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Foreign Divestment in the Integration Development Path of Greece

Abstract: Research on Investment Development Path (IDP) primarily focuses on conventional FDI. Instead, our study extends the IDP to explore foreign divestment within the European integration process approaching foreign divestment risk as the outcome of an interaction between regional integration and economic development. This is the main contribution of the study. In particular, the paper explores divestment risk when the emerging economy of Greece enters the single market which is considered as a crucial turning point for its development path. The analysis focuses on the divestment outcome of 162 MNE subsidiaries established during the protectionism era and finds considerable manufacturing divestment during the transition from protectionism to regional integration in spite of the positive development of the Greek economy. However, the divestment effects of the individual explanatory variables used in the study are asymmetrical. The findings provide useful lessons for economic policy in emerging economies entering a developed integrated area, having interesting integration and FDI policy implications and venues for future research.

Keywords: foreign divestment, IDP Paradigm, European integration, turning point of development path

1 Introduction

The IDP Paradigm in a stage-wise progression connects five different development stages with several types of FDI (Narula and Dunning, 2000; Narula and Dunning, 2010). In its later version Narula and Dunning (2010) emphasize the importance of points of inflection (turning points) during the IDP and the threshold levels of absorptive capacity (e.g., human capital, infrastructure) without which countries fail to “take off”. However, despite the existence of a rich IDP literature (Ragoussis, 2011; Narula and Guimãn, 2010; Kayam and Hisarciklilar, 2009; Fonseca et al., 2007; Galan et al., 2007; Barry et al., 2003; Buckley and Castro, 1998), the Paradigm ignores foreign divestment primarily focusing on attractive direct investment in each development stage.

Our paper aspires to shed light in an emerging economy that actively participates in the European integration explaining how foreign divestment occurs when the economy reaches a strategic turning point of IDP. The specific point can be located during the transition from the second to the third stage of the Paradigm that might cause a qualitative transformation of assets and create a quite different operational context of MNE subsidiaries than that of their establishment. This transition initiates an industrial restructuring reflected in the substitution of traditional assets (e.g. labor, tariffs) through created assets in more advanced sectors and high-tech industries. For

methodological reasons we distinguish the above process into two main contrasting poles. The left pole contains the IDP stages 1 and 2 that are characterized by the exploitation of traditional advantages (unskilled labor, tariffs) in emerging, mostly protected economies. The right pole includes the three subsequent stages that are closely related to created-asset advantages (especially stages 4 and 5) of economically developed countries (Narula and Dunning, 2010; Galan et al., 2007). Consequently, movements within each pole (i.e., from stage 1 to 2 or from stage 4 to 5) might indicate smooth structural changes that adapted through flexible institutions can enable corresponding countries to accommodate structural alterations. However, the transition from the left to the right pole (that is, especially the entry from the second into the third IDP stage) becomes a critical turning point, since this marks a qualitative change from an investment driven economy into an innovation driven economy. This point of inflection might represent a gradual replacement of Heckscher – Ohlin industries through differentiated industries and innovation-intensive Schumpeterian sectors. Therefore, at this point, emerging economies might demonstrate a dual or multiple economic structure with the co-existence of traditional and high-tech activities (Narula and Dunning, 2010). Which of the two types of activities will prevail remains an open question and will determine divestment phenomenon.

Industrial structural effects might become stronger when development overlaps with regional integration (e.g. Narula and Dunning, 2010; Benito et al. 2003; Buckley and Castro, 1998). Integration process might increase the risk of deindustrialization of emerging economies (instead of increasing economic catch-up and convergence with the developed countries) through the intensification of competition due to abolishment of trade barriers (tariffs) and the single market effect. More specifically, in the context of European integration, advanced economies in the core might benefit more from scale economies and proximity to large markets at the expense of peripheral Mediterranean economies such as Greece or Portugal mainly possessing traditional advantages like low wages and tariffs (e.g., Krugman and Venables, 1990, 1996). This might

generate a strategic reaction of MNEs with important divestment implications in the periphery that can be caused by the reorganization of their spatial distribution seeking for more efficient exploitation of comparative advantages of the various member countries (e.g., Benito et al., 2003; Pearce and Papanastassiou, 1997). Overall, the driving forces of development and integration act together showing the need to integrate critical integration elements into the development procedure in order to reveal the idiosyncratic nature (i.e., each country follows a unique and individual IDP; Narula and Dunning, 2010) of the *integration development path*. Although the IDP Paradigm extensively analyzes globalization and liberalization (Narula and Dunning, 2000), it does not incorporate into its stages model integration elements. For instance, the Paradigm does not take into account the different nature of market-seeking MNE subsidiaries across individual development stages as in the period of protectionism they may exploit tariff protection, whereas in the integration they mainly seek for market proximity and product differentiation.

