INTERNATIONALISATION AND CORPORATE COMPETITIVENESS: MEASURING THE EFFECT OF EXTERNAL ENVIRONMENT ON THE CASE OF GREEK MULTINATIONALS

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Abstract

This study suggests an approach, building on international business and the internationalisation theories, in order to discussing the concept of corporate competitiveness. Our key explanations are based on the motivations of multinational enterprises when investing abroad and we relate those with the external environment of the host country when discussing the changes in corporate competitiveness. We explore and establish a relationship between the corporate motives and the external environment for a company in pursuit of competitiveness. This study adopts a single country perspective, i.e. multinationals emerging from Greece, to avoid problems related with different motivations of companies from different countries. Our focus is primarily at the industry level and our sample covers 70 Greek companies that internationalised in the period 2001-2006. According to our findings, the existence of prosperous markets, human capital and infrastructures are the key factors in order to create corporate competitiveness.

Keywords: Corporate Competitiveness, Greek companies, Multinationals, Motivations

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1. Introduction

Internationalisation theories have, up till now, provided reasonable explanations on the motives that drive corporations to invest abroad. Since the work of Hymer (1960/1976) back in the sixties, researchers have focused on the investigation and explanation of multinational enterprises (MNEs) and their expansion abroad. Common ground to all these approaches is the assumption that corporations are in a continuous search for creating and sustaining advantages that will provide a competitive edge against competition. To this end, another stream of the literature, i.e. strategic management, provides reasonable explanations on the changes that a corporation has to undergo, especially with respect to its internal environment in order to respond to a changing and dynamic external environment. It is this study's scope to provide an approach building on international business and the internationalisation theories with the aim of discussing the concept of corporate competitiveness. It goes beyond the scope of this study, though, to enter the strategic management literature and seek for explanations based on this stream.

Our key explanations are based on the motivations of MNEs (Berhman, 1984; Dunning, 1993; Filippaios et al., 2004) when investing abroad and we relate those with the external environment of the host country when discussing the changes in corporate competitiveness. We explore and establish a relationship between the corporate motives and the external environment for a company in pursuit of competitiveness.

MNEs deploy their tangible and intangible assets in international business environments with a view towards increasing their competitiveness and profitability, whereas the deployment of these assets in host country's environment strengthens their resource base, and capabilities to restructure and compete in world markets and consequently improve their performance (WIR, 1995). In this respect MNEs and host country's governments are searching for partnerships in order to promote their mutual goal: (corporate or national) competitiveness.

In contrast, the current decade is characterised by geopolitical risks and crises in international markets such as the oil markets and also environmental concerns. These developments brought new challenges for firms and countries and consequently new perspectives on competitiveness; MNE adjustment to evolving globalisation and a better link between corporate strategy, structures and competencies to the socio-economic performance of host and home countries for the benefit of both. The company's motivations, capabilities and resources that initially lead investments abroad are reflected by the host country's business environment and competitive position. However, as the business environment and the host country's competitive position changes, the ability of adopting an emergent strategy (as a response to environmental pressures or the reengineering process due to a geopolitical crisis) and timely and accurate overall corporate response to change in international business environments will determine corporate competitiveness.

In Table 1 we present rank loss or gain in the overall IMD standing for every index and for 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 the countries has deteriorated as concerns their overall competitiveness.

Insert Table 1 here.

Our key hypothesis is that if the company's motivations when investing abroad are mirrored by the changes in the external environment of the host country, this will eventually lead to an increase of corporate competitiveness after the internationalisation move. On the contrary if the company's motivations are different from the changes in the external environment then we will either see stagnation or even in some extreme cases deterioration in corporate competitiveness.

Our key hypothesis is complemented by the fact that motivations differ between companies, sectors or even multinationals that emerge from different countries. This study adopts a single country perspective, i.e. multinationals emerging from Greece, to avoid problems related with different motivations of companies from different countries. Our focus is primarily at the industry level. Our sample covers 70 Greek companies that internationalised in the period 2001-2006. The companies included in our sample might have also engaged in earlier internationalisation moves but, in this paper, we wanted to measure and document their behaviour in a more recent period. The sample covers a wide range of companies and industries and is representative of the companies' geographical allocation for whole country as it covers companies coming from the Southern as well as the Northern part. The internationalisation pattern recorded in this study is also representative of the behaviour of Greek companies in total and covers locations in almost every part of the world. We recorded internationalisation moves in forty-eight countries covering the Balkans, Central and Eastern Europe, the European Union, as well as North America, the Middle and Far East.

