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COUNTRIES' INTERNATIONAL COMPETITIVENESS AND FDI: AN EMPIRICAL ANALYSIS OF SELECTED EU MEMBER-COUNTRIES AND REGIONS

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Abstract

This paper empirically examines the relationship of a country's international competitiveness as defined and measured by the International Management Development (IMD) and its accumulation of inward Foreign Direct Investment (FDI) stock. This relationship is analysed for the European Union (EU)-15 Member-Countries and for the period 2003-2006 which coincides with processes of enlargement, structural changes, increased global competition for EU-located firms, and pressure for relocation of their economic activities. EU South Member-Countries (SMCs) are examined separately from North Member-Countries (NMCs) taking into account structural and regional

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differences[2]. Evidence suggests a heterogeneous response of FDI towards the two EU regions - considered as country groups - in the processes of globalization, as well as the discriminating effects of different aspects of competitiveness on FDI e.g. economic performance, government efficiency, business efficiency and infrastructure. An interesting outcome is that the role of government in influencing international competitiveness and consequently the levels of FDI is more important in SMCs than in NMCs.

KEYWORDS: International Competitiveness, FDI, MNEs, European Union

JEL Classification: F23, F21

1. Introduction

The last decade has undergone a remarkable growth of global FDI inflows. FDI recovered strongly in 2004-06 period after a deep three-year (2001-2003) decline mainly due to geopolitical risks. This trend was supported by increased international competitiveness, improvements in the business environment of many countries in the world including emerging countries, macroeconomic growth and technological change, and companies' search for better locations-lower cost, new markets, competitively high skills - in order to maximize the returns of their investment strategies i.e. efficiency, strategic asset seeking, market and/or resource seeking (UNCTAD, 2006). In this setting competitiveness becomes central to the agenda of many countries including EU-Member Countries. The EU in response to global developments set for a ten-year (up to 2010) timeline a series of specific policy measures to make EU "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion" known as the Lisbon Strategy. However, in the execution of the Lisbon strategy some countries are in progress and others are lagging behind whereas this could divide them into performing regions (western,

[2] Fifteen (15) countries in total are examined in the empirical analysis of this study 6 SMCs and 9 NMCs. Northern EU-Member Countries include: Austria, Belgium, Denmark, Finland, Germany, Luxemburg, Netherlands, Sweden and the United Kingdom. Southern EU-Member Countries include: France, Greece, Italy, Portugal, Spain and Ireland. Ireland, Spain, Portugal and Greece are treated as countries of the "European Periphery" and as recipients, for a period of more than ten years, of various financing arrangements aimed at supporting and strengthening their competitiveness (Garelli, 2006). Ireland is a particularly competitive country with significant levels of FDI, Spain and Portugal exhibit average performance, Greece exhibits low performance and Italy very low performance. Therefore one should acknowledge a possible bias in the country selection which is outbalanced in the formal analysis with fixed effects analysis.

northern, southern etc). Moreover developments such as the EU enlargement, the emergence of BRIC (Brazil, Russia, India and China) and other developing countries as FDI recipients conveyed different effects on individual EU economies.

For instance there is evidence that the new EU member states started gaining parts of the global production chain requiring higher skills, such as precision engineering, design, research and development (Anastassopoulos and Rama, 2008; The Economist, 2005). This development aroused concerns in some of the EU-15 countries because it was felt accession countries could use wage and tax competition to attract FDI, promoting a relocation of facilities within the EU-25 (Sachwald, 2005). According to the same study, some dislocation of production has actually already taken place: Portugal, and even Spain, has lost production volume to Eastern Europe.

According to the European Commission (2006), concerns about relocation of economic activity due to enlargement have proved to be unfounded. The outflows of FDI from the old Member Countries and their impact on employment are not significant. The Commission considers that new Member Countries only receive a small portion (4%) of FDI outflows from the EU-15. The bulk of FDI outflows are destined to other Member Countries (53%) and the United States (12%). Relocation has in fact allowed an increase in the competitiveness of firms of the EU-15 by leading to lower job creation (estimated at between 0.3% and 0.7% in Germany and Austria, which are among the largest investors in EU-10 countries). However, according to the Commission, relocation is influenced only to a lesser extent by corporate tax rates and therefore the impact of taxation should be assessed.