The above methodological point of view fully matches the needs of our empirical research as defined by the particular *integration development path* of the Greek economy. Our empirical analysis focuses on MNE subsidiaries operating in Greece during a forty year period (1960-2001). The integration development path of the specific economy is directly interrelated with a relatively liberal trade regime. Greece joined the EEC/EU in 1981 which reflects the most important turning point of its development path in terms of the passage from protectionism (1960-1980) to integration (1981-2001).

The study contributes to the existing literature as follows: To the best of our knowledge this is the first work that utilizes the IDP Paradigm for the explanation of foreign divestment instead of investment, thus, its methodological approach extends the IDP research that explicitly focuses on conventional FDI. Moreover, the study incorporates into the IDP the dynamic conditions of European integration effectively combining regional integration and economic development effects. Further, our analysis adopts the suggestion of Narula and Dunning (2010) as regards the

importance of turning points of a country during the IDP primarily explaining foreign divestment because of failure of the Greek economy to “take off”.

2. Literature review

There is a relatively rich literature on IDP however focusing on investment and development (e.g., Dunning et al., 2013; Buckley, 2012; Ragoussis, 2011; Narula and Dunning, 2010; Narula and Guimón, 2010; Kayam and Hisarciklilar, 2009; Fonseca et al., 2007; Galan et al., 2007; Barry et al., 2003; Narula and Dunning, 2000; Buckley and Castro, 1998; Dunning, 1981), and not divestment as our study does.

The idea of an “investment development path” was introduced by Dunning (1981) as a dynamic approach within the paradigm of ownership, locational and internationalization (OLI) advantages. Subsequently, Narula and Dunning (2010; 2000) evolve further the IDP approach hypothesizing an association between a country’s level of development proxied by GDP per capita and its international investment position captured by net foreign direct investment stock (outward minus inward FDI stocks). Their analysis takes into consideration that a host country goes through five stages of development linked to different industry specialization and different types of FDI correspondingly. In particular, in the first stage host countries possess limited locational advantages in unskilled labor – intensive activities resulting in relatively low inflow FDI. In the second stage traditional locational advantages again lead to a growing inward FDI activity, *inter alia* in order to utilize new opportunities in protected local markets. In the third stage created-asset L advantages such as product differentiation, agglomeration economies, and human capital take effect and promote FDI in more innovation-based activities and in highly differentiated branches. In the last two stages created L advantages accumulate in innovation-intensive Schumpeterian sectors and differentiated industries, thus creating a knowledge economy and the necessary conditions for the growth of advanced and market-oriented FDI.

In addition, there are some attempts to further improve the IDP context. So, Dunning et al. (2013) incorporate trade aspects into the IDP suggesting that there is a certain interface between the IDP and the trade development path (TDP), especially in created asset-intensive industries. Further, Narula and Guimón (2010) propose that IDP analysis should also take into account the idiosyncratic economic structure of countries and the heterogeneous nature of FDI emphasizing the turning points in a country's IDP. In turn, Buckley (2012) approximates critically the work of Dunning, especially those referring to Development Paradigm, revealing its gradual character. Moreover, in the framework of IDP, Ragoussis (2011) explores the importance of spatial determinants for the emergence of inward and outward FDI.

Surely there are also other empirical studies supplementing the core literature. For instance, Buckley and Castro (1998) investigating the case of Portugal propose that the IDP is substantially influenced by government policy and European integration policy reflected in Portugal's accession to the European Economic Community. Also, Fonseca et al. (2007) concentrate on the Portuguese economy and discuss FDI in the local economy based on the IDP theory. Galan et al. (2007) examine the most important factors for the locational decisions of Spanish MNEs in FDI, considering host countries at different levels of economic development (Latin America, EU). Boudier-Bensebaa (2008) explores FDI in Central and Eastern European economies and concludes that these economies are at stage one or two of the IDP and are diverging from EU15 in terms of outward investment position but converging in terms of GDP. Finally, Kayam and Hisarciklilar (2009) introduce a non-linear fluctuation approach to effectively capture the idiosyncratic nature of the IDP and better explain the specific development stage a country is at.

3. The integration development path of Greece

Assessing the IDP course of the Greek economy, it becomes clear that Greece passed successfully the first two IDP stages in the 1960s and 1970s (protectionism) with substantial GDP growth rates

and a large amount of FDI inflows. At that time, many foreign MNEs entered the economy to exploit either the protected local market or unskilled labor. In 1981, which might be considered as a crucial turning point, Greece became full member of the EEC/EU. In the two subsequent decades foreign MNEs faced strong international competition due to the single market effect. There is strong evidence that at that time Greece had partially the traits of developing economies such as low labor cost and tariffs (stages 1 and 2 of the IDP) and partially the traits of more developed economies (mainly those of stage 3) expressed in the appearance of industries with product diversity and the superiority of outward FDI relative to inward FDI. In the new environment, labor costs were rising compounding the international competitive position of the economy and trade barriers were decreasing leading to intensified import competition in the local market. These trends caused a wide foreign divestment activity that requires systematic investigation.

