

**PATH DEPENDENCE VIEW OF EXPORT BEHAVIOUR: A RELATIONSHIP
BETWEEN STATIC PATTERNS AND DYNAMIC CONFIGURATIONS**

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Abstract

The main objective of this work is to understand the extent to which a relationship exists between static patterns and the dynamic configurations of a firm's export behaviour. The premise of our investigation is that the set of exporting decisions adopted over a period of time can be explained, in part, by the export pattern of the firm at the start of that period. Our empirical work is based on a sample of 754 exporting firms covering a 4-year period (2002-2006). Data were obtained from the Survey of Business Strategies (SBS). Our results support the path dependent focus of internationalisation, find some interdependences among three dimensions of export behaviour (extent, entry mode and scope), in static and dynamic fields, and support the idea that export experience influences some of the changes in foreign behaviour at one point in time, but not all. Our work contributes to the literature in that it is one of the first works that (1) simultaneously analyses static and dynamic variables; (2) it establishes relationships between both of these; (3) different dimensions of international behaviour are introduced jointly; and (4) these relationships are contextualised according to the firm's export experience.

Key words: *Dynamic configurations, export behaviour, internationalization process, path dependency.*

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INTRODUCTION

The internationalisation of a firm is by definition a dynamic process (Vernon, 1966, Bilkey and Tesar, 1977; Johanson and Vahlne, 1977; 1990; Welch and Luostarinen, 1988, Andersen, 1993). For decades, the process has been explained as a process of incremental learning, in which firms advance through a series of phases as they accumulate knowledge on international markets (Johanson and Vahlne, 1990; Andersen, 1993; Eriksson et al., 1997; 2000). Despite this, the great majority of investigations carried out over recent decades have taken a cross-sectional approach, which relegates the role of time to a secondary level in research into the internationalisation process (Sharma and Blomstermo, 2003; Jones and Coviello, 2005; Eden, 2009). One of the main contributions of the international entrepreneurship trend (Oviatt and McDougall, 1994; Zahra and George, 2002) has been to underline the importance of time, by defining the concept of ‘speed’ or ‘age at entry’ – the time that elapses between the foundation of the firm and its first international activities. This trend attempts to explain why some firms do not follow the incremental model described in the stage theory, but initiate their internationalisation process sooner.

However, very few investigations have been carried out that analyse the internationalisation process once it has begun, from a dynamic perspective. As Autio, Sapienza and Almeida (2000, p.909) stated, “research has not sufficiently distinguished between two closely related but distinct issues: first, the time lag between the founding of a firm and its initiation of international operations (Jones,

1999; Jones and Coviello, 2005) and, second, the speed of a firm's subsequent international growth". Similarly, Eden (2009, p.535) makes the following observation: "The dominant paradigms in IB research – the OLI paradigm and internationalisation theory – focus on the 'why, where and how' of the MNE, with little attention to the 'when'". There are, of course exceptions, both in conceptual contributions (Kutschker et al., 1997; Jones and Coviello, 2005), and empirical investigations (Gankema et al., 2000; Qian and Delios, 2008; Townsend et al., 2009). Nevertheless, there is still much to learn, as there are very few empirical works that examine the speed of the internationalisation process post-entry.

One of the principal difficulties in a dynamic study of the internationalisation process is undoubtedly its complexity. The internationalisation of a firm, be it through exports, cooperation agreements or foreign direct investments (FDI), has different aspects, relating to (1) the degree of commitment, defined as the proportion of the firm's total sales derived from international activities (Johanson and Vahlne, 1990; Andersen, 1993; Bonaccorsi, 1992; Calof, 1994); (2) the degree of resource commitment, which is generally linked to the mode of entry chosen for each foreign country (Dunning, 1980; Buckley and Casson, 1981); and (3) localisation, or the range of countries in which the firm develops its international activity (Johanson and Wiedersheim-Paul, 1975; Benito and Grisprud, 1992). Jones and Coviello (2005) propose the existence of fingerprint patterns, which combine a set of variables related to the modes of entry and countries in which a firm is operating at a given time, and dynamic profiles, which are defined by the joint evolution of these dimensions over time. Asmussen et al. (2009) have recently referred to international dynamic configurations.

The main objective of this work is to understand the extent to which a

relationship exists between static patterns and the dynamic configurations of a firm's export behaviour. The premise of our investigation is that the set of exporting decisions adopted over a period of time can be explained, in part, by the export pattern of the firm at the start of that period. This premise is based on the path dependent view of international behaviour (Hutzschenreuter et al., 2007), according to which, the firm's history influences its subsequent behaviour (Teece et al., 1997). The design of our empirical investigation also analyses the export trajectory (Root, 1987) from a configurational perspective (Short et al., 2008), and attempts to prove, as its second objective, the extent to which the evolution of the different dimensions of the export process are related. Finally, as a third objective, we will attempt to verify whether the relationship between static patterns and dynamic configurations is dependent on the firm's international experience.

The work is structured as follows. In the following section we explain the conceptual bases of our investigation. We will focus in particular on two basic assumptions found in the literature: (1) internationalisation is a dynamic and path dependent process and (2) the internationalisation process is multidimensional. In the third section we set out our hypotheses and their justification. The methodology and results are described in the fourth and fifth sections and in the sixth and final section we set out the results, their implications, the limitations of the study and our conclusions.

THEORETICAL DEVELOPMENT

Internationalisation as a dynamic and path dependent process

The dynamic nature of the internationalisation process is clearly explained by Welch and Luostarinen (1988) in their definition of the internationalisation process as “a

process through which a firm increases its level of involvement on foreign markets over time”. This definition is consistent with the stage-based approach that emerged from the Uppsala schools (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977) and the innovation approach (Bilkey and Tesar, 1977; Czinkota, Cavusgil and Reid, 1981). From this perspective, internationalisation is described as a process of incremental learning that develops over time. The existence of ‘stages’ implies a succession of stages ordered over time. According to the stages approach, firms move from one stage to another as they increase their degree of commitment to foreign markets and their level of knowledge about those markets (Johanson and Vahlne, 1990; Andersen, 1993).

