of the variables

In this section the pairwise correlation coefficients between the variables are calculated. The purpose of this estimation is to examine if there are potential sources of multicollinearity in our estimation model which in turn could affect the results of the empirical estimation.

	Inward FDIs	Domestic Credit 1	Domestic Credit 2	Fuel exports	GDPpc	GDPgr	Inflation	Population	Openness	Tel. lines
Inward FDIs	1									
Domestic credit 1	0.087	1								
Domestic Credit 2	-0.084	**0.928**	1							
Fuel exports	0.328	-0.120	-0.226	1						
GDPpc	0.262	**0.666**	0.594	-0.026	1					
GDPgr	0.137	-0.056	-0.086	-0.011	-0.204	1				
Inflation	-0.201	-0.470	-0.458	0.135	**-0.601**	0.000	1			
Population	-0.155	0.476	0.460	-0.351	0.297	0.070	-0.112	1		
Openness	0.061	0.325	0.237	-0.302	0.444	-0.016	-0.175	**0.736**	1	
Tel. lines	0.473	0.373	0.194	0.079	**0.560**	0.104	**-0.547**	0.209	0.349	1

Table 1: Pairwise Correlation Matrix (Advanced Economies)

Table 1 represents the correlations between the selected variables with regard to the G7 countries. Domestic Credit to Private sector (Domestic Credit 1) seems to overlap with Domestic Credit provided by Banking Sector (Domestic Credit 2) and GDP per capita. The last is also overlapping with Domestic Credit provided by Banking Sector (Domestic Credit 2), Inflation and Infrastructure proxie (Telephone lines). Openness and Population are

overlapping as well. Finally, Inflation is overlapping with Inflation. We believe that these variables are important for our study and therefore we decided not to drop off either of these variables. However, as it will be seen in the following section, Domestic Credit 2, GDP per capita and Inflation have an insignificant effect on the dependent variable and are excluded during the process of our study.

	Inward FDIs	Domestic Credit 1	Domestic Credit 2	Fuel exports	GDPpc	GDPgr	Inflation	Population	Openness	Tel. lines
Inward FDIs	1									
Domestic credit 1	0.321	1								
Domestic Credit 2	0.309	**0.931**	1							
Fuel exports	-0.096	0.211	0.134	1						
GDPpc	0.151	0.123	0.227	-0.107	1					
GDPgr	0.305	0.110	0.005	0.161	-0.293	1				
Inflation	-0.139	0.163	0.282	-0.159	0.012	-0.127	1			
Population	0.337	0.111	0.003	0.173	**-0.593**	**0.628**	-0.161	1		
Openness	-0.236	-0.251	-0.207	0.008	-0.283	0.014	0.067	0.179	1	
Tel. lines	0.331	0.006	0.086	-0.340	**0.665**	-0.095	-0.068	-0.136	-0.306	1

Table 2: Pairwise Correlation Matrix (Emerging Economies)

Table 2 represents the correlations between the selected variables with regard to the emerging economies. Domestic Credit to Private sector (Domestic Credit 1) seems to overlap with Domestic Credit provided by Banking Sector (Domestic Credit 2). GDP per capita is also overlapping with Population and Infrastructure proxy (Telephone lines). GDP growth and Population are overlapping as well. Similarly with the advanced economies, we decided not to neglect either of the variables mentioned because these variables are important for the progress of our study. However, as it will be seen in the following section, Domestic Credit to Private Sector, GDP per capita and GDP growth are found to have positive but insignificant effect on inward FDIs.

4. Empirical Results

This section reports the statistical results of the regression analysis using OLS panel regression analysis for the two groups of countries. In total, we estimated 5 models for advanced economies and 6 for emerging countries. The number of the models occurred by excluding each time the most insignificant variables in order to conclude to the most precise model, including the most significant variables for both sets of countries.

4.1. Advanced Economies

Table 3 depicts the data for the advanced economies, observing a stable value of Adjusted R^2 in the entire models. According to the empirical results, GDP growth, openness, population and infrastructure proxy (telephone lines) have significant effect on Inward FDIs. GDP growth has a positive and significant effect on the dependent variable at 5% respectively. Openness has also a positive and significant effect on the dependent variable at 5% level in Models 1 to 4 and positive and significant effect at 1% level in Model 5.