Table 1 indicates significant industrial structural changes. As Greece became a full member of the EEC/EU, the abolition of protectionism increased the percentage of imports in total domestic consumption from 23.6% in 1980 to 51.8% in 2001 (Table 1), whereas export trend rose to a lesser extent, from 18.4% in 1981 to 27.4% in 2001. Moreover, manufacturing output was often recorded at the 1980 level or lower (Table 1), especially that of capital goods. By the end of the period under investigation, the Greek economy has been already transformed into a service-oriented economy (Table 2) as the share of the services sector of GDP grew from 49.7% in 1980 to 63.7% in 2001 (though a large part of the services were provided by the state: non-business services), whereas the corresponding share of manufacturing decreased from 15.2% in 1980 to 13.1% in 2001 and the primary sector (e.g. agriculture, fisheries) showed high losses. However, while GDP per capita was rising continuously, the number of surviving subsidiaries declined substantially after 1980 although some important cross-border acquisitions took place in the integration period (Figure 1). So, GDP growth was associated with widespread deindustrialization and significant MNE divestment.

Tables 1 and 2 about here/

Figure 1 about here

The study explores the strategic reaction of foreign MNEs to the external change, using a unique dataset consisting of 162 manufacturing MNE units, which were established in the country during the era of protectionism (1960-1980) (Table 3). The study excludes from the analysis cross-border acquisitions that happened in the integration era as its primary research aim is the divestment investigation of existing subsidiaries and not the exploration of new establishments.

We identify the sample subsidiaries in the official lists provided by all Foreign Chambers of Industry and Commerce based on Greece. The lists contain all foreign manufacturing units that operate in the country from year to year, with full data such as address, location, year of establishment, management, product groups, and industrial sector.

Due to reliable information available for the whole period under examination, we could follow the survival outcome of all these units up to the year 2001 and conclude that out of a total of 162 subsidiaries, 77 (47.5%) ceased to operate, while 85 (52.5%) could survive (Table 3). The net survival outcome was positive (survivors > closures) mainly in industries such as foods and chemical products and negative across several industries such as those of textiles, clothing, non-metallic minerals, machines and transportation.

Table 3 about here

4. The context of integration development path

Following the recent literature on firm divestment (for example Görg and Bandick, 2010) we apply the complementary log-log model (cloglog) which is equivalent to the discrete time version of the proportional hazard model. The hazard risk of a subsidiary closing at time t is formulated as:

$$h(t) = h_0(t) \exp(bX) \quad (1)$$

where $h(t)$ represents the rate at which subsidiaries close at time t given that they have survived until $t-1$, conditional on several covariates, $h_0(t)$ is the baseline hazard rate at time t when all of the covariates are set to a specific value.

For the specific purposes of the econometric analysis the study subsequently applies the following models. Models 1 and 2 analyze the full sample without interaction effects. Due to possible multicollinearity between the variables of GDP per Capita (GCAP) and integration (INTEGR), we exclude the variable INTEGR from the first model and the variable GCAP from the second model accordingly. Subsequently, due to importance of the technology factor (TECH) within IDP, we divide our sample according to technological intensity of the industry and run model 3 only for the high-tech industries, and model 4 only for the traditional industries. In addition, models 5 and 6 refer to the full sample with interaction effects. Model 5 comprises the interaction of the variables LABO (unskilled labor), TARIF (tariffs) and PDIF (product differentiation), interacting with the variable GCAP, whereas model 6 contains the interaction effects of the same variables with the variable TECH.

Three explanatory macroeconomic measures are used in the models (Table IV). These measures include GDP per capita (GCAP), integration (INTEGR), and tariffs (TARIF). Additionally, the robustness of the analysis is increased by using eight control variables, such as product differentiation (PDIF), business size (SIZE), year of business establishment (YEST), labor costs (LABO), technology-intensity of industry (TECH), openness of industry (OPEN), kind of industry (INDU), and physical distance between home and host country (DIST). Finally, interaction effects are incorporated in the models to potentially find out considerable relationships within the integration path of the country.

The rationale for the choice of the specific variables is as follows. The crucial point in the empirical investigation is to capture the divestment impact of the critical turning point where the