Despite this view of internationalisation as a “process”, there are very few works that aim to describe and explain from a dynamic perspective how this process develops. The majority of the literature of the last few decades of the 20th century proposed different trajectories or series of stages (Root, 19987; Leonidou and Katsikeas, 1996), or proposed explanatory models for the choice of entry modes and markets that assume a progression through the internationalisation process. Some of those that have been widely developed are the models emanating from the eclectic theory (Dunning, 1980), the theory of transaction costs, (Hennart, 1991; Hennary and Park, 1994), agency theory, (Agarwal and Ranmaswami, 1992), etc. However, very few dynamic models have been proposed to see “how” this process develops over “time”. As Sharma and Blomstermo (2003) indicate, the role of “time” in the internationalisation process has been almost forgotten until now. Compare the dynamic character of the concept with the scarcity of works from a process perspective –in the case of conceptual studies– and with longitudinal methodologies – in the case of empirical studies (Eden, 2009). A rare exception within the former type

of investigation is the work of Kutschker et al. (1997) and Jones and Coviello (2005). The latter describe internationalisation as a series of “behaviours” which develop over “time”. Thus, Jones and Coviello propose a model in which they define concepts such as *fingerprint patterns* as “a composite of the number and range of cross-border business modes established by the firm, and the number and distance of countries with which those modes were established, at a specific point in time”, and *dynamic profiles* as “changes in the composition of business modes and countries over a period of time” (2005, p.293). These definitions are comparable to Kutschker et al. (1997) in that they distinguish between static patterns and dynamic profiles or processes.

Both concepts combine the contributions from literature on the internationalisation process and the view of internationalisation as a path dependent process (Hutzschenreuter et al., 2007; Hutzschenreuter and Voll, 2008). The path dependence approach is based on a resources and capabilities view of the firm (Wernerfelt, 1984; Barney, 1991) and, specifically, is based on the dynamic capabilities approach (Teece, Pisano and Shuen, 1997). Path dependence recognises that ‘history matters’, that is, “a firm’s previous investments and its repertoire of routines (its ‘history’) constrain its future behaviour” (Teece et al., 1997, p.522-523). This argument is related to the firms’ learning capabilities, assuming that learning is a process that requires time to be developed.

Even before the development of concepts such as dynamic capabilities and path dependences (Teece et al., 1997), international business scholars described the internationalisation process as a path dependent process. According to the stages approach, internationalisation is a cumulative process in which new decisions depend, to a great extent, on past decisions. This view is shared by the learning view of the internationalisation process (Johanson and Vahlne, 1977, 1990; Andersen, 1998;

Eriksson et al., 1997, 2001) and the evolutionary theory of multinational firms (Kogut and Zander (1993). Both views assume that internationalisation takes time because firms have to learn through experience and that the set of accumulated experience through past decisions influences future international decisions. Taking the concepts of Jones and Coviello (2005) mentioned above, we can say that dynamic profiles develop from static profiles in a continuous learning process.

The multidimensional character of internationalisation

International behaviour encompasses a wide range of decisions and events which affect both the organisation's externally visible aspects and its internal profile. Welch and Luostarinen (1988) identified some of these aspects when they spoke of (1) the operation method (how), (2) the sale objects (what), (3) target markets (where), (4) organisational capacity, (5) personnel, (6) organisational structure, and (7) finance. From a dynamic point of view, Eden (2009) summarises two main lines of research about the internationalisation process: (1) entry mode decision; and (2) location decision, while Zahra and George (2002), taking an international entrepreneurship view, differentiate between three types of international behaviour: (1) extent; (2) width or scope; and (3) speed. Finally, from the methodological point of view, Sullivan (1994) proposed to develop a complex instrument based on several dimensions to measure the degree of a firm's internationalisation. Some of these multidimensional views of the internationalisation process consider time or speed as one dimension (Zahra and George, 2002; Kutschker and Baurle, 1997). In summary, three dimensions have commonly been considered in previous research.

The first refers to the commitment derived from foreign sales (Zahra and George, 2002). Numerous papers have focused on analysing exporting intensity,

taken to be the quotient between the firm's exports and total sales turnover (Bonaccorsi, 1992; Calof, 1994; etc.) or international sales growth (Autio et al., 2000). Sullivan (1994) incorporates this variable as one of the indicators to be used to measure the degree of a firm's internationalisation. A second dimension is based on the resources made available to the internationalisation process (Kuivalainen et al., 2007). In this regard, companies that have production plants, subsidiaries, etc. make a larger proportion of their resources available outside their national borders, thereby demonstrating greater commitment to the internationalisation process. This second approach is related to entry mode decisions (Buckley and Casson, 1981, 1998). The third dimension of internationalisation is related to location and markets. Zahra and George (2002) define width as the range of markets in which the company develops its business. This dimension refers to the location decision, that is, markets and/or countries where the company sells or manufactures its products and services (Welch and Luostarinen, 1988). In this sense, the firm's internationalisation can be measured by the number of countries to which it exports its products, the number of countries where it operates subsidiaries, the diversification of foreign markets, the physical and cultural distance between the countries where it is active, etc. (Sullivan, 1994).

It is important, however, to stress that these three dimensions should not be viewed as independent dimensions. Eden (2009), in a recent review of the role of the literature on *time* to internationalisation, stated: "Location and entry mode decisions are not independent of one another" (p.536). In this sense, several recent works have proposed the need to refer to internationalisation profiles (Jones and Coviello, 2005) or international configurations (Asmussen et al., 2009). The basic assumption is that a firm, at any given point of time, has a unique configuration of countries and entry modes, and these two dimensions are interdependent.