Within this context, crucial is the justification for our country selection. Greece is a small open economy at the periphery of the EU and, until recently, has been primarily a recipient of Foreign Direct Investment (FDI). The last twenty years, though, with the opening up of Central, Eastern and South Eastern European markets, Greek entrepreneurs grabbed the opportunity to expand abroad in search of new, unsaturated markets and cheaper resources in the form of human capital or primary materials. This process led Greece to become a key investor in the region (Stoian and Filippaios, 2008) and Greek firms to enter a learning path that could enable them to further expand abroad in unfamiliar markets (Johanson and Valhne, 1977 & 1990). The investigation of the Greek case is of great importance for the international business literature as it is a clear demonstration of the process that a small open economy has to follow in order to become a regional player and a substantial outward investor.

The main contribution of this study is, therefore, twofold. It first provides a description of the internationalisation of Greek firms. It then links these internationalisation moves with specific motivations and will discuss them under the prisma of corporate competitiveness. This creation of competitiveness is not only crucial for the home but also for the host country. It is, thus, really important to identify firms' motivations and see their reflection on corporate competitiveness when adding in the analysis countries' characteristics. Our study has both managerial as well as policy implications and recommendations. On the managerial side we provide evidence and guidance on managerial decisions related to internationalisation. On the policy side we give direction to policy makers as to which factors in the economy are those that can potentially be of assistance to corporations when generating competitive advantages.

The rest of the paper will be organised as follows: Next section will offer a basic literature review. Section 3 will discuss the corporate motivations and will present our hypotheses. Section 4 will present the data and in section 5 we will discuss the methodology followed. Finally, in section 6 we will analyse our empirical findings whilst section 7 will conclude the paper offering managerial and policy recommendations.

2. Literature Review

The firm and consequently the environment in which it operates remain crucial to the issue of competitiveness. Corporate level competitiveness emphasises the role of factors internal to the firm such as firm strategy, assets, capabilities and competencies that allow corporations to compete in international markets and meet consumers' tastes and needs. Therefore the main responsibility for corporate competitiveness lies with corporations themselves, in developing and building capabilities more effectively than competitors (Barney et al. 2001, Barney, 1991; Bartlett and Ghoshal, 1989; Doz and Prahalad, 1987; Hamel and Prahalad, 1989, Grant; 1991; Smith, 1995).

In addition, according to the internationalisation theory, these competencies are not only necessary to compete in the local market but a necessary condition for the expansion abroad. These distinctive competencies and characteristics form the ownership specific advantages (Oa) (Dunning, 1993) which come first (before the FDI act) and are necessary conditions for the competitiveness of firms in international business environments. Consequently these Oa determine "who is investing abroad" (Dunning, 1993). Oa must enable subsidiaries of MNEs to more than offset the disadvantages that firms confront when penetrating foreign markets (Hymer, 1960/1976; Kindleberger, 1969; Dunning, 1993) and operating in foreign environments. These (Oa) advantages may relate to technology (patents, R&D facilities, new product development skills), marketing and management skills, expertise in managing oligopolistic industries or even expertise in the co-ordination of international activities (Dunning, 1993) through economies of scale and scope.

Consequently, the location advantages (La) determine "where value adding activities take place" (Buckley and Casson, 1976), i.e. in which host countries 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) not available in the home country, 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, firms from one particular nationality will have a domestic location advantage over firms based in other countries.

The influence of La lies in the responsibility of policy makers, i.e. to create and maintain an appropriate business environment that will encourage the blossoming of entrepreneurship. More specifically, governments affect the physical and human infrastructure of the country and set the rules for the exercise of business activity, e.g. the framework of competition among firms, the institutional framework for labour relations, the limits of environmental impacts stemming from the operation of enterprises etc.