Greek economy entered the EU (1981). This becomes possible through the variables INTEGR and TARIF. The first variable expresses the passage from protectionism to integration, while the second variable measures the reduction of tariffs during the integration procedure having considerable divestment implications. In addition, a main suggestion of IDP (Narula and Dunning, 2000 and 2010) is the positive link between economic development and GDP per capita (GCAP) rises with ambiguous divestment effects. More precisely, economic development process influences location attractiveness twofold. The cost of utilizing unskilled labor rises as the country intensifies its use and, hence, the siting of production in labor-intensive activities (LABO) becomes gradually less attractive to foreign investors and eventually fades out (e.g., Bernard et al. 2006). At the same time, the integration process favors the development of created assets and *inter alia* the operation of units in differentiated industries (PDIFF). Furthermore, business size (SIZE) indicates economies of scale with positive survival prospects. Moreover, the inclusion of the year of establishment (YEST) in the models allows the examination of accumulated experience effects (as suggested by organizational learning perspective) in divestment risk. Also, the Greek integration path had a beneficial impact on traditional industries such as food and beverages with natural-based assets against of technologically advanced sectors (TECH) such as those of machinery, transportation etc. (Hallet, 2000; Midelfart-Knarvik *et al*, 2000) that exhibited international disadvantages and an increasing divestment risk. The literature on IDP (e.g., Dunning et al., 2001) suggests that economic development of a country is also shaped by its trade development path (TDP) that can be described as the development of national exports and imports in the global markets reflected in the degree of openness of the economy. Therefore, Dunning et al. (2001) support the idea of an integrated IDP and TDP in terms of a positive correlation of variables such as FDI, foreign trade, GDP per capita and created-asset intensity of industries. From this point of view, the two paths should interact with each other and determine the divestment outcome of MNE subsidiaries. This notion, lately, started to gain importance in the research interest among

international business scholars (e.g., Colantone and Sleuwaegen 2010). Therefore, the variable openness (OPEN) is utilized as a crucial proxy for divestment effects of external trade relations expecting that operation in an open, integrated environment might increase efficiency and reduce divestment risk. The variable INDU aims to capture industry dispersion effects on divestment. Finally, the variable of physical distance (DIST) between Greece and the home country may indicate trade costs such as transport costs that lower divestment probability. The definition of the selected variables is presented in Table 4.

Table 4 about here

5. Empirical results on the Greek integration development path

The sample period correlations between the independent variables are relatively low (all Pearson coefficients < 0.7), with an exemption to the case of GCAP and INTEGR (0.90), which reveals that economic development is positively associated with integration procedure (Table 5). Therefore, the above two variables are examined separately in our econometric technique, giving more emphasis in the GCAP variable. No serious multicollinearity problems were detected in the regression estimation since the largest variance inflation factor (VIF) was 2.0, which is much lower than the multicollinearity threshold of 10.

Table 5 about here

For the better understanding of the econometric results, we note that a positive sign of an estimated coefficient represents an increasing divestment risk and *vice versa*. The regression results of the six models are presented in Table 6. In particular we found that as the economy enters the EU (INTEGR) and achieved a higher per capita income (GCAP), many mature subsidiaries tended to close down, since they became “out of date”. In turn, a gradual reduction of TARIF increased exit risk since low tariff levels decreased trade costs for MNEs substantially. Simultaneously, a

continuous increase in labor unit cost (LABO) facilitated divestment, whereas product differentiation hampered it. Furthermore, it was found that rising current SIZE increased divestment, reversely, subsidiaries targeting on relatively smaller market segments could improve their survival chances. Moreover, YEST has a negative sign (even with different statistical significance across the models), indicating that relatively later establishments were exposed to lower exit risk, as these subsidiaries were better prepared to adjust to the single market conditions as compared to earlier establishments. Additionally, subsidiaries located in high-TECH industries had less survival chances compared to those operating in traditional branches. Furthermore, operation in an open environment (OPEN) limited divestment risk, as this might strengthen the culture of efficiency of the foreign units which have to be more innovative by following product differentiation strategies. The divestment impact of industry dispersion (INDU) across all models appeared to be ambiguous with changing significance, while the physical distance (DIST) variable had a divestment effect though local production could save transport costs. Potentially for Greece the immense geographical distance with the home country might cause high managerial and communication costs for the parent firm.

Models 5 and 6 with the interaction effects support all of the abovementioned findings and provide new insights in the divestment phenomenon, in particular as regards the interaction of PDIF with GCAP and TECH correspondingly. In model 5, the interaction of PDIF with GCAP reveals that product differentiation could reverse the negative survival impact of economic development (GCAP). Similarly, in model 6, the interaction of PDIF with TECH shows that product differentiation can be a stimulating survival factor in high-tech industries, fully offsetting the positive divestment effect of technology-intensive branches.

Table 6 about here

The aforementioned results are consistent with our conceptual framework leading to interesting policy implications and venues for future research, which we briefly present next.

6. Conclusions

Exploiting the central ideas of the IDP on critical turning/ inflection points of development and the particular idiosyncratic nature of the IDP for each country (Narula and Dunning, 2010), the paper specified the Paradigm and developed the appropriate conceptual framework for the analysis of foreign divestment in the Greek economy. Since the development profile of Greece was decisively shaped by its transition from protectionism to European integration (in 1981), regional integration effects were incorporated systematically into the analysis, thus extending the IDP concept. The specific transition reflected a strategic turning point of the development process as at that time the country attempted to enter the third IDP stage with painful structural effects. The analysis revealed that MNE subsidiaries established in the distant past became non-competitive and shut down due to exploitation of traditional advantages such as unskilled labor and tariff protection. The MNE subsidiaries shut down as they had to operate under quite different positions as compared to those of their establishment. At the same time, integration favoured subsidiaries with product differentiation, indicating its asymmetry divestment effects. Thus, the structural effects of integration and development overlap and work together, shaping the evolutionary and divestment process decisively.