HYPOTHESES

Static patterns and dynamic exporting profiles

The basic proposition of this work is that a firm's international behaviour over a particular period will be influenced by its international profile at the start of that period. Using the concepts put forward by Jones and Coviello (2005), we propose that the static, or fingerprint pattern of a firm at a particular moment in time will affect the dynamic profile of the firm at a later time. This relationship is based essentially on the path dependent view of the internationalisation process (Hutzschenreuter et al., 2007) and is consistent with both the evolutionary theory of multinational firms (Kogut and Zander, 1993) and the view of the internationalisation process as a learning process (Johanson and Vahlne, 1990; Andersen, 1998; Eriksson et al., 2000). To simplify the investigation, this work focuses on the export development process. In this sense, we define the static export pattern as the combination of modes of access to exports, the diversity of destination countries for those exports and the importance of those exports for the firm, either by their total volume or their intensity (the percentage of exports in relation to the firm's total sales). The dynamic profile of the firm is defined as the evolution of these three dimensions over a specific time period, that is, by the changes in the mode of access to exports, changes in the export localisation and changes in the volume and intensity of exports over time. In accordance with the theoretical approaches described in the previous section, the static export pattern is the result of the firm's "export history" and brings together all of its export-related decisions (Eriksson et al., 2000; Hutzschenreuter et al., 2007). This static export pattern reflects both the firm's accumulated learning and its export behaviour over its entire history (Andersen,

1993; Eriksson et al., 1997, 2000) and the level of commitment reached in its export activities (Johanson and Vahlne, 1990; Andersen, 1993).

Likewise, according to the idea implicit in the “pattern” concept (Jones and Coviello, 2005), or international configuration (Asmussen et al., 2009), we propose that the relationship between static and dynamic variables is produced at both an individual and joint level. Firstly, we propose that the development of each of the three dimensions that make up the dynamic export profile (changes in the modes of access to exports, changes in market diversification and changes in the export volume/intensity) will be affected by each of the three dimensions that constitute the firm’s static pattern (modes of access to foreign markets, market diversification and export volume/intensity) at the beginning of the period. At the same time, however, there will be a joint influence of the static dimensions on the dynamic evolution of each of the dynamic dimensions, arising from the existing interdependences of the decisions regarding entry mode, localisation and intensity (Eden, 2009; Asmussen et al., 2009). We believe that the level of international learning achieved by a firm results from export activities in their entirety rather than from each individual one (Eriksson et al., 2000). We therefore propose:

Hypothesis 1: A relationship exists between the static dimensions that constitute the international profile of a firm at one time (t) –individually and jointly– and the evolution of these dimensions over an immediately subsequent period (t+n).

Dynamic export profiles

The idea of the existence of dynamic profiles (Jones and Coviello, 2005),

suggests that the internationalisation decisions taken by a firm over time form a coherent set, guided by a specific internationalisation strategy, which develops from the set of experiences and learning accumulated over time and the degree of involvement reached up to that point (Andersen, 1993). In this sense, we might expect that the different decisions relating to the development of the firm's export behaviour (entry modes, localisation and volume/intensity) are not independent of each other. For example, by incorporating the concept of speed (Autio et al., 2000), it can be expected that companies with a more rapid internationalisation process will progress simultaneously and further through these three dynamic dimensions than slower companies or those that reduce their level of internationalisation (Benito, 1997). In other words, the interdependent nature of the different dimensions of export behaviour suggests that those firms that, over a specific period of time, move towards entry modes that require a greater commitment of resources, would also further diversify the markets for their exports, and at the same time increase their export volume and intensity over that period. We therefore propose:

Hypothesis 2: A relationship exists among the different dimensions that make up the internationalisation process over a period $t+n$ –individually and jointly.

The moderating role of export experience

The preceding hypotheses link the different static and dynamic dimensions of international behaviour over a specific period of time. However, as we explain below, it can be argued that this relationship is not independent of the firm's accumulated export experience. From our standpoint, it is not possible to compare the dynamic international behaviour of firms at different stages of their internationalisation process. The idea that dynamic behaviour is path dependent on

past behaviour implicitly assumes the existence of differences regarding “accumulated history” (Teece et al., 1997). In the field of export behaviour, it is possible to distinguish therefore, between firms at the very start of their internationalisation process and those with an extensive accumulated export experience.

The influence of export experience, defined as the length of time the firm has been developing its export activities (Eriksson et al., 1997) has, however, been subjected to very little empirical testing, as there are two opposing arguments. On the one hand, those that define internationalisation as a learning process argue that as accumulated experience increases, their lack of information reduces, along with the accompanying uncertainty derived from operating in foreign markets (Johanson and Vahlne, 1977; Eriksson et al., 1997). Consequently, as Eriksson et al. (1997) suggest: “The longer firms operate abroad, the more they learn, and the more rational decision-making becomes” (p.25). It would therefore be possible to expect more intensive international behaviour in more experienced firms than in those that have been exporting for a shorter time. On the other hand, Autio et al. (2000) suggest that firms with less experience learn more quickly. This “advantage of newness” is due to the greater learning capability of younger firms, arising from their greater ability to assimilate new knowledge related to foreign markets and their greater flexibility. In their study, Autio et al. (2000) found that firms that started their internationalisation process early increased their exports more rapidly. According to these arguments, firms that have been exporting for the least time will be able to learn more quickly and, therefore, will tend more quickly to increase their commitment to modes of access to exports, market diversification and export volume and intensity.