Based on the above, one could distinguish the factors influencing competitiveness into external ones, over which firms have limited or no control whatsoever, and internal ones that are completely under the control of firms (Fayerweather, 1978; Kobrin, 1976). Scholars have been arguing for decades that the two are inextricable. To link, therefore, the government performance, the economic and business performance and the other characteristics of the business environment of the host countries, in which a corporation locates value adding activities, with the corporation's strategy, motivations, capabilities and resources poses a serious challenge for CEOs.

The concept, however, of "national competitiveness" has been criticised in recent years (Lall, 2001; Krugman, 1994). Corporations are assumed to compete internationally for markets and resources. In this respect a corporate competitive strategy and performance can be objectively defined and measured. On a country level, though, the notion of competitiveness becomes less clear. Countries are not in competition with each other in a similar way corporations are (Porter, 1990). They do compete, however, with each other in order to attract investments; incidentally they compete to attract FDI from foreign firms and to align their policies with global challenges.

A number of studies (Kogut, 1988; Porter, 1990; Dunning, 1993; Nachum, 1998) emphasise the role of home country characteristics in determining the competitive position of national or multinational firms in international markets. According to Nachum (1998), the home country diamond (or the characteristics of the business environment - in Porters' terminology - at home) is more important in determining the competitiveness of Swedish firms compared to the host country's diamonds. However, the effect of the host countries' diamonds tends to increase with the internationalisation process and commitment to foreign environments.

Nevertheless, in a world of changes, the diamonds of many host countries may be subject to change and this has important implications for corporate competitiveness. The World Competitiveness Yearbook (WCY, 2007; Garelli, 2005) analyses and classifies the ability of countries participating in the annual survey to create and maintain an environment fostering the generation and strengthening of corporate competitiveness. In other words, the World Competitiveness Yearbook answers the following question: "How can nations and enterprises effectively manage the totality of their competitive advantages in order to achieve well being and realise profits?" According to the methodology utilised in the WCY, the national environment is divided into four main factors of competition: economic performance, government efficiency, business efficiency and infrastructure. In the following section we will build on MNEs' motivations and link those with the above mentioned factors.

3. Conceptual Framework – Hypotheses Development

International business literature has identified four key motivations (Berhman, 1984; Dunning, 1993; Filippaios et al., 2004) that drive company's internationalisation. Resource, market, efficiency and strategic asset seeking are the dominant ones. Each company can follow a single motive or as it happens in most cases a combination of two or more when deciding to internationalise.

Resource seeking (RS) is the most basic of all motivations for a firm's internationalisation. It refers to cases where the company is actively searching for resources abroad that are either inexistent or relatively expensive in its home country. Although most researchers when examining resource seeking motivations refer to primary materials or natural resources it is important to clarify that resource seeking encompasses also investments abroad that are related with other intangible resources, i.e. human capital, when those are in scarcity in the home country. The majority of resource seekers will be manufacturing companies and especially those with upstream activities that are in constant need of cheap and of good quality raw materials. The abundance, on the other hand, of natural resources in certain countries will attract primarily those resource seekers.

The second motivation that drives corporations abroad refers to market seeking (MS). This kind of motivation leads MNEs to establish production plants in specific countries in order to cater local or in broader sense regional markets[2]. This motivation is usually driven by either the size of the host market that can potentially provide the necessary volumes of demand that can lead to economies of scale in production or by the product specific characteristics that make local production necessary. This second part usually refers to a certain degree of product adaptation

[2] For example, the specific nature of MS behaviour in W. Europe has evolved as individual countries have entered the EU (Tavares, 2001 a,b; Tavares and Pearce, 2001), whilst MS has proved to be a major reason for MNEs' initial operations in the CEE transition region (Manea and Pearce, 2001; Lankes and Venables, 1996; Mutinelli and Piscitello, 1997).

either in the production, sales/distribution or after sales service. This market seeking motivation can be further strengthened by the existence of trade barriers in the form of tariffs or other non-tariff barriers[3]. This motivation is usually seen dominant in downstream manufacturing industries that deliver goods with substantial local adaptation and to certain fragments of the services sector, i.e. telecommunications, tourism and banking & finance where the products production and quality is determined primarily by the direct contact with the final consumer (Bartlett and Ghoshal, 1989).