The study revealed the importance of foreign divestment within the IDP given that extant IDP research has completely ignored the specific issue concentrating on conventional FDI; although the main theoretical representatives of the Paradigm (Narula and Dunning, 2000; 2010) have not ruled out the pessimistic development scenario speaking about industrialization “failures”. Nevertheless, Narula and Dunning (2000; 2010) promote rather more a smooth gradual transition of emerging economies during their economic development process than the activation of wide

disruptive effects (Buckley, 2012). Our study exhibited that the opposite scenario might be realistic as well supporting by Narula and Guimón (2010) who claim that emerging economies cannot internally absorb external events that might cause a large scale restructuring, even a structural shock, within their economic system. From our point of view, such a structural shock that took place in Greece at the early European integration stages caused a substantial divestment in the local economy. In this way, the paper captured the European integration effects on foreign divestment and this can be considered as another novelty within the relevant literature. It should be underlined that although the main IDP scholars (Narula and Dunning, 2000 and 2010) recognize the importance of regional integration they do not systematically incorporate strong integration elements to the individual IDP stages. Given the specific structural weakness of the IDP, the study adds value to the *integration development path* of Greece locating a critical turning point that connects two quite different institutional and political regimes (protectionism vs. integration) with contrasting driving forces and complex interactions that facilitate divestment process.

To sum up, the study offers some important contributions to the IDP literature. Firstly, to the best of our knowledge this is the first paper on the IDP Paradigm which explain foreign divestment instead of investment, thus, its analysis extends the current IDP research that explicitly focuses on traditional FDI. Secondly, the study places foreign divestment in a complex framework effectively combining regional integration and economic development effects. Finally, our paper utilizes a central element of IDP concerning turning points of development (Narula and Guimón, 2010; Narula and Dunning, 2010) to explain foreign divestment. In particular, we show that the failure of the Greek economy to “take off”, in other words, effectively to replace traditional industries via high-tech activities and thus reaching higher stages of IDP is a considerable source for divestment.

The empirical analysis has some relevant policy implications. In particular, this demonstrates that membership (in a regional agreement) itself might become a significant asset, but this might initiate considerable MNE divestment. However, it cannot be ruled out that European integration effects on divestment would be milder in the late integration stages, especially in the period of entry of Greece in Eurozone (2002 onwards), which is not included in the analysis. This is because Greece's participation in the Eurozone was connected with a certain macroeconomic improvement such as lower inflation, lower interest rates and more political economic stability, at least till the advent of the current crisis. This might imply a certain mitigation of divestment risk of businesses which already gained substantial experience on structural adjustment at the early integration stages.

To illustrate, in order to gain access to the EMU Greece followed a macroeconomic policy which targeted the nominal imbalances of the economy during the period 1994-2000. Thus annual inflation was reduced from 7.9% in 1996 to 3.9% in 2002; long term interest rates were reduced from 14.4% to 5.1% over the same period. The annual government deficit was reduced from -7.4% to -1.4% and the public debt was reduced from 111.3% to 104.7% over the same period (Bitzenis, 2009). These nominal improvements were not however associated with the implementation of structural reforms thus the FDI inflows of the period remained extremely low. As Staboglis (2008) points out: "From a total of 140 countries which are under United Nation surveys Greece constantly is between 120th and 127th position [in terms of its ability to attract FDI]. From 1995 to 2000, FDI inflows increased in Greece by 3% whereas in Spain the increase was 309%, in Portugal it was 891% and in Ireland it was 1,733%" (Staboglis, 2008). According to another study, between 2004 and 2010 average FDI inflows in EU countries (expressed as a percentage of GNP) were 3.7% whereas in Greece they were just 1% (Romeos, 2011). It goes without saying that the marginal nominal improvements of macroeconomics during the 1990s associated with the complete

absence of structural reforms and the inability to attract critical FDI levels are partial causes of the current crisis.

Further, our findings raise questions about the role that could be played by economic policy to reduce divestment risk. Basically we can assume that a solid economic policy (fiscal, monetary etc.) could contribute to a more stable economic political environment and shrinkage of investment and divestment risks although it is difficult a quantification of such a reduction.¹ At the same time, our analysis indicates that policy makers should not explicitly focus on conventional macroeconomic indicators such as GDP per capita which might be an imperfect proxy for development (see also Narula and Dunning, 2010) but also on international competitiveness and technology indices; the rise of GDP cannot always hamper divestment in manufacturing, especially when favoring services growth. In addition, our findings show that policy decision makers at industry level would not be able to hamper a de-industrialization process in activities with traditional assets. Instead, they could support second-time and more qualitative investment, determining the threshold levels of absorptive capacities that are crucial for the “take-off”.