Consequently, it would be of particular interest to study the locational factors of these countries, which affect their international competitiveness and their impact on the amount of FDI they can sustain and/or attract. One might theorize a number of reasons why policy makers would like to understand the link between competitiveness and FDI: to identify institutional and/or market failures; to see whether the Lisbon process has further integrated or differentiated Southern from Northern Member-States.

In this respect, this paper contributes to the literature on this subject in providing an empirical analysis, using a unique dataset that captures a variety of factors affecting FDI and competitiveness in providing answers to the above mentioned policy concerns. The paper is organised as follows: the second section reviews theoretical developments and relevant empirical evidence. The third section describes methodology, sample, and variables. The descriptive analysis of competitiveness and FDI in NMCs and OMCs is briefly outlined,

and the results of an empirical analysis are presented in the fourth section. Finally, a summary of the paper is provided in the fifth section.

2. Theory and empirical background

The concept of "national competitiveness" has been criticized (Lall, 2001; Krugman, 1994). The enterprise and the environment in which it operates remain the key to the issue of competitiveness. Enterprises are expected to compete internationally for markets and resources. In this respect a competitive strategy and performance can be objectively defined and measured. At a country level, the notion of competitiveness becomes less clear. Countries and enterprises compete in a different manner. However, they do compete with each other in order to attract investments and as a response to global processes they lay specific emphasis to retain economic activities within their business environment. More specifically, governments affect the physical and human infrastructure of the country and set the rules to carry out business activity, e.g. the framework of competition among firms, the institutional structure for labor relations, the limits of environmental impacts stemming from the operation of enterprises etc (Kobrin, 1976). Government is also responsible for taxation issues and offers, through the operation of various public enterprises a wide range of support for goods and services. In this respect the accumulation of FDI is one of the most effective ways for economies to become integrated and competitive on the global markets.

According to International Business (IB) literature the level of FDI depends on the Location (L) effect of a country's business environment. In other words, by keeping firm level factors constant, it is the L effect that determines "where value adding activities take place" (e.g. in which countries and/or sectors) and may, for example, refer to the existence of raw materials or other assets (e.g. abundant and/or cheap labour, intermediate markets, technological expertise) to international transport and communication costs, to less rigorous legislation, to a more favourable domestic business environment (including institutional framework and resource allocation). Since the distribution of these resources and capabilities is uneven, some firms of one particular nationality and/or located in certain countries will have a site advantage over other firms based in other countries.

Theoretically the analysis of the Location effects (L or determinants) of FDI has been developed within the neo-classical trade theory, (Krugman, 1991; Markusen and Venables, 1998; Venables, 1999). The eclectic paradigm

(Dunning, 1981, 1988, 1993) incorporates L and I effects and adds another dimension required to further the distribution of FDI in a host country. A company must enjoy Ownership advantages (O), in order to compete favourably with other firms so as to invest in a specific country. O advantages determine 'who is going to produce abroad' and relate to technology, marketing and management skills or even expertise in the coordination of international activities. These advantages must be transferable overseas and even more economically exploitable abroad in combination with some host country L advantages. Different configurations of L effects can strengthen a firm's competitiveness, however L assets are spatially embedded (Dunning, 1993).

Inward FDI depends to a certain extent, also on the step which a country and/or group of host countries have reached in the "Investment Development Path" (IDP) paradigm (Dunning and Narula, 1996; Narula and Dunning, 2000). Therefore similarities and differences between NMCs and SMCs based on the location factors could be viewed in line with the theoretical suggestions taken from the IDP.

A number of studies examine the determinants of distribution of inward FDI in developed, developing or emerging countries and/or sectors. Caves (1974) found a positive relationship between FDI and economic performance i.e. industrial productivity in Canada. Lall and Siddharthan (1982) argue that L factors could explain the absence of foreign penetration in 40 manufacturing industries in the US. Milner and Pentecost (1996) noticed that competitive advantages of the host economy, the level of protection, and the host market size positively affect the distribution of US FDI in UK manufacturing. Anastassopoulos (1997) founded L advantages related to the strong and distinctive established product base of Greek firms, and export potential for multinational enterprises subsidiaries in Greece. Kumar (1990) found policy failures in consumer goods in India. Similarly, Liu (2000) for China and Maroudas and Rizopoulos, (1995) for Bulgaria observed that FDI is significantly influenced by policy measures towards FDI.