This motivation is usually supplemented by efficiency seeking (ES) motives. In this case crucial for internationalisation is the cost structure of production and the potential benefits that an MNE can acquire by relocating its production from one country to another. This motivation has a rather dynamic aspect and requires a constant evaluation of the operational and cost needs of the multinational network. This motivation is also directly related with gaining cost competitive advantages by organising your production and distribution in the most efficient way. Although one could characterise the MS behaviour as leading to multi-domestic structures, this ES behaviour is closer to interdependent global strategies and usually pursued by industries where products are in the mature stage of their product life cycle (Vernon, 1966) or competition is first and foremost based on cost competitiveness (Porter, 1986).

All three motivations described above are related to MNEs that seek to enhance the benefits they can secure from their mature competitive technologies, as embodied in successful established products. The fourth motivation refers to a strategic asset or capability seeking (SAS)

3 In industrial economies MS investments by MNEs often emerged within the protectionist response to the 1930s recession, and was sustained by higher growth and continued trade restraints in the immediate post-war decades. The protectionist import-substitution strategies of the developing economies in the 1950s/1960s also induced MS investment by MNEs. Levels and changes of various protectionist policies and instruments as determinants of FDI have been included in several influential studies (Barrell and Pain, 1999a,b; Neven and Siotis, 1996; Kogut and Chang, 1991; Cullem, 1988).

motivation and addresses not intermediate but medium to long term goals of the company in its search for sustaining a competitive edge over the competition. This motivation can be seen in a variety of ways in which MNEs organise and in effect involve themselves within the national system of innovation (Nelson, 1993; Lundvall, 1992) of their host countries. This behaviour is usually associated with high technology industries, where the swift transition from one stage of the product's life cycle to the next creates a necessity for corporations to move rapidly into new product development.

The above analysis leads to the formulation of the four key hypotheses:

H1a: Corporate competitiveness will be positively related with resource seeking motivation in manufacturing upstream industries

H1b: Corporate competitiveness will be positively related with market seeking motivation in manufacturing downstream industries

H2a: Corporate competitiveness will be positively related with efficiency seeking motivation in mature manufacturing industries

H2b: Corporate competitiveness will be positively related with strategic capability seeking motivation in high tech manufacturing industries

The above motivations should be mirrored by the changes in the external environment. If for example we see a mature manufacturing company to establish itself in an environment with low labour costs then that should boost its competitiveness. If we see a manufacturing downstream company to invest in a location with abundant natural resource then we would expect a positive impact on its competitiveness. On the contrary if we see a high technology oriented company to invest in a less developed market then we would expect a smaller impact (positive) or even negative on competitiveness.

As most companies invest following a combination of the above motives we would expect the dominant motivation to determine the main effect but we would also expect all other motivations to play a smaller role. Usually a company will not invest in a location where the aggregate effect on competitiveness will be negative as this would not make sense.

4. Data and Sample description and discussion

The sample consisted of 70 firms from all industrial sectors. The 66% of companies are members of Federation of Industries of Northern Greece (FING) and the other 33% members of Federation of Greek Industries (SEV).

The survey commenced in November 2006 and lasted two months. The questionnaire, together with the cover letter from FINF, was posted to the high -level managers of 139 internationalized firms including vice-presidents/directors, presidents, general managers and department managers. The survey targeted people in positions most likely to be knowledgeable on firm's strategies and prospects, and particularly on the process, motives and obstacles of internationalisation of the firm and its growth path in the host countries. The letters, together with the questionnaire, had a personal and formal character.

Some days after each questionnaire was sent, a request was made by telephone for a meeting to complete the questionnaire. It was decided to request interviews with managers rather than simply requesting the return of the questionnaires, but the managers had the choice to simply mail in questionnaire if time did not permit an interview or if the questionnaire was standardised enough to complete without an interview. The survey was very welcomed and managers were very co-operative. Indeed, the researchers were treated most hospitably by the interviewees, and were often given a tour of the company too. Themes such as internationalisation, the international strategy of the firm, regional development, motives of internationalization and obstacles in the host countries were found to be very common and interesting to directors of the firms operating in Greece. The researchers gained new insights in each interview. For most of the firms, the questionnaire was completed during the interviews, but there were a few cases in which managers completed it and sent it by post or fax.