A more general policy implication is that emerging economies should avoid regional integration attempts, while they have not yet completed the risky, qualitative transition from the second to the third IDP stage. Another general policy implication is that policies towards inward investment should extend, much more decisively and comprehensively, beyond its initial attraction in order to seek to secure sustained benefits from these operations. Overall, the study offers a

¹ We can assume that the risk will be reduced as national income increases and it is distributed in such a way in order to avoid or minimize social tensions. This is expressed by the following equation: $Y=f(I \cdot xq+Cxs+Wxd+Tx b)-(Q)$, whereas: Y=Total national income, I=Total investments of the period, q=percentage of the profit of the investment, C=aggregate capital infrastructure in the economy, S=efficiency of infrastructure, W=Total employment, D=Total labor productivity, T=Aggregate technological improvements of the period, b=Sectoral technological improvements, Q=Cohesion ratio between economic/ social classes. Thus Q is influenced by corruption, bureaucracy, low political stability, social tensions due to strikes, environmental catastrophes, etc. Even if investments are high but they do not reflect high social norms or standards, this will affect risk. Furthermore, if FDI is associated with technological transformation again the perception of the society is going to influence the risk levels. Thus, if a society believes that technological change is associated with job distraction and labor marginalization a negative reaction may eventually occur. See: Liouis et al., 2002.

divestment story that might be a useful learning process for integration and FDI policy in emerging economies.

The analysis is focused in the 1980-2001 period. This is the time when immense changes occurred in the EEC/EU block and the first transformation of the EMS (European Monetary System) took place. In particular, the first common fiscal measures were introduced and the Maastricht Treat decided the establishment of the monetary union between the member states in 1999, with the introduction of the Euro and the abolishment of the ECU. Although the priority of the European policy in the 1980s and 1990s was in the financial sphere, there was always emphasis of the Cohesion Fund on structural reforms and transformation of the economies of South Europe (Greece, Italy, Spain, Portugal). Unfortunately no coherent policies occurred as regards the promotion of FDI and thus the issue of FDI inflows towards these states was marginalised. The nexus of the EEC/ EU failed economic policies with FDI inflows is certain an issue of another paper.

In general, future research should apply divestment scenarios to individual national economies with integration attempts, given the strongly idiosyncratic nature of development path and the growing importance of regional integration dynamics which challenge economic development. In the corresponding IDP analysis it might be important to integrate several investment, integration and trade aspects (Dunning et al., 2001). As regards the case of Greece, our model could be extended later to include the period 2002-2015 in the analysis in order to investigate the impact of the EMU on divestment and compare early with late integration stages, taking into consideration the economic data of the period and associate them with the social mobility and traits of the same era. The nexus of the two elements would certainly cast light in the investment / disinvestment process and partially explain the current economic crisis.

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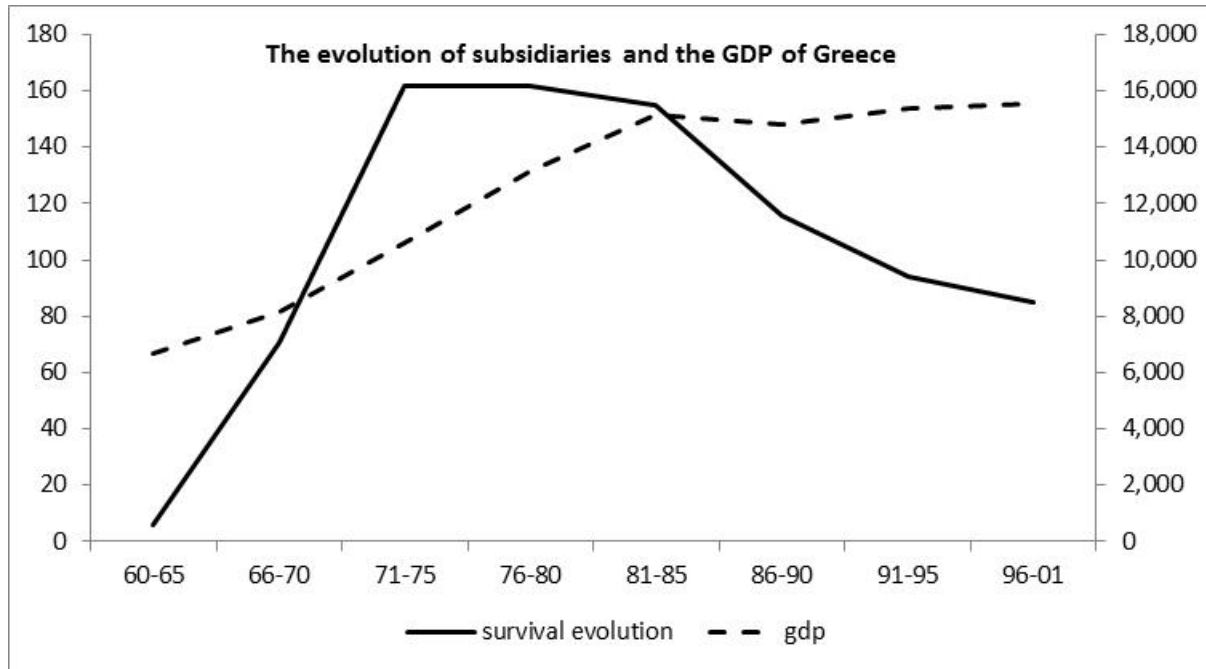
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FIGURE 1 GDP per Capita¹ and number of the foreign subsidiaries in Greece