Population has a negative and significant effect on growth at 10% level in Models 1 to 3 and model 5 whereas the same variable has a negative and significant effect at 5% level in Models 4. Telephone lines have a positive and significant effect on inward FDIs at 1% level in all models. Finally, domestic credit 1 (in 4 out of 5 models), fuel exports, GDP per capita and inflation have a positive but insignificant effect on the dependent variable, whereas domestic credit 2 has a negative but insignificant effect on inward FDIs.

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
	Dependent Variable INFDI				
Domestic Credit 1	0.007439 (0.884)	0.006630 (1.368)	0.006941 (1.494)	0.006706 (1.448)	0.009620 (2.400**)
Domestic Credit 2	-0.000925 (-0.117)				
Fuel Exports	0.028186 (0.794)	0.027755 (0.788)	0.028015 (0.798)		
GDPpc	1.76E-05 (0.920)	1.69E-05 (0.925)	1.53E-05 (0.907)	1.99E-05 (1.250)	
GDPgr	0.119478 (2.557**)	0.120094 (2.593**)	0.119557 (2.591**)	0.116725 (2.539**)	0.103066 (2.305**)
Inflation	0.009739 (0.222)	0.010094 (0.231)			
Openness	3.49E-08 (1.987**)	3.47E-08 (1.990**)	3.55E-08 (2.084**)	3.78E-08 (2.252**)	4.26E-08 (2.602*)
Population	-2.61E-08 (-1.761***)	-2.59E-08 (-1.763***)	-2.65E-08 (-1.833***	-2.83E-08 (-1.980**)	-2.68E-08 (-1.879***)
Telephone lines	0.050876 (2.817*)	0.051062 (2.845*)	0.049185 (3.077*	0.042738 (3.102*)	0.049242 (3.854*)
Adjusted R^2	0.428	0.431	0.433	0.434	0.433
S.E. of Regression	1.301	1.298	1.295	1.294	1.296
Total Panel observations	217	217	217	217	217

*The asterisks *, **, *** indicate the error level at 0.01, 0.05, 0.10*

Table 3: Advanced economies

4.2. Emerging Economies

Table 4 presents the data for the group of emerging countries, where we also observe a relatively stable value for Adjusted R^2 in all the 6 models. Fuel exports have a negative and significant effect on inward FDIs at 10% level in 4 of the 6 models and negative but insignificant effect in model 5. Inflation has also negative but insignificant effect on the dependent variable at 1% level. On the contrary, Domestic Credit 2 has a positive and significant effect on inward FDIs at 1% level in 5 of the six models. In the first model the same variable has positive but insignificant effect on the dependent variable. Population has also positive effect at 5% level of significance in models 1 and 2 and at 1% level in models 3 to 6. Similarly, telephone lines have a positive and significant effect on Inward FDIs at 10% level in models 1 to 4 and at 1% level in models 5 and 6. Finally, Domestic Credit 1, GDP per capita and GDP growth have positive but insignificant effect on the dependent variable, whereas openness has a negative and insignificant effect on inward FDIs.

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Dependent Variable INFDI					
Domestic Credit 1	0.007843 (0.762)					
Domestic Credit 2	0.007681 (1.048)	0.012467 (3.302*)	0.013211 (3.269*)	0.012403 (3.298*)	0.013869 (3.836*)	0.013883 (3.827*)
Fuel Exports	-0.035521 (-1.752***)	-0.036928 (-1.831***)	-0.035518 (-1.771***)	-0.033912 (-1.699***)	-0.027418 (-1.410)	
GDPpc	7.98E-05 (1.149)	8.76E-05 (1.277)	8.87E-05 (1.294)	9.32E-05 (1.365)		
GDPgr	0.023279 (0.813)	0.024769 (0.868)	0.025524 (0.897)			
Inflation	-0.001348 (-3.886*)	-0.001313 (-3.824*)	-0.001306 (-3.811*)	-0.001306 (-3.812*)	-0.001399 (-4.153*)	-0.001346 (-4.009*)
Openness	-3.16E-13 (-0.771)	-3.19E-13 (-0.780)				
Population	2.00E-09 (2.070**)	2.13E-09 (2.242**)	2.46E-09 (2.889*)	2.56E-09 (3.044*)	2.46E-09 (2.924*)	2.57E-09 (3.055*)
Telephone lines	0.032007 (1.820***)	0.029092 (1.697***)	0.028706 (1.678***)	0.028453 (1.664***)	0.040604 (2.774*)	0.44854 (3.121*)
Adjusted R²	0.493	0.495	0.496	0.497	0.494	0.490
S.E. of Regression	1.096	1.094	1.093	1.092	1.095	1.099
Total Panel observations	155	155	155	155	155	155