Two considerations generated the choice of the sample: firstly, that the sample should be representative of the Greek case, and secondly, that additional data could be combined with the data from public sources.

Our data capturing the external environment come from a combination of two databases. The key macroeconomic data come from the Economist Intelligence Unit, whilst variables capturing other structural characteristics of the economies come from the electronic version of World Bank's publication, World Development indicators. A summary of the variables description and the relative sources is provided in Table 2 whilst the basic statistics and a correlation table in Table 3.

Insert Table 2 here.

Insert Table 3 here.

Despite the fact that both databases offer a wide variety of variables that we could use in the analysis we selected, following Filippaios et al. (2004), those that we believe could capture the different motivations of the firms.

5. Methodology

Our dependent variable is an ordered discrete variable taking the values from 1 to 5 for the two time periods under investigation. In this case the most efficient way of estimating the effect of the external environment on the competitiveness of the corporations participating in our sample is to use an ordered logit model (Maddala, 1983). In this case we wanted to fit an ordinal dependent variable on the independent variables capturing the external environment. Although the actual values taken by the dependent are irrelevant the assumption that the model does is that higher values correspond to a higher outcome, i.e. in our case higher corporate competitiveness. As our dependent variable though comes from specific firms in two time periods we decided to follow a methodology suggested by Carro (2006) with certain modifications as again suggested by Honore and Kyriazidou (2000). This enabled us to use firm and time effects for our estimations and separating thus the individual effect of companies from our results.

6. Empirical Findings

We proceeded in two steps with our results. Table 4 presents four different estimations for the full sample of companies whilst, in order to get the more insightful sectoral breakdown, Table 5 presents similar estimations for downstream and upstream manufacturing separately. The overall explanatory power of the different models is good with the last model (model 4) encompassing all others according to the Akaike Information Criterion. The market seeking motivation of Greek companies investing abroad is evident from the positive and strongly statistically significant results of both the GDP growth (GDPGR) as well as the GDP per head (GDPPC).

Insert Table 4 here.

In all different specifications (models 1 to 4) both variables are positive and significant demonstrating that the existence of a strong local market in combination with positive future prospects as captured by the growth variable can influence in positive way the corporate competitiveness. On the other hand labour costs as captured by the unit labour cost change, although they show the hypothesised, by the efficiency seeking motivation, sign fail to be significant but in one model (model 1 which is also the simplest one). This is a really interesting finding for most Greek companies as most studies, up until now, show a strong efficiency seeking motivation that usually complemented the market one. The openness of the economy as captured by the trade balance is never significant and the small size of the coefficient also demonstrates the small explanatory power of the variable on the corporate competitiveness. Human resource availability of skills is an important factor for corporate competitiveness especially with respect to primary (LPRI) and secondary (LSEC) education as both variables are positive and remain significant irrespective of the model's specification. The sign for the tertiary (LTERT) education is the right one but the variable does not become significant. This possibly reflects the transfer of low and medium technologies on behalf of the Greek companies abroad with a consequent creation of higher value added activities in Greece. In terms of the infrastructure related variables, mobile subscriptions (MOBS) is positive and significant showing that can positively influence the corporate competitiveness. This can also capture some qualitative aspect of a sophisticated demand. This variable is complemented by the royalties and fees payments over receipts (RLFEES) which never becomes significant. Finally, taxes on international trade (TAXINTTRADE) are not significant, showing though the hypothesised negative sign.

Table 5 presents our results when breaking down the sample to downstream and upstream manufacturing companies.

Insert Table 5 here.