¹: in \$, at constant prices, 2005 (UNCTAD/ World Bank)

Table 1 Indices of international competition and manufacturing output per category of goods

YEAR	Indices of international competition ¹		Index of manufacturing output (1980=100)			
	Import penetration ²	Export performance ³	Consumer goods	Durable consumer goods	Capital goods	Total manufacturing
1980	23,6	18,4	100,0	100,0	100,0	100,0
1981	23,5	15,7	110,9	99,8	86,1	103,7
1982	25,1	16,5	108,3	91,5	77,7	97,4
1983	27,3	18,6	106,3	89,2	79,8	96,9
1984	28,6	20,8	108,2	87,5	81,8	98,4
1985	29,8	20,0	111,4	97,4	81,2	101,0
1986	31,6	20,7	111,6	101,5	79,3	100,3
1987	34,8	23,0	110,1	89,0	76,3	98,3
1988	31,3	17,0	115,5	81,0	84,3	103,4
1989	38,6	22,4	119,1	84,9	83,0	105,6
1990	41,2	22,1	110,3	75,3	92,1	102,6
1991	42,4	22,6	107,7	81,2	92,1	101,7
1992	44,7	24,6	105,5	81,7	92,0	100,4
1993	45,1	25,1	103,8	88,7	84,5	97,1
1994	45,8	27,0	106,4	88,5	83,2	98,2
1995	47,6	27,4	106,9	87,2	88,6	100,3
1996	46,3	27,5	107,7	89,3	88,7	100,9
1997	49,5	28,7	107,1	95,3	92,5	101,9
1998	51,5	28,1	110,1	118,3	94,4	105,3
1999	50,6	27,2	109,7	130,2	95,7	106,0
2000	50,9	27,5	109,9	129,8	95,6	106,0
2001	51,8	27,4	110,0	130,1	95,5	105,9

Source: Bank of Greece, National Statistical Service of Greece (NSSG)

¹at constant prices of 1988; ² $[\text{import}/(\text{domestic production} + \text{import} - \text{export})]*100$; ³ $(\text{export}/\text{domestic production})*100$

Table 2 Sectoral composition (%) of GDP¹

Sectors / industry	1980	1985	1990	1997	1998	1999	2001
<i>Primary production</i>	25,0	15,6	10,5	11,3	11,0	10,8	10,0
<i>Industrial production</i>	25,3	26,1	26,5	25,8	26,5	26,6	26,3
Mining	0,6	1,0	0,9	0,8	0,8	0,7	0,7
<i>Manufacturing</i>	15,2	15,9	15,3	14,1	14,0	13,8	13,1
Construction	7,7	7,0	7,6	7,7	8,3	8,8	8,0
Utilities (power/gas/water)	1,8	2,2	2,7	3,3	3,3	3,4	4,5
<i>Services</i>	49,7	58,3	63,0	62,9	62,5	62,6	63,7
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: Federation of Greek Industries

Table 3 Industry breakdown of the 162 foreign subsidiaries

Industry NACE (4-digit level)	TOTAL NUMBER (stand 1980) Total	CLOSURES (1981-2001) Total	SURVIVORS (stand 2001) Total
Foods/ Beverages/Tobacco	22	5	17
Textiles/Clothing/Leather – Footwear	22	19	3
Paper/Printing–Publishing	7	4	3
Chemical products/Rubber prod./Plastics	50	16	34
Non-metallic minerals	15	9	6
Basic metals/ Metal products	19	9	10
Machines/ Equipment/Electrical machinery	23	13	10
Transportation	2	2	0
Other industries	2	0	2
TOTAL	162	77	85