There where a few studies devoted to FDI location factors in EU enlargement [Grabbe, 2001; Read and Bradley, 2001; Anastassopoulos et. al. 2004]. An emerging strand of research has dealt with the impact of institutions on FDI (Wheeler and Mody, 1992; Disdier and Mayer, 2004) and the role of government to correct market and institutional failures and decrease 'economic and regulatory policy uncertainty' -a major obstacle for business- (World Bank, 2005). All these studies found evidence of the importance of L advantages of countries. This paper enriches this research by using a unique dataset that acquired a variety of factors including variables that capture

economic and government performance, business effectiveness and infrastructure.

3. Empirical Analysis

3.1. Descriptive analysis

The World Competitiveness Yearbook (WCY) of IMD is among the most detailed and informative annual reviews for global measurement and evaluation of competitiveness of countries and economic systems. The WCY analyzes and classifies the ability of countries participating in the annual survey to create and maintain an environment fostering entrepreneurship and strengthening company's competitiveness in order to achieve well being and make profits.

According to WCY national environment is divided into four main factors of competition: economic performance; governmental efficiency; business efficiency; and infrastructure.

ECOP - economic performance: is the macro-economic evaluation of the domestic economy. This factor has been aggregated from the following five sub-factors: domestic economy, international trade, international investment, employment and prices.

GOVEF - government efficiency: the extent through which government policies are conducive to competitiveness: public finance, fiscal policy, institutional framework, business legislation and societal framework.

BUSEF - business efficiency: the extent to which enterprises are performing in an innovative, profitable and responsible manner: productivity and efficiency, labour market, finance, management practices and attitudes and values.

INFR - infrastructure: the extent to which basic, technological, scientific and human resources meet the needs of business: basic infrastructure, technological infrastructure, scientific infrastructure, health and environment and education.

In Table 1 we introduce rank loss or gain in the overall IMD standing for each index and all four by-categories. Rank loss or gain in the various classifications has been computed based on comparisons of 2006 standings to those of 2002. With the exception of Austria and Denmark, the relative position of countries has deteriorated as to their overall competitiveness. This situation is also apparent in the related ranking of all four categories. In particular, in the "Economic Performance" index category, 6 out of 15 countries display rank losses of over ten positions. In the "Government Efficiency" index category,

Austria, Belgium and Denmark from NMCs and Ireland and Greece from SMCs noticed an improvement in their relative ranking over time, while the remaining countries mark losses ranging from 1 to 12 positions. The same picture applies to the "Business Efficiency" index category. However in the "Infrastructure" index category, all countries reveal positive or negative values, with rank losses ranging from 1 to 7 positions (Netherlands).

Table 1: Rank loss / gain by IMD Index in the 2002 – 2006 five year period

	Country	Overall Competitiveness indicator	Economic Performance Indicator	Government Efficiency indicator	Business Efficiency Indicator	Infrastructure Indicator
Northern EU Member-Countries	Austria	+2	-6	+3	+8	-1
	Belgium	-7	-18	+4	-5	+5
	Denmark	+1	-17	+4	+9	+2
	Finland	-7	-9	-4	-7	-4
	Germany	-8	-15	-3	-5	+1
	Luxemburg	-7	0	-12	-11	-4
	Netherlands	-11	-10	-1	-12	-7
	Sweden	-2	-6	-5	+2	-2
	United Kingdom	-4	-2	-3	-6	-2
Southern EU Member-Countries	France	-5	-7	-4	-7	-5
	Greece	0	-6	+1	-12	+3
	Ireland	-2	-1	+3	-2	-3
	Italy	-14	-18	-9	-16	-5
	Portugal	-4	-12	-7	-8	+4
	Spain	-8	-13	-12	-7	-1