From our point of view, the relationship between experience and international

behaviour is not linear, but depends on the level or phase of the process being analysed. Thus, the process theory of internationalisation explains that firms will begin exporting to a few countries using methods that require little commitment of resources and, once exports begin to grow, the firm will broaden its market diversity and the commitment required for modes of access to those markets (Johanson and Vahlne, 1977, 1990). In this sense, it is not possible to speak of the early years of export activity –which might witness a growth in the export volume and intensity, but not in the modes of access to exports or geographical diversity– in the same way as the later years, when these two latter dimensions would see even greater growth than in export volume/intensity, which may be exchanged for other modes of access to foreign markets such as manufacturing displacement, the granting of local partnership licences, etc. (Vernon, 1966). In this investigation, we will only consider experience through a *dummy* variable, which will distinguish between less experienced firms (that have been exporting for fewer than four years) and internationally experienced firms (which have been exporting for four years or more). As a result, when referring to experience, we will only consider the early years of export activity. We therefore propose:

Hypothesis 3a: A firm's export experience will moderate the relationship between the static dimensions that constitute the international profile of the firm at one time (t) –individually and jointly– and the evolution of the export volume and intensity over a period immediately following (t+n), such that this relationship will be less intense for more experienced firms.

Hypothesis 3b: A firm's export experience will moderate the relationship between the static dimensions that constitute the international profile of the

firm at one time (t) –individually and jointly– and the evolution of the modes of access to exports and market diversity over a period of time immediately following (t+n), such that the relationship for more experienced firms will be more intense.

Our model is represented in Figure 1.

Insert Figure 1 about here

METHODOLOGY

Sample

The source of our empirical work is the Survey of Business Strategies (SBS). This is a firm-level panel of data compiled by the Spanish Ministry of Science, which contains a representative sample of Spanish manufacturing firms with more than 10 employees; it is probabilistic, and stratified by industry and firm size (in terms of the number of employees). Relevant information about international activities of firms was available for two different years: 2002 and 2006. The initial sample of firms therefore comprises firms that completed the survey in 2002 and 2006, giving a total of 1,137. From that sample, we selected firms that showed an active international behaviour in the first year of the period, 2002, excluding all those that did not export that year. As a result, 754 firms comprised the final sample.

Variables

Static dimensions of export activity

Four variables have been considered. We have used two variables to measure export volume intensity: *Export intensity (ExpInt)*: the quotient between export sales and the total sales in year 1; and *Export volume (LnExport)*: export sales in year 1, in its logarithmic version. With regard to entry mode into foreign markets, we have used an interval scale variable: *Initial mode of entry to foreign markets (Mode)*. This variable shows, in four intervals, from a lower to a greater commitment, the way of entering foreign markets. The levels are (1) none of the following modes; (2) use of an agent; (3) access to foreign markets through cooperation, (4) use of its own distribution channel. Finally, we have measured the *Diversification of the foreign markets (MrkDiv)*. This variable was calculated using the Denis and Depelteau index (1985). This index calculates the sum of the percentages of the exports to each zone considered, multiplied by its logarithm. Higher values reflect greater diversification. Our data is divided into to four market regions: (1) European Union, (2) Latin-American Countries, (3) Other OECD Countries, and (4) Other Countries.

Dynamic dimensions of export activity

We have used three variables to measure the dynamic profiles of firms. The first was *IncExport*: average increase in export intensity and volume between 2002 and 2006. We have grouped both dimensions together (volume and intensity) owing to the high level of correlation between them (Corr. =0.996, $p < 0.000$). The Cronbach alpha of this new variable shows its high reliability ($\alpha = 0.927$). The second dynamic dimension measured is *Variation in the mode of entry to foreign markets (IncMode)*: the difference of the commitment to the mode of entry to foreign markets in 2002 and 2006 ($Mode_{2006} - Mode_{2002}$). Finally, the third dynamic dimension is *Variation in the export market diversification (IncMrkDiv)*: measured as the difference of the

variables relating to the geographical dispersion of the markets in which the firm participates in 2002 and 2006 ($MrkDiv_{2006}-MrkDiv_{2002}$).

Moderator variable

In order to differentiate between experienced and non-experienced exporters, we have included a *dummy* variable ($Exp98$) which reflects whether a firm was involved in export activity four years before the initial year of analysis, that is, in 1998 (value = 1) or not (value = 0). We assume that firms that were exporting four years earlier are experienced exporters and firms that were not exporting in 1998 and exported in 2002 could be considered as non-experienced exporters.

Control variables

We included several control variables in our analysis. We looked at the industrial sector through 19 *dummy* variables, relating to 19 of the 20 sectoral groups the sample was divided into. Two additional control variables refer to size at the start of the period analysed (2002): $LnSales_i$ –the logarithm of sales in 2002– and $LnEmployees_i$ –the logarithm of the number of employees in 2002. Similarly, the age of the firm was controlled by $LnAge_i$ –the difference between 2002 and the year of the firm’s foundation, in its logarithmic version. Another two *dummy* variables have been included to control ownership structure. The first – $Public_i$ – shows whether the firm is quoted on the stock exchange, while the second – $FamilyB_i$ – indicates whether the firm is family-run or not, and both refer to the first year, 2002. Finally, two new control variables were incorporated, both relating to whether the firm has foreign subsidiaries or not. The first – FDI_i – is a *dummy* variable that represents whether the firm had undertaken any foreign direct investments in the initial year

(2002), and the second – *ForAffil_i* – measures the number of foreign subsidiaries the firm had in the same year, 2002.