Table 4 Variables used in the study

Name	Definition	Literature
DIVEST (dependent)	a dummy variable which takes the value of 1 for subsidiaries that divest and 0 otherwise	McCloughan and Stone, 1998
GCAP	GDP per capita in U.S. dollars, constant prices	Narula and Dunning, 2000; Galan et al., 2007; Narula and Dunning, 2010
INTEGR	a dummy variable which takes the value of 1 for integration and 0 otherwise	Narula and Dunning, 2000; Galan et al., 2007; Narula and Dunning, 2010
TARIF	nominal protection rate for each industry	Culem, 1988; Baldwin and Yan, 2011
PDIF	product differentiation; the contribution of advertising expenditure to sales for each industry	Caves, 1971; Pennings and Sleuwaegen, 2000
SIZE	current size; labor force (ln)	McCloughan and Stone, 1998; Pennings and Sleuwaegen, 2000; Colombo and Delmastro, 2001
YEST	year of establishment; it indicates the age of the subsidiary	McCloughan and Stone 1998
LABOR	labor unit cost for each industry	Culem, 1988; Bernard et al., 2006
TECH	dummy variable which takes the value of 1 if the industry is technology intensive and 0 otherwise	Pennings and Sleuwaegen, 2000; Yamawaki, 2004
OPEN	the sum of import and export penetration ratio for each industry	Colantone and Sleuwaegen, 2010; Harris and Li, 2011
INDU	a variable that accounts for the industry dispersion	Colantone and Sleuwaegen, 2010
DIST	physical distance between Greece and the home country in miles	De Silva and McComb, 2012; Nachum and Zaheer, 2005

TABLE 5 Pearson Correlations - independent variables

Variables	TARI	PDIF	DIST	TECH	GCAP	INTEGR	LABO	SIZE	YEST	INDU	OPEN
TARIF	1.00										
PDIF	-0.22	1.00									
DIST	-0.03	0.34	1.00								
TECH	-0.04	0.16	0.13	1.00							
GCAP	-0.70	0.07	-0.01	-0.03	1.00						
INTEGR	-0.69	0.06	-0.01	-0.04	0.90	1.00					
LABO	-0.32	-0.18	-0.11	-0.13	0.47	0.45	1.00				
SIZE	-0.14	0.40	0.08	-0.05	0.16	0.16	0.02	1.00			
YEST	-0.22	-0.30	-0.12	-0.21	0.27	0.25	0.18	-0.38	1.00		
INDU	0.01	-0.07	-0.10	0.52	-0.03	-0.02	-0.04	-0.01	-0.05	1.00	
OPEN	-0.34	-0.08	-0.05	0.21	0.40	0.39	0.54	0.11	0.03	0.17	1.00

TABLE 6 Econometric results

VARIABLES	(1) without INTEGR	(2) with INTEGR	(3) TECH = 1	(4) TECH = 0	(5) Interaction GCAP	(6) Interaction TECH
Explanatory Variables						
GCAP	0.391*** (0.023)		0.464*** (0.040)	0.331*** (0.035)	0.789*** (0.045)	0.381*** (0.025)
INTEGR		0.997*** (0.160)				
TARIF	0.123*** (0.006)	0.134*** (0.064)	0.140*** (0.010)	0.099*** (0.008)	0.115*** (0.007)	0.111*** (0.007)
Control variables						
PDIF	-1.136*** (0.054)	-1.153*** (0.054)	-0.954*** (0.053)	-1.817*** (0.138)	-0.530*** (0.087)	-1.821*** (0.123)
SIZE	0.002*** (0.000)	0.002*** (0.004)	0.003*** (0.001)	0.004*** (0.001)	0.001** (0.001)	0.004*** (0.000)
YEEST	-0.019** (0.008)	-0.019* (0.007)	-0.006 (0.012)	-0.034** (0.015)	-0.060*** (0.008)	-0.005 (0.008)
LABO	11.696*** (0.735)	11.461*** (0.594)	10.327*** (1.316)	12.057*** (0.777)	69.325*** (7.380)	9.916*** (0.610)
TECH	0.840*** (0.119)	0.929*** (0.114)			0.813*** (0.167)	0.669** (0.265)
OPEN	-0.022*** (0.003)	-0.024*** (0.002)	-0.023*** (0.005)	-0.039*** (0.004)	-0.017*** (0.003)	-0.026*** (0.003)
INDU	-0.044* (0.024)	-0.040* (0.023)	0.101 (0.063)	-0.107*** (0.029)	0.085*** (0.027)	-0.071*** (0.025)
DIST	0.344*** (0.026)	354*** (0.027)	0.394*** (0.034)	0.288*** (0.060)	0.387*** (0.031)	0.343*** (0.027)
Interactions						
LABO*GCAP					5.299*** (0.577)	
TARIF*GCAP					0.011*** (0.001)	
PDIF*GCAP					-0.089*** (0.013)	
LABO*TECH						5.016*** (1.403)
TARIF*TECH						0.022*** (0.007)
PDIF*TECH						-0.924*** (0.126)
Constant	32.014** (15.063)	32.259* (15.296)	5.528 (22.835)	63.657** (30.014)	109.097*** (15.831)	5.610 (16.535)
Observations	4,412	4,412	2,391	2,021	4,412	4,412
Log - likelihood	-796.251	-774.411	-434.302	-305.599	-606.863	-755.197

Notes: Log – log model results are reported. The dependent variable is a dummy equal to one if the subsidiary divest and zero otherwise. Robust statistics (standard errors) are presented in the parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%.