The overall explanatory power of the models is good with the services model over performing the one for manufacturing companies. Again the market seeking motivation and the market related variables show strong positive statistical association with corporate competitiveness. The distinction between the two models though comes through the GDP per capita (GDPPC) variable that positively influences only the competitiveness of companies active in downstream manufacturing. This is not unexpected as companies rely usually on high added value activities and are more relevant to consumers' buying power than downstream manufacturing companies. Conversely, the labour costs (ULCCH) do affect the competitiveness of the upstream manufacturing companies whilst the variable remains insignificant for the downstream manufacturing ones. Greek manufacturing companies rely on securing cheap labour force to remain competitive in a changing global environment. This represents a key motivation for Greek companies when investing abroad. Human skills variables affect only the downstream manufacturing companies' competitiveness always in a positive way. In this case not only the primary (LPRI) and the secondary (LSEC) education is important but also the tertiary (LTERT) education affects in a positive and statistically significant way the competitiveness. Mobile phone subscriptions (MOBS) have an identical effect to both cases, i.e. positive and significant whilst the taxation (TAXINTTRADE) has again a negative but insignificant effect. Finally, the royalties and fees payments over receipts is positive and statistically significant for downstream manufacturing only, demonstrating the availability of an existing foreign base of similar firms that at the same time can repatriate profits through charging fees and royalties.

7. Conclusions

In this study we explored the effect of the external environment on corporate competitiveness. Using a representative sample of Greek corporations investing abroad we associated their investment decisions with changes in the local environments and their perceptions on their competitiveness position change. From a managerial perspective the key finding of the current study is that before any investment abroad there should be a carefully examination between the corporate motivations and the possible future changes in the external/country environment. If both motivations and locational characteristics are in alignment this can generate competitive gains for the company and eventually provide the necessary edge over competition. Where, though, the corporate motivations are not fully aligned with changes in the local environment, either due to miscalculation of the changes or in many cases changes in government policies, this can create problems to the corporate goal for competitiveness. From a policy makers perspective the findings are more straightforward. Although there is always scope to create flexibility in the labour markets and the necessary conditions for lower wages this will not bring substantial benefits. It is the existence of a strong local market, the human skills and a well developed infrastructure that provide the ground for creating corporate competitiveness. Policy makers should therefore focus on education, infrastructure building and possibly on creating enough buying power for the local consumers.

This study does not come without its limitations. It is of course a single country study when it comes to the country of origin. The variety of countries where our sample companies have invested though makes us feel that our results cover a much broader scope than a single country study would have. It is also worth mentioning that our measure of competitiveness is not an objective one but rather measures the managers' perceptions on their corporation and therefore it might be in some cases overvalued. Finally, the data selected for the independent variables could be further expanded to capture also institutional factors of the local economies that according to recent literature do affect the country's ability to create a competitive environment.

This is the first attempt towards understanding the interrelationship between the external environment and the corporate competitiveness. Our next step would be to add into the analysis corporate characteristics and examine whether those are also in alignment with the companies' goals and the external environment. This will eventually give us a more complete and coherent picture of the interrelation between the internal (corporate) and the external (country) environment in creating competitiveness.

TABLES

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
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
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, Various Years and Authors' Calculations

Table 2. Variable Description and Sources

Variable	Description	Source
COMPET	Competitiveness as captured by survey responses	Authors' questionnaire
GDPGR	Real Gross Domestic Product Growth (% pa)	Economist Intelligence Unit
GDPPC	GDP per head (US $ at PPP)	Economist Intelligence Unit
ULCCH	Unit Labour Costs (change per annum)	Economist Intelligence Unit
TRABAL	Trade Balance	Economist Intelligence Unit
LPRI	Labour Force with Primary Education (% of Total)	World Development Indicators
LSEC	Labour Force with Secondary Education (% of Total)	World Development Indicators
LTERT	Labour Force with Tertiary Education (% of Total)	World Development Indicators
MOBS	Mobile Phone Subscribers (per 100 people)	World Development Indicators
RLFEES	Royalties and Fees Payments over Royalties and Fees Receipts (BoP, US $ PPP)	World Development Indicators
TAXINTTRADE	Taxes on International Trade (% of Public Revenue)	World Development Indicators