Statistical methods

The different hypotheses were tested using multiple regression models and interactive regression models. Three sets of models were estimated, each one referring to the three dependent variables proposed in the theoretical model: (1) *IncExport*, (2) *IncMode*, and (3) *IncMrkDiv*. In each group, eight models were calculated, starting with the introduction of the control variables (model 1), and subsequently incorporating the static independent variables of the direct effects (model 2) and their interaction (model 3). We then added the dynamic variables of export behaviour as independent variables, with the exception of the explanatory variable in each model (model 4) and its interaction (model 5). The two subsequent models include both the interaction between the static variables of export behaviour and the dynamic variables (separately in model 6 and combined in model 7). Finally we introduced the moderating effect of export experience (model 8). We omitted the corresponding direct effects from all the models that included interaction effects, to avoid problems of colinearity.

RESULTS

Descriptive statistics

Table 1 represents the descriptive statistics and a correlation matrix. The characteristic common to all firms is that they belong to the manufacturing sector and were exporting in the first year of the period analysed (2002). The sectoral distribution is uniform, such that no sector contains more than 10.8% of the whole

sample. The average firm size is 298 employees and their average age is 28 years. Twenty-nine firms were quoted on the stock market (2.8%) and 236 designated themselves family firms (31.3%). Likewise, 155 firms (20.5 percent) of the sample had at least one foreign subsidiary, with an average of five subsidiaries. With regard to export experience, of the 754 firms in the sample, 566 (75.1 percent) could be considered as experienced exporters, having been exporting for at least four years beforehand, that is, in 1998.

Insert Table 1 about here

With regard to the correlations, there are few significant correlations relating to the sectoral control variables. As is logical, correlations exist between the two variables that measure the firm size (*LnSales* and *LnEmployees*) as well as between the fact of having foreign subsidiaries (*IDE*) and the number of subsidiaries (*ForAffil*). Among the variables that define the static pattern, significant, although not very high, correlations can be observed between size and age with regard to export volume (*LnExport*), the mode of access to exports (*Mode*) and market diversification (*MrkDiv*). There is also a high degree of correlation between the four state variables, proving the suitability of static profiles in the study of processes and internationalisation (Jones and Coviello, 2005; Asmussen et al., 2009). However, it is interesting that the correlation between *LnExport* and *ExpInt* proves to be negative. That is, those firms with greater export intensity have a lower export volume and vice versa. One possible explanation is that firms with high volumes of exports operate foreign subsidiaries, as observed in the positive correlation between *FDI* and

LnExport. In relation to the dynamic variables, we observe a positive and significant correlation between an increase in the mode of access to exports (*IncMode*) and an increase in market diversification (*IncMrkDiv*). Bearing in mind that the upper and lower limits of the growth variables are restricted, negative correlations can also be noted between the initial state of these variables in 2002 and their growth in the following period (2002-2006).

Regression Analysis Results

Tables 2, 3 and 4 represent the results of the eight regression models, described in the methodology section, for each of the three dependent variables that make up the dynamic configuration of international behaviour: (1) *IncExport*: the increase in exports (Table 2); (2) *IncMode*: the increase in the mode of access to exports (Table 3); and *IncMrkDiv*; the increased diversification of export markets (Table 4). In general terms, all of the models make it clear that there is no sectoral influence on the results, or on the great majority of the control variables considered, with the exception of size, measured by the variable *LnEmployees*, which does appear to be significant in several models. The results also show that each model 1, which only includes the control variables, is neither significant nor explanatory. The description of our results is set out below, following the order of the hypotheses proposed above. Colinearity has been controlled, through condition indices and the VIF (variance inflation factor). The maximum value of these is shown in Tables 2, 3 and 4, and are all within the acceptable limits.

Insert Tables 2, 3 and 4 about here

The first hypothesis links the static international pattern variables –2002– with the dynamic configuration variables –2002 to 2006. Each model 2 directly estimates the value of the static variables, while model 3 introduces the interaction effects of those variables. When the dependent variable is *IncExport*, only the direct effects of their corresponding static variables are significant, both having a negative value. This effect is logical in the case of *IntExp* ($\beta=-0.091$, $p<0.05$), because this is a restricted variable, being a percentage. In other words, however high the firm's percentage of exports may be at any given time, its subsequent growth will be lower. However, *LnExport* is not a restricted variable and its significance and negative effect is more intense ($\beta=-0.359$, $p<0.01$). Therefore, firms that start with high exports are less likely to see a later increase in those exports. When the dependent variable is *IncMode*, the direct influence of two variables can be seen: *LnExport* ($\beta=0.206$, $p<0.001$), which is positive; and *Mode* ($\beta=-0.649$, $p<0.001$), which is negative. The second relationship is the logical one derived from the measurement of the *Mode* variable itself, measured on the interval scale and, therefore, bound by its upper limit. However, the first relationship demonstrates that firms with high export values are more likely to increase their commitment to the mode of access to exports. Likewise, when the dependent variable is *IncMrkDiv*, the results are similar to the previous ones. There is a significant direct effect of ($\beta=0.334$, $p<0.001$), such that firms with higher levels of export volumes tend to increase the diversity of their export markets. Once again, the negative relationship can be observed between the dynamic dependent variable *IncMrkDiv*, and its corresponding static variable, *MrkDiv*, such that where the degree of market diversity from the start is greater, there will be less growth in the subsequent period ($\beta=-0.277$, $p<0.001$).

Model 3 introduces the static variables, this time in interaction. Apart from the significant negative effects of the interactions in which the static dimension corresponding to the dynamic dependent variable operates $-LnExport/IntExp$ in the case of *IncExport*; *Mode* with regard to *IncMode*; and *MrkDiv* with regard to *IncMrkDiv*— other significant relationships can be observed. The variables *Mode* and *MrkDiv* jointly exert a positive influence on export growth, *IncExp* ($\beta=0.334$, $p<0.01$). Similarly, the interaction between the *LnVExport* and *MrkDiv* variables is significantly positive when explaining *IncMode* ($\beta=0.349$, $p<0.001$). Finally, the interaction between *LnExport* and *Mode* has a joint positive effect on the dependent variable *IncMrkDiv* ($\beta=0.345$, $p<0.001$). In summary, the relationship observed between the static and dynamic variables is not only direct but also joint, through their moderating effects. However, it must be acknowledged that the degree of explanation of the models representing these interactions is lower in the three models that represent the direct effects, as the lower adjusted R^2 values are removed.