Source: IMD, WCY 2005 – calculations conducted by the authors

Table 2 presents the UNCTAD's inward FDI performance and potential indices for 2002-2006 five year periods, the inward FDI stock (mil.$) and share (%) of each country in total world inward FDI stock (current values). The distribution of inward FDI within the two groups of countries is uneven and has been highly concentrated within a relatively few countries. Concerning NMCs the United Kingdom is the largest FDI recipient country (with 9.71% world share) followed by France (6.52%), Germany (4.18) and Spain (3.69%). According to UNCTAD, in 2006, a few countries, namely Austria, Spain and the Netherlands, noticed a decrease in FDI inflows whereas inflows to Belgium more than doubled raising its total FDI stock to 603 billion, which was more

than the country's GDP at the end of 2006. However each country attracts FDI for different reasons e.g. coordination centers in Belgium, strategic assets in Ireland or Investment Bridge to Balkans via Greece. Although the country–specific structural variables affecting inward FDI do not generally significantly change, over the 2002-2006 period, notable changes in the FDI performance of all countries with the exception of United Kingdom and Greece are perceived. As Table 2 reveals both NMCs and SMCs became progressively less attractive locations for foreign direct investors in comparison with other developing and emerging regions of Europe and the world in the period 1002-2006. A few countries have improved their performance and potential but there is a need to more formally control heterogeneity among samples (see the following section 4.2).

Table 2: FDI stock (mil. $) and FDI share (%) of each country in total world inward FDI stock (2006, current values) and rank loss / gain of inward FDI performance and potential, in the 2002 – 2006 five year period

	Country	Inward FDI stock 2006 (mil. $)	Inward FDI 2006 % world share	Inward FDI Performance Index	Inward FDI Potential Index
Northern EU Member-Countries	Austria	77,700	0.64	-26	-3
	Belgium	603,432	5.0	-9	-8
	Denmark	138,410	1.15	-103	-2
	Finland	64,173	0.53	-64	-2
	Germany	502,376	4.18	-88	+4
	Luxemburg	73,030	0.60	0	+3
	Netherlands	451,491	3.76	-78	-1
	Sweden	218,373	1.82	-31	-1
	United Kingdom	1,165,265	9.71	+6	0
Southern EU Member-Countries	France	782,825	6.52	-12	0
	Greece	37,009	0.31	+5	-3
	Ireland	179,041	1.49	-139	-4
	Italy	294,790	2.45	-3	-3
	Portugal	85,520	0.71	-44	-10
	Spain	443,275	3.69	-67	0

Source: WIR 2002-2007 – calculations conducted by the author

3.2. Econometric analysis

This section provides empirical evidence of the link between FDI and competitiveness. The main hypothesis is that locationally advantageous

countries and/or group of countries are likely to be the home of internationally competitive firms. Therefore, given the global competition and the ownership advantages of internationally competitive firms, the existence of L advantages would influence the levels of FDI. However, this would vary according to the type of FDI. For market seeking FDI, the size and growth of the market, the level of competition and cost factors are amongst the main L determinants. For resource seeking FDI the investors will target the countries which have available and low cost resources. For efficiency seeking FDI differential costs, economies of scale and scope are of most importance. For strategic asset FDI investors seek competitively high skills, technology and other assets in order to compete in the global and/or regional marketplace.

Inter-country variation in the level of inward FDI stock might be explained in terms of differences in levels of L advantages. An empirical specification of the relationship between FDI and competitiveness is as follows:

$$FDIS_{it} = a_0 + b_{it} X + c_{it} COUNTRY + d_{it} YEAR + u_{it} \text{ (equation 1)}$$

When X is a vector with independent variables (as described in section 3.2) and U_{it} is the error term. The dependent variable, used in the analysis, is *Inward Foreign Direct Investment Stock (FDIS)* as defined by the UNCTAD in the *World Investment Report (2005)*. The variable statistics and the correlation matrix are provided in the Appendix. The estimation technique is least squares.

The X vector represents L variables which are grouped according to the IMD classifications as follows:

A. Economic performance

The "classical" L advantages influencing FDI are input prices, market size, growth of the market, and relative abundance of natural resources. For market-seeking FDI, the determining factor is the size of the host country market, and country economic performance which is associated with actual and expected profitability. GDP per capita as a measure of market size (GDP) and total general government dept (CURRENTA) are used in this study as proxies for economic performance of the host country. Given theoretical predictions and empirical findings from previous studies FDI should be positively related to GDP and negatively related to CURRENTA (see Table 3).

B. Government efficiency

FDI is also influenced by government efficiency. Government efficiency facilitates all types of FDI but mostly market seeking. Successful implementation of economic reforms by the host country government not only links the country to the global business environment but also facilitate growth by both domestic and foreign firms. Concerning foreign investors, a history of manageable fiscal deficits signals how committed and credible the government is. The total general government dept (TOTALGEN) is used as an indicator of government efficiency and commitment to the Lisbon strategy and it is expected to be negatively related to FDI.