Table 3. Correlation Table and Basic Statistics

	Obs	Mean	St.Dev.	Min	Max	COMPET	GDPGR	GDPPC	ULCCH	TRABAL	TAXINTTRADE	LPRI	LSEC	LTERT	MOBS	RLFEES
COMPET	640	3.10	1.32	0.00	5.00	1										
GDPGR	640	4.19	2.89	-4.30	13.30	0.1678*	1									
GDPPC	640	18945.75	12371.94	1756.40	50146.00	0.2397*	-0.4492*	1								
ULCCH	640	7.37	8.27	-5.70	46.45	-0.2323*	0.1599*	-0.4204*	1							
TRABAL	640	-5.54	109.97	-838.27	217.75	-0.0256	0.1305*	-0.2047*	0.1175*	1						
TAXINTTRADE	640	3.35	6.29	-16.19	29.37	-0.2024*	0.0404*	-0.3670*	0.2988*	0.0121	1					
LPRI	640	23.78	14.17	6.40	64.00	0.1212*	-0.1965*	-0.1230*	-0.1677*	0.0952*	-0.1101*	1				
LSEC	640	43.90	18.21	4.80	78.30	-0.0321	-0.0121	0.1202*	0.1660*	0.1792*	-0.4131*	-0.6129*	1			
LTERT	640	28.52	14.49	3.60	67.70	-0.0475	0.1077*	0.2457*	0.0046	-0.3413*	0.1508*	-0.4206*	-0.2422*	1		
MOBS	640	61.67	33.21	1.26	127.51	0.4178*	-0.2249*	0.7361*	-0.2311*	-0.0286*	-0.2901*	-0.0058	0.2344*	-0.0648*	1	
RLFEES	640	10.20	21.98	0.00	150.07	0.0506	0.2828*	-0.2558*	0.0870*	0.0981*	-0.1224*	-0.0651*	-0.0541*	0.1563*	-0.2083*	1

* denotes significance at 5%

Table 4. Ordered Logit estimation of External factors influencing competitiveness (Dependent variable: Corporate competitiveness)

	Model 1	Model 2	Model 3	Model 4
GDPGR	0.619***	0.536***	0.549***	0.377***
	(0.059)	(0.063)	(0.066)	(0.117)
GDPPC	0.003***	0.004***	0.005***	0.004*
	(0.001)	(0.001)	(0.002)	(0.001)
ULCCH	-0.034*	-0.030	-0.029	-0.035
	(-0.020)	(-0.019)	(-0.021)	(-0.024)
TRABAL	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
LPRI	0.113**	0.112**	0.120**	0.243*
	(0.044)	(0.045)	(0.056)	(0.136)
LSEC	0.080**	0.083**	0.089*	0.203*
	(0.040)	(0.041)	(0.052)	(0.121)
LTERT	0.053	0.061	0.066	0.207
	(0.040)	(0.041)	(0.053)	(0.126)
MOBS		0.019***	0.017***	0.024***
		(0.005)	(0.005)	(0.007)
RLFEES			0.008	0.019
			(0.013)	(0.018)
TAXINTTRADE				-0.034
				(-0.044)
Number of Obs	640	640	640	640
Wald Chi2	138.3	143.51	147.2	114.49
Pseudo R2	0.0978	0.1061	0.112	0.1047
Akaike Info Crit	1459.052	1447.878	1393.847	1078.713

Robust Standard Errors in parenthesis

*** denotes statistical significance at 1%, ** denotes statistical significance at 5%, * denotes statistical significance at 10%

Table 5. Ordered Logit estimation of External factors influencing competitiveness by Manufacturing and Services (Dependent variable: Corporate competitiveness)

	Upstream Manufacturing	Downstream Manufacturing
GDPGR	0.280*	0.340*
	(0.153)	(0.201)
GDPPC	-0.001	0.005***
	(-0.001)	(0.001)
ULCCH	-0.061*	-0.013
	(-0.034)	(-0.042)
TRABAL	-0.001	0.004
	(-0.001)	(0.003)
LPRI	0.294	0.647**
	(0.184)	(0.325)
LSEC	0.248	0.565*
	(0.162)	(0.29)
LTERT	0.261	0.583*
	(0.167)	(0.312)
MOBS	0.031***	0.018*
	(0.011)	(0.011)
RLFEES	-0.001	0.045*
	(-0.025)	(0.024)
TAXINTTRADE	-0.041	-0.009
	(-0.062)	(-0.053)
Number of Obs	460	180
Wald Chi2	58.15	99.39
Pseudo R2	0.082	0.204
Akaike Info Crit	711.159	363.391

Robust Standard Errors in parenthesis

*** denotes statistical significance at 1%, ** denotes statistical significance at 5%, * denotes statistical significance at 10%

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Appendix

Data collection – Information about the sample

The empirical survey, from which have drawn the results of some questions in a closed-type questionnaire, was created the period between September 2006 - January 2007. The survey's data process and the related statistic analysis were completed in June 2007.