The second hypothesis links the three dynamic variables: *IncExport*, *IncMode*, and *IncMrkDiv*. To test this second hypothesis, we estimated four regression models for each dependent variable, combining direct and moderating effects as well as static and dynamic variables—Models 4, 5, 6 and 7 in Tables 2, 3 and 4. When the dependent variable is *IncExport*, there is virtually no significant influence of the increase in the other two dimensions of export behaviour, *IncMode* and *IncMrkDiv*, either directly or through interaction. Only a slight positive influence was observed for the latter ($\beta=0.070$, $p<0.1$). Here, a slight increase was observed in the explanation of the model, moving from an $R^2=0.015$ to an $R^2=0.022$. When *IncMode* is the dependent variable, only *IncMrkDiv* has a significant influence and a positive value ($\beta=0.322$, $p<0.001$ in Model 4 and $\beta=0.337$, $p<0.001$ in Model 6). However,

no significant influence of *IncExport* can be observed, or any significant interaction between *IncExport* and *IncMrkDiv*. Finally, similar results are observed when the dependent variable is *IncMrkDiv*. Thus the influence of *IncMode* is significant and positive ($\beta=0.464$, $p<0.001$ in Model 4 and $\beta=0.483$, $p<0.001$ in Model 6).

Moreover, it can be observed that the joint influence of *IncExport* and *IncMode* is significant, although reduced ($\beta=0.080$, $p<0.01$). To summarise, the earlier results demonstrate that *IncMode* and *IncMrkDiv* are positively related, while *IncExport* does not show any significant relationship with the other two dynamic variables. We should also point out that, in each case, model 4, which includes both static and dynamic variables as explanatory variables, gives a greater explanatory value.

Finally, the third hypothesis proposes the moderating influence of export experience on the former relationships. Model 8 in Tables 2, 3 and 4 shows the influence of the variable *Exp98* on the four static variables. When the dependent variable is *IncExport*, no significant relationship can be observed. Conversely, when the dependent variable is *IncMode*, two effects are seen to be highly significant: firstly, the joint effect of *Exp98* and *LnExport* ($\beta=0.527$, $p<0.001$), and secondly, the joint effect of *Exp98* and *Mode* ($\beta=-0.824$, $p<0.001$). Finally, when the dependent variable is *IncMrkDiv*, the significant influence of two effects interacting with each other can be observed: the joint effect of *Exp98* and *LnExport* ($\beta=0.329$, $p<0.001$) and the joint effect of *Exp98* and *MrkDiv* ($\beta=-0.414$, $p<0.001$). Nevertheless, the degree of explanation of those models is lower than in previous models, as reflected by the lower R^2 value, corresponding to the three dependent variables.

DISCUSSION AND CONCLUSIONS

The first hypothesis proposed a relationship between the different dimensions

that constitute the international profile of the firm at a specific time –in this case 2002– both individually and jointly, and the development of those dimensions at a later time; specifically, during the period 2002 to 2006. This hypothesis includes some basic assumptions of the stages approach to the internationalisation process, such as (1) its definition as a process that develops over time (Sharma and Blomstermo, 2003; Jones and Coviello, 2005); (2) its path dependent nature (Hutzschenreuter et al., 2007); and (3) the interdependence of the different dimensions that constitute international behaviour (Jones and Coviello, 2005; Asmussen et al., 2009). On the whole, the results obtained in the regression analysis appear to confirm hypothesis 1, albeit with some qualifications. In this sense, three independent phenomena can be observed. Firstly, there is a negative relationship between each of the static dimensions and their evolution over the following four years. This is due, on one hand, to the fact that three of the four static variables were measured using variables whose upper limit was capped. However, it is possible that, beyond this methodological question, the results might suggest that firms that have reached more advanced levels of export behaviour tend to grow less than those that are at the initial stages, developing instead, other, more complex and sophisticated international behaviour, such as formalising joint ventures, acquiring or creating foreign subsidiaries, etc. (Bilkey and Tesar, 1977; Root, 1987; Johanson and Vahlne, 1990). A second phenomenon is the positive influence of export volume (not export intensity) on growth and commitment to modes of access to foreign markets and the diversity of foreign markets. This result supports the basic arguments of stage theory (Johanson and Vahlne, 1977), according to which, when firms achieve high volumes of exports, (a) they opt for modes of access that involve greater control of those exports and (b) they decide to export to a greater number of countries. A third

phenomenon related to the first hypothesis is the joint influence of the static variables on the dynamic variables. Thus, although the models that consider the effects in interaction are less explanatory than those that only consider the direct effects, various joint effects are shown to be significant. Of particular note is the joint effect of the mode of access to exports and the market diversification in 2002 as predictors of the increase in exports, as well as the effect of export volume and modes of access on the evolution of market diversification. To summarise, the results support recent theoretical proposals that suggest the need to consider the different dimensions of international behaviour as being interdependent. In this sense, the empirical results explain the existence of what Kutschker et al. (1997) and Jones and Coviello (2005) conceptualised as static patterns or *fingerprint patterns*, or what Asmussen et al. (2009) called *international configurations*.