The cost of doing business in a host country is mainly influenced by taxation. According to the European Commission (2006) relocation is influenced only to a lesser extent by corporate tax rates and therefore the impact of taxation should be assessed. Country differences in corporate tax rates on profits (CORPORAT) should be mirrored in FDI levels. Therefore a negative relationship between FDI and CORPORAT is expected.

The cost of doing business in a host country consists not only of the actual costs of inputs but also non-economic costs such as bureaucracy and transaction costs in dealing with local authorities. Government efficiency can affect business conditions in the host country by influencing the legal and regulatory environment (LEGALAND) and bureaucracy (BURREAUC) which both should negatively affect FDI.

C. Business efficiency

According to theoretical predictions and evidence from previous empirical studies one should expect a positive relationship between productivity (PROD) and FDI. Multinational enterprises also search for better locations with competitively high skills in order to maximize the returns of their investment strategies (as in the case of efficiency seeking FDI). Therefore SKILLEDL should be positively related to FDI.

Wheeler and Mody (1992) found that political risk has little importance in US multinational firms' location decisions. Similar results were reported by Asiedu (2002) or Bevan and Estrin (2000) on different subgroups of countries. A critical FDI determinant is investment risk. Stability in the level of investment risk allows investors to incorporate risk more accurately when estimating the rate of return. Risk assessment has been especially important for developing or transition countries rather than developed countries, which is our case. However, a negative relationship is expected between FDI and INVRISK.

The degree of economic integration of a country to the global marketplace has economic but also social determinants. The attitudes of citizens towards

globalisation and foreign investors should decisively influence FDI. Hence a positive relationship between FDI and ATTITUDE is expected.

D. Infrastructure

Availability of good infrastructure is a necessary and sufficient condition for foreign investors to operate business locally regardless of the type of FDI. There are several proxies for the infrastructure variable. Since energy infrastructure is of particular importance for EU-Member States we make use of this proxy here as the infrastructure variable (ENERGYIN). A positive relationship with FDI is expected.

Table 3: Variable definitions and expected sign

IMD Category	**Name**	**Variable**	**Definition**	**Expected sign**
A. ECONOMIC PERFORMANCE	GDP	GDP (PPP)	US$ billions at purchasing power parity	(+)
	CURRENTA	Current account balance	US$ billions (minus sign=deficit)	(-)
B. GOVERNMENT EFFICIENCY	TOTALGEN	Total general government debt	percentage of GDP	(-)
	CORPORAT	Corporate tax rate on profit	maximum tax rate, calculated on profit before tax	(-)
	LEGALAND	Legal and regulatory framework	the legal and regulatory framework encourages the competitiveness of enterprises	(-)
	BURREAUC	Burreaucracy	burreaucracy does not hinder business activity	(-)
C. BUSINESS EFFICIENCY	PROD	Overall productivity (PPP)	GDP (PPP) per person employed, US$	(+)
	SKILLEDL	Skilled labor	skilled labor is readily available	(+)
	INVRISK	Investment risk	euromoney country credit -worthiness scale from 0-100	(-)
	ATTITUDE	Attitudes toward globalization	attitudes toward globalization are generally positive in your society	(+)
D. INFRASTRUCTURE	ENERGYIN	Energy infrastructure	energy infrastructure is adequate and efficient	(+)

To test the hypothesis that the location determinants of FDI for SMCs and NMCs are different, equation (1) fits with the sample of SMCs and NMCs respectively. The SMCs sample has a total of 30 observations (6 countries for a five-year period) and the NMCs sample has a total of 45 observations (9 countries for a 5-year period). Table 4 reports the estimated coefficients. The regression results are presented in equations (1) and (2) for SMCs and NMCs respectively, where it is inferred that the coefficients appear to be quite different for the two groups of countries confirming that the EU consists of at least two heterogeneous groups of Countries SMCs and NMCs.