The asterisks *, **, *** indicate the error level at 0.01, 0.05, 0.10

Table 4: Emerging economies

4.3. Comparative assessment

Taking into account the empirical results from both sets of countries, we opt to highlight and amplify the significant differences and similarities between them as far as the effectiveness of the selected variables on inward FDIs is concerned. Initially, financial sector development has mixed effect on both sets of countries. Domestic credit to private sector (DOMCR1) has a positive but insignificant effect on inward FDIs for both sets of countries. This finding implies that private sector in the host country is advancing rapidly. This development is powered by high consumption of goods and services provided by private enterprises which are in need of capital flows. This kind of developing consumption and advancing need of capitals is a positive indication for the MNEs in order to locate their activities in the host country (Forssbaek & Oxelheim, 2011). On the contrary, Domestic credit by banking sector (DOMCR2) has a negative and insignificant effect on inward FDIs in the developed country, whereas the same variable has a positive and significant effect on the dependent variable. The former could be attributed to limited availability of funds from the banking system of the host country due to advanced protectiveness of the financial system. In addition, the insignificant effect of the financial development proxy implies that MNEs do not depend on the banking system of the host country. This outcome is in line with Atkin and Glen (1992) who suggested that firms in the G7 countries are able to be financed by their funds and are insignificantly affected by the host country's financial system. On the contrary,

the positive and significant effect of the proxy to inward FDIs in developing countries shows that these countries use their developing banking system in order to attract inward FDIs. This result is in line with Korgaonkar (2012) who supported that banking sector development variables have a positive and significant impact on the FDI inward stock and inflows to countries.

Similarly with financial development proxies, fuel exports have controversial effects on inward FDIs in advanced and emerging economies; it has positive effect for the former without being statistically significant. This result pinpoints the fact that developed economies promote market – seeking investments rather than recourse – seeking FDIs. It is crucial to mention that MNEs tend to promote recourse – seeking investments in countries with high resource endowments even despite the fact that these countries could be undeveloped or unstable (Onyieiwu *et al.*, 2004). In emerging countries, the negative and significant effect of fuel exports on inward FDIs suggest that high recourse endowments tend to deter non-recourse FDIs such as market seeking or even efficiency seeking investments. This result is in line with Poelhekke and van der Ploeg (2010) who suggested that net effect of subsoil assets on total inward FDIs is negative especially for countries that are geographically close to many other big markets. This outcome is opposite to the study conducted by Asiedu (2006) who suggested that among other determinants, high recourse endowments are crucial for the promotion of FDIs in Africa regardless the type of direct investment.

Regarding the effects of economic development proxies on inward FDIs, the results are mixed in both sets of countries. GDP per capita has positive but insignificant effect on the dependent variable for both samples whereas GDP growth has positive and significant effect on inward FDIs in advanced countries and positive but insignificant effect on the dependent variable in emerging economies. Positive levels of economic growth mean high consumption rates, which lead to higher production volume. Production costs (fixed and variable) are affected directly by the higher production volume through economies of scale and as a result the enterprise is much more profitable. High profits and cost minimization are the essence of the internationalization of the MNEs and for this reason FDIs are connected positively and directly with economic development proxies (Ancharaz, 2003). The insignificant effect of the economic development variables (GDP per capita and GDP growth) on inward FDIs in emerging economies could be associated by the fact that economic growth is one of the traditional determinants of inward FDIs and, regarding the emerging economies, have decreased in importance by the MNEs (UNCTAD 1996: 97).