In line with our arguments relating to the interdependence of the dimensions that constitute international behaviour, the second hypothesis proposed that the evolution of certain dynamic dimensions should influence the evolution of others. In this case, the results support hypothesis 2, particularly with regard to the evolution of modes of access and the extent of export market diversification. However, the evolution of export volume and intensity is not significantly similar to the other two dimensions. This result has important implications in that it demonstrates that increased control of exports through modes of access and the geographical diversification of markets does not bring with it an immediate increase in export volume. A possible explanation of this result is the objective of risk minimisation, a central element in the stage theory (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; Andersen, 1993). On one hand, evolution in the modes of access is explained by the desire to increase control over higher export levels, as explained

above, rather than to increase export volumes. On the other hand, entry into new geographical areas can also be explained by the desire to diversify markets and therefore, the risk carried by excessive concentration. Likewise, it is possible that firms that are further increasing the control of their exports and market diversification are those with a greater propensity to move to a higher stage in the internationalisation process, through strategic alliances, the creation of joint ventures, foreign direct investments, and so on.

The third and final hypothesis suggests that exporting experience would moderate the relationship between static and dynamic international variables, albeit differently in the case of the evolution of exports (hypothesis 3a) on the one hand and the modes of access and market diversity on the other (hypothesis 3b). The results do not confirm hypothesis 3a, as no significant relationship was found. However, hypothesis 3b is partially confirmed. It can be shown that in the first year, the positive influence of export volume on the evolution of modes of access to exports and on market diversity is more intense when the firm has been exporting for more than four years. It can be supposed that experience carries an implicit accumulated learning (Eriksson et al., 1997; Sharma and Blomstermo, 2003), which confers a more intense influence of the static dimensions on the later dynamic behaviour.

Our investigation suggests important implications that could be useful when planning future investigations into the internationalisation process. Firstly, our results support the path dependent focus of internationalisation. However, the estimation models are scarcely explanatory. This supports the idea that the history leading up to an international state at one particular point ‘influences’ future international behaviour, but rules out its ‘determining’ this behaviour in future. Secondly, our work demonstrates certain interdependences between three dimensions of export

behaviour, with regard to extent, entry mode and scope (Zahra and George, 2002), in both the static and dynamic fields. However, these interdependences do not act to the same extent between all dimensions. Thirdly, our results support the idea that export experience influences some of the changes in foreign behaviour at one point in time, but not all. In general terms, our work contributes to the literature in that it is one of the first works that (1) simultaneously analyses static and dynamic variables; (2) it establishes relationships between both of these; (3) different dimensions of international behaviour are introduced jointly; and (4) these relationships are contextualised according to the firm's export experience.

Our investigation has some limitations, however, among which we would note those relating to the characteristics of the sample, the temporal field and the measurement of the variables. Firstly, the sample consists entirely of Spanish manufacturing companies that were exporting in one particular year –2002, which might cast doubt on its generalisability in other national, sectoral and temporal environments. Secondly, the period analysed is four years and the dates used are not exactly longitudinal, in that dynamic behaviour has been measured by comparing the cross-sectional data at two different times, 2002 and 2006 (Eden, 2009). A more in-depth analysis of the static and dynamic relationships of international behaviour should broaden the temporal horizon, use truly longitudinal data and apply statistical methodologies that are specific to this type of data. Finally, given the source of the primary data, the measurement of certain variables shows certain weaknesses. For example, only information on export behaviour was available, rather than any other type of international operations; only four broad areas were indicated, rather than the specific countries exported to; and we did not have access to the exact number of years that the firm had been exporting, and therefore the measurement of export

experience is not as detailed as we would have liked.

Internationalisation as a dynamic process continues to be a difficult topic to capture, given its inherent complexity, as well as the difficulty in obtaining data over time. Our investigation casts some light from an empirical perspective on the dynamic nature of the export process and its relation to the level of internationalisation that a firm has reached at a specific time, integrating concepts from the stage theory of internationalisation, the path dependent view of international behaviour, the international learning approach and the configurational approach. It is simply another step in our understanding of *how* firms internationalise over time.

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Figure 1. Model and Hypotheses