Specifically, concerning the influence of economic performance on FDI, the GDP variable is positive and statistically significant in explaining FDI levels in both SMCs and NMCs, indicating the importance of market size and domestic

competitive environment as well as market seeking operations mainly in NMCs (where the magnitude is higher – equation 2). This finding is in line with theoretical predictions and findings from previous studies (Dunning, 1980; Porter, 1990; Vernon 1966). The findings in equation (1) indicate that direct investments in the South region tend to decrease as the countries' current account deficits increase and international competitiveness worsens. CURREENTA is negative and statistically significant at 5 per cent (equation 1). On the contrary, current account imbalances do not have any effect on FDI levels in NMCs.

The effect of public sector performance on FDI is more apparent in SMCs. In particular, higher corporate tax rates, and bureaucracy limit foreign direct investment levels in SMCs and are not apparent and/or have less influence in NMCs. CORPORAT is negative and statistically significant in explaining FDIS in equation 1 and insignificant in equation 2. BURREAUC is negative and statistically significant in both equations (with the magnitude being higher in equation 1).

Concerning business efficiency, the extent to which enterprises are performing in a productive manner in both equations can positively influence their countries' accumulation of FDI. PROD is positive and statistically significant for both groups of countries (equations 1 and 2, however with the magnitude being higher for SMCs). The findings also indicate that foreign direct investments in SMCs tend to decrease as the country's political risks increase (INVRISK in equation 1), in contrast with INVRISK being positive but insignificant in explaining FDIS variation in NMCs (equation 2).

The SKILLEDL variable is negative and significant in NMCs and insignificant in SMCs indicating that skilled labor is not readily or competitively available in both groups of countries given the needs of foreign firms and local markets. This finding indicates the need to improve education and workforce skills in tune with business sector demand and therefore to speed up the Lisbon process in skills and lifelong learning.

The attitudes toward globalization differ considerably between SMCs and NMCs. ATTITUDE is more positive in the societies of NMCs and this has a positive effect on FDIs whereas ATTITUDE is less positive in SMCs and/or has a negative effect.

ENERGYIN is positive and statistically substantial indicating and presuming the existence of resource seeking investments (e.g. in areas of renewable energy) in SMCs and negative in NMCs indicating the energy dependence of FDIS.

All of the above coefficients represent additional effects to country specific fixed effects which are captured by the dummy variables (COUNTRY and YEAR).

Table 4: Parameter Estimates for South and North EU-Member Countries

		South	North
PROXY	**Equation:** **Dependent:** **Explanatory Variables:**	**(1)** **FDIS** **Coefficient (t-statistic)**	**(2)** **FDIS** **Coefficient (t-statistic)**
	Constant	-11.948 (-1.761)	-19443 (-1.728)
ECONOMIC PERFORMANCE	**GDP**	2.451 (2.330)**	0.676 (5.485)***
	CURRENTA	-0.004 (-2.224)**	0.002 (0.760)
GOVERNMNETEFFICIENCY	**TOTALGEN**	0.004 (0.510)	0.024 (0.474)
	CORPORAT	-0.025 (-2.704)***	0.025 (0.898)
	LEGALAND	0.188 (3.341)***	0.114 (0.770)
	BURREAUC	-0.283 (-4.552)***	-0.190 (-1.765)*
BUSINESS EFFICIENCY	**PROD**	2.591 (3.694)***	1.359 (2.518)***
	INVRISK	-0.219 (-6.398)***	0.116 (1.570)
	SKILLEDL	-0.109 (-1.570)	-0.240 (-2.019)**
	ATTITUDE	-0.084 (-1.779)*	0.442 (3.932)***
INFRASTRUCTURE	**ENERGYIN**	0.108 (3.230)***	-0.217 (-1.834)*
	R-square	0.96	0.87
	N	30	45

N **:** number of observations. * Indicates significance at 10 percent level.
** Indicates significance at 5 percent level. *** Indicates significance at 1 percent level.

The regression analysis indicated group heterogeneity in the specified FDI functions. To test for the statistical significance of these findings we made use of covariance analysis. Table 5 shows the outcome of this analysis. The F test suggests that the observed heterogeneity of FDI functions of NMCs and OMCs is statistically significant at the 1 per cent level. This finding supports the

initial hypotheses for group differences in intercepts, slopes and the overall profitability functions.