Inflation has also controversial effects on the dependent variable since it is positive but insignificant for the advanced economies but negative and significant for the emerging economies. Examining the data we used in order to precede to the econometric analysis, we observed that inflation rates in advanced and emerging economies differ widely. Advanced economies have not suffered from abnormal inflation, which means that it is powered by high consumption rates and could explain the insignificant effect on the dependent variable. This result is in line with Sayek (2009) who supported that inflation rates are positively related with inward FDIs due to high consumption which minimizes production costs through economies of scale. On the contrary, inflation has negative and significant effect on the dependent variable in emerging economies. These countries have experienced abnormal inflation rates caused by economic and political instability. MNEs prefer not to promote long

– term investments in countries which are economic and political volatile (Yartey and Adjasi, 2007). Furthermore, high inflation rates show the weakness in a country's economic condition and monetary mismanagement which affects the profitability of businesses in general (de Mello, 1997).

Similarly with inflation, openness has different effects on inward FDIs in advanced and emerging economies. It is positive and significant for the former; this observation could be attributable to the fact that MNEs in advanced economies are not only market seeking but also export oriented. In addition, a multinational enterprise is usually in need of productive factors which are imported from other countries. This result is in line with Adhikary (2011) who suggests that MNEs prefer to promote investments in open economies. Low transaction costs result financial incentives (higher return of investment) for MNEs in promoting irreversible investments such as FDIs. On the contrary, openness seems to have negative but insignificant effect on inward FDIs. This negative relation can be explained by the fact that countries with trade restrictions, which could drive MNEs to promote direct investments rather than imports of goods, have a competitive advantage to attract FDIs (Asiedu, 2002).

The only determinant which has the same effect in inward FDIs for both sets of countries is infrastructure, which has positive and significant effect on the promotion of inward FDIs. This outcome agrees with Raynolds *et al.* (2004) who suggested that among other determinants, infrastructure has a positive and significant effect on inward FDIs. In this study, the data of 212 countries were collected in order to examine the effect of infrastructure and other determinants such as economic development proxies, openness and population on inward FDIs. Moreover, this result is consistent with Rajan *et al.* (2008) who supported that infrastructure is vital in order to the economy to attract high levels of FDIs.

Finally, another variable which has different effects on inward FDIs for both sets of countries is population growth. This variable has positive and significant effect on inward FDIs in emerging countries. Nunnenkamp (2002) used data from 28 emerging economies and suggested that population growth shows the growth of the number of consumers who need more products in order to cover their needs and has a positive and significant effect on inward FDIs in emerging countries. On the contrary population growth has a negative and significant effect on inward FDIs in advanced economies. This result could mean that inward FDIs in these countries are not just market- seeking (Botric & Suflic, 2005).

5. Conclusion and perspectives for future research

The purpose of this study was to examine the determinants of inward FDIs in emerging and advanced countries. These countries are totally different in policy making, growth rates and economic and political structure. Clearly, emerging economies promote FDIs promotion policies, such as China, which inward FDIs promotes FDIs from the 70s. Emerging countries are also low income countries. This fact gives them the comparative advantage in promotion on FDIs which depend on low – wage workforce. Additionally, emerging countries rely on technological innovations which are brought by MNEs. In contrast, developed countries do not promote FDI – promotion policies. These countries are high – income. Additionally, in these countries, many enterprises have developed their own R&D departments which are the source of technological innovations.

In our analysis we used 9 explanatory variables the choice of which was based on the availability of integrated data. We used OLS analysis with fixed cross – section effects in order to specify the effect of every variable on inward FDIs and compare the results of every group of countries in order to see how different these countries in many aspects are.

The results of this research could bring new matters for further research. For example, the mixed effect of financial sector variables needs thorough examination. Additionally, the effect of inflation in countries which had suffered from high inflation rates in the past surely can bring certain interesting results regarding the strategy employed by the MNEs. Moreover, a sector level analysis on the effect of openness on inward FDIs could shed light on the relation between these two variables because production cost varies for every sector. In addition, the effects of these variables on growth could be analyzed for different sets of countries, such as middle income – economies. In advance, a thorough examination on the effect of non traditional determinants on inward FDIs, such as ease of doing business and bureaucracy, could have interesting results.

This research can be considered as work in progress. Using other estimation techniques could bring more detailed results in order to explain the determinants of inward FDIs in emerging and advanced economies.

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