The survey dealt with:

1. the incentives, strategies and barriers of the Greek companies that have set up and operate an affiliate/subsidiary company abroad, and
2. the incentives, strategies and barriers of Greek companies that develop only an export activity

The parameters that have been examined in the frame of the survey were:

1. the internationalization incentives,
2. the benefits from the internationalization development actions,
3. the strategies that the Greek internationalized companies are following, and,
4. the barriers that the companies are facing in their involvement in new markets

In this survey had participated totally seventy (70) companies: 40 affiliated, which means Greek companies that own an affiliated abroad, and from now and own will be mentioned as "affiliated" in brief, and 30 "exporting", that means Greek companies that develop exporting activity abroad, and from now and on will be mentioned "exporting" in brief.

Finally, the ratio between "affiliated"/"exporting", that concerns the geographical orientation was: 65% from Northern Greece and 35% from Athens.

IMD methodology[4]

The IMD World Competitiveness Yearbook (WCY) is the world's most thorough and comprehensive annual report on the competitiveness of nations, published without interruption since 1989.

It is considered to be the first access point to world competitiveness, providing objective benchmarking and trends, as well as a worldwide reference point to statistics and opinion data that highlight the competitiveness of key economies. The WCY analyzes and ranks the ability of nations to create and maintain an environment that sustains the competitiveness of enterprises. An economy's competitiveness cannot be reduced only to GDP and productivity because enterprises must also cope with political, social and cultural dimensions. Therefore nations need to provide an environment that has the most efficient structure, institutions and policies that encourage the competitiveness of enterprises.

The essential building block for the rankings is the standardized value for all the criteria, which IMD calls the STD value. The first step is to compute the STD value for each criterion using the data available for all of the economies Then IMD ranks the economies based on the 254 criteria that are used in the aggregation, 131 Hard and 123 Survey data. The additional 77 criteria are presented for background information only. They are not included in the aggregation of data to determine the overall rankings. In most cases, a higher value is better, for example, for Gross Domestic Product; the economy with the highest standardized value is ranked first while the one with the lowest is last. However, with some criteria the inverse may be true, where the lowest value is the most competitive, for example, Consumer Price Inflation. In these cases, a reverse ranking is used: the economy with the highest standardized value is ranked last and the one with the lowest is first.

The World Competitiveness Yearbook (WCY) analyzes and ranks the ability of nations to create and maintain an environment which sustains the competitiveness of enterprises. It means that IMD assumes that wealth creation takes place primarily at enterprise level (whether private or state-owned) - this field of research is called: "competitiveness of enterprises". However, enterprises operate in a national environment which enhances or hinders their ability to compete domestically or internationally - this fi eld of research is called: "competitiveness of nations" and is covered by the WCY.

Based on analysis made by leading scholars and by its research and experience, the methodology of the WCY thus divides the national environment into four main factors:

- Economic Performance

- Government Efficiency

- Business Efficiency

- Infrastructure

In turn, each of these factors is divided into 5 sub-factors which highlight every facet of the areas analyzed. Altogether, the WCY features 20 such sub-factors. These 20 sub-factors comprise more than

[4] Source: IMD WCY 2008

300 criteria, although each sub-factor does not necessarily have the same number of criteria (for example, it takes more criteria to assess Education than to evaluate Prices). Each sub-factor, independently of the number of criteria it contains, has the same weight in the overall consolidation of results, that is 5% (20x5 =100).

Criteria can be hard data, which analyze competitiveness as it can be measured (e.g. GDP) or soft data, which analyze competitiveness as it can be perceived (e.g. Availability of competent managers). Hard criteria represent a weight of 2/3 in the overall ranking whereas the survey data represent a weight of 1/3. In addition, some criteria are for background information only, which means that they are not used in calculating the overall competitiveness ranking (e.g. Population under 15). Finally, aggregating the results of the 20 sub-factors makes the total consolidation, which leads to the overall ranking of the WCY.