Table.5 Results of heterogeneity tests

Hypotheses	***F-test***	**Supported**
Test of differential intercepts	85,589***	Yes
The determinants of FDI of NMCs and SMCs differ:		
Test of differential slope vectors:	23,014***	Yes
Test for overall heterogeneity	16,078***	Yes

*** Indicates significance at 1 percent level.

4. Conclusions

This paper examined the relationship of a country's international competitiveness and its accumulation of inward Foreign Direct Investment (FDI) stock for a sample of European Union (EU)-15 Member-Countries and for the period 2003-2006 which coincides with processes of enlargement, structural changes, increased global competition for EU-located firms, and pressure for relocation of their economic activities.

Based on evidence, with the exception of Austria and Denmark, the relative position of countries has deteriorated concerning their overall competitiveness. The "Economic Performance" index category and the "government efficiency" index categories reveal the biggest rank losses. The distribution of inward FDI within the two groups of countries is uneven and it has been highly concentrated within a relatively few countries e.g. United Kingdom, France and Germany for the group of NMCs and Ireland for SMCs.

The econometric analysis showed a heterogeneous response of FDI towards the two EU regions - considered as country groups - in the processes of globalization and the discriminating effects of different aspects of competitiveness on FDI e.g. economic performance, government efficiency, business efficiency and infrastructure.

Consequently, the determinants of FDI differ between NMCs and SMCs. NMCs' accumulation of FDI mostly depends on their market size, government efficiency in reducing bureaucracy, openness and efficiency of the business

sector. SMCs' accumulation of FDI depends less on the importance of their market and more on the efficiency of the government and the reduction of investment risk. The results are in line with predictions in section 2 and 4 and reveal the existence of two heterogeneous country groups within the EU in terms of their integration with the world though one should acknowledge a selectivity bias problem in the classification of certain countries in the two groups.

An interesting outcome on the competitiveness agenda is the role of government in influencing international competitiveness and consequently the levels of FDI is more important in SMCs than in NMCs. Governments in these countries should give more emphasis to improve their efficiency by implementing the Lisbon agenda and particularly improving their regulatory and business environment, reducing bureaucracy and dealing with taxation issues.

To conclude, this paper has several restrictions that can operate as a basis for future constructive potential research. One limitation is inherent in the static character of this research. It would be interesting to position OLI factors in a dynamic perspective by extending the sample size and particularly the country dimension. Another limitation has to do with the sensitivity of results in country selection though the F test supports the validation of regressions.

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Appendix

Statistics of variables

Variables	Mean	Std.Dev.	Minimum	Maximum	Cases
DEP	12.01	1.04	9.65	13.94	75
GDP	5.98	1.19	3.29	7.82	75
CURRENTA	0.87	35.51	108.07	110.46	75
TOTALGEN	56.52	24.90	6.12	106.77	75
CORPORAT	31.45	6.37	12.50	43.20	74
LEGALAND	4.91	1.42	2.70	8.18	75
BURREAUC	3.50	1.45	1.47	6.89	75
PROD	11.15	0.30	10.12	11.74	75
INVRISK	91.19	4.59	79.47	99.78	75
SKILLEDL	6.44	1.03	4.41	8.38	75
ATTITUDE	5.81	1.11	2.54	7.96	75
ENERGYIN	7.01	1.53	3.16	9.04	75

Correlation Matrix of Variables

Variables	GDP	CURRENTA	TOTALGEN	CORPORAT	LEGALAND	BURREAUC	PROD	INVRISK	SKILLEDL	ATTITUDE	ENERGYIN	DEP
GDP	1,00											
CURRENTA	-0,06	1,00										
TOTALGEN	0,45	0,01	1,00									
CORPORAT	0,47	0,19	0,50	1,00								
LEGALAND	-0,53	0,13	-0,61	-0,50	1,00							
BURREAUC	-0,49	0,21	-0,57	-0,47	0,89	1,00						
PROD	-0,19	0,16	-0,30	-0,34	0,25	0,40	1,00					
INVRISK	-0,31	0,30	-0,65	-0,26	0,62	0,67	0,63	1,00				
SKILLEDL	-0,11	0,51	-0,10	-0,08	0,53	0,61	0,29	0,49	1,00			
ATTITUDE	-0,43	0,27	-0,51	-0,51	0,75	0,72	0,35	0,59	0,39	1,00		
ENERGYIN	-0,14	0,51	-0,19	0,29	0,40	0,45	0,08	0,43	0,65	0,13	1,00	
DEP	0,73	0,02	0,07	0,17	-0,30	-0,23	0,21	0,18	-0,09	-0,05	0,07	1,00