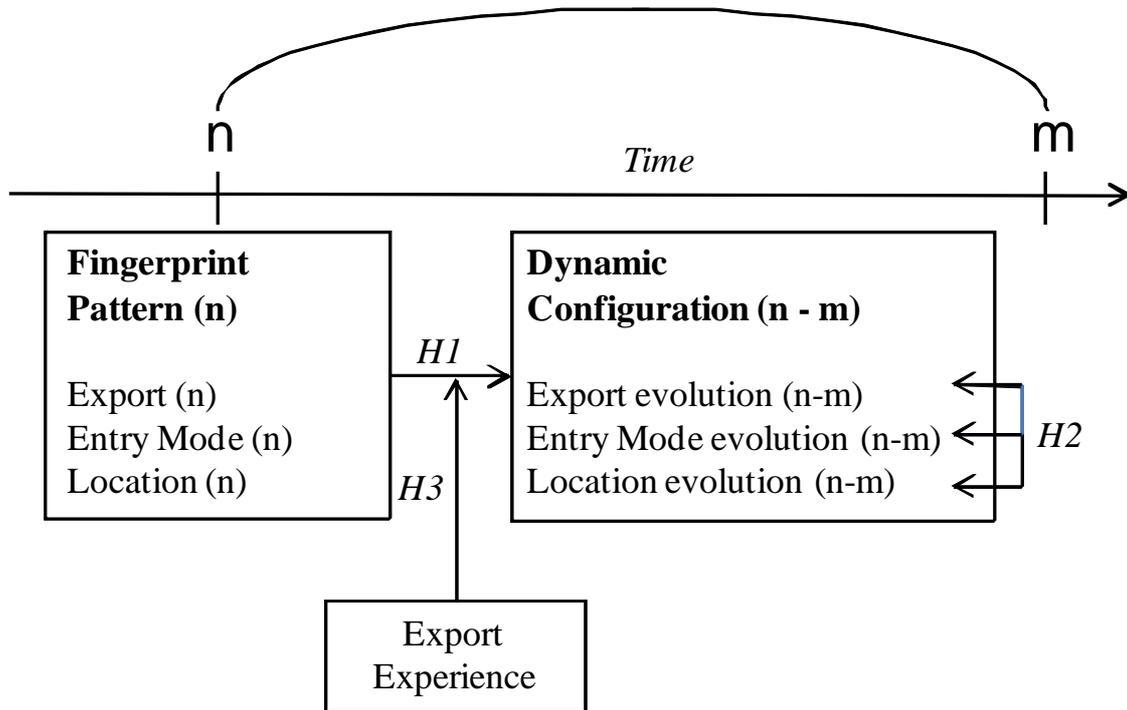


Table 1: Descriptive statistics and correlation matrix

	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33				
1 Sector1	0,029	0,17																																					
2 Sector2	0,073	0,26	-0,05																																				
3 Sector3	0,017	0,13	-0,02	-0,04																																			
4 Sector 4	0,08	0,27	-0,05	-,08*	-0,04																																		
5 Sector5	0,019	0,14	-0,02	-0,04	-0,02	-0,04																																	
6 Sector6	0,031	0,17	-0,03	-0,05	-0,02	-0,05	-0,02																																
7 Sector 7	0,033	0,18	-0,03	-0,05	-0,02	-0,05	-0,03	-0,03																															
8 Sector8	0,038	0,19	-0,03	-0,06	-0,03	-0,06	-0,03	-0,04	-0,04																														
9 Sector9	0,086	0,28	-0,05	-,08*	-0,04	-,09*	-0,04	-0,05	-0,06	-0,06																													
10 Sector10	0,065	0,25	-0,05	-,07*	-0,03	-,07*	-0,04	-0,05	-0,05	-0,05	-0,08*																												
11 Sector11	0,054	0,23	-0,04	-0,07	-0,03	-0,07	-0,03	-0,04	-0,04	-0,05	-,07*	-0,06																											
12 Sector12	0,057	0,23	-0,04	-0,07	-0,03	-,07*	-0,03	-0,04	-0,05	-0,05	-,07*	-0,06	-0,06																										
13 Sector13	0,109	0,31	-0,06	-,09**	-0,05	-,10**	-0,05	-0,06	-0,06	-0,07	-,10**	-,09*	-,08*	-,08*																									
14 Sector14	0,077	0,27	-0,05	-,08*	-0,04	-,08*	-0,04	-0,05	-0,05	-0,06	-,08*	-,07*	-0,07	-0,07	-,10**																								
15 Sector15	0,016	0,13	-0,02	-0,04	-0,02	-0,04	-0,02	-0,02	-0,02	-0,03	-0,04	-0,03	-0,03	-0,03	-0,04	-0,04																							
16 Sector16	0,053	0,22	-0,04	-0,07	-0,03	-0,07	-0,03	-0,04	-0,04	-0,05	-,07*	-0,06	-0,06	-0,06	-,08*	-0,07	-0,03																						
17 Sector17	0,073	0,26	-0,05	-,07*	-0,04	-,08*	-0,04	-0,05	-0,05	-0,06	-,08*	-,07*	-0,07	-0,07	-,09**	-,08*	-0,04	-0,07																					
18 Sector18	0,019	0,14	-0,02	-0,04	-0,02	-0,04	-0,02	-0,02	-0,03	-0,03	-0,04	-0,04	-0,03	-0,03	-0,05	-0,04	-0,02	-0,03	-0,04																				
19 Sector19	0,05	0,22	-0,04	-0,06	-0,03	-0,07	-0,03	-0,04	-0,04	-0,05	-0,07	-0,06	-0,06	-0,06	-,08*	-0,07	-0,03	-0,05	-0,06	-0,03																			
20 LnSales	16,02	2,47	0,06	-0,01	0,07	-,08*	-0,06	-0,02	0,07	-0,03	,08*	-0,02	0,04	0,04	-0,01	0,00	-0,03	0,04	-0,02	0,06	-,07*																		
21 LnEmployees	4,375	1,47	0,02	0,04	0,04	-,12**	-,09**	-0,01	0,04	-0,07	,089*	-0,04	0,06	,09**	-0,05	-0,04	-0,02	0,05	,11**	0,05	-,08*	,42**																	
22 LnAge	2,473	0,94	-0,02	-0,02	,12**	0,05	-0,02	-,12**	-0,06	0,02	,14**	-,08*	0,00	0,02	-0,02	0,00	0,03	-0,04	-0,04	,11**	-0,05	,09*	,17**																
23 Public	0,038	0,19	0,01	-0,03	-0,03	-0,01	0,02	0,00	0,04	0,00	0,06	-0,05	-0,05	,12**	-0,07	-0,03	0,03	,07*	0,00	-0,03	-0,05	-0,05	,20**	0,05															
24 Family	1,687	0,46	0,00	-,07*	-0,04	-,09**	-,07*	0,02	0,05	0,00	0,03	-0,01	0,02	0,05	-0,01	-0,01	-0,05	,08*	0,07	0,01	0,01	0,05	,14**	-,07*	0,05														
25 FDI	0,206	0,40	0,01	-0,02	0,03	-0,05	-0,07	-0,03	,08*	-0,03	0,01	0,01	0,07	0,04	0,01	0,04	0,01	-0,02	-0,05	0,00	-0,04	,19**	,37**	,15**	,12**	0,03													
26 ForAffi	1,048	6,41	-0,02	0,06	0,02	-0,03	-0,02	-0,01	0,03	-0,02	-0,02	-0,03	,12**	,09**	-0,03	0,00	-0,01	-0,03	-0,04	0,00	-0,02	-,11**	,18**	,12**	,16**	0,01	,32**												
27 Exp98	0,751	0,43	-0,03	0,00	-0,04	0,04	0,03	-,09**	0,00	-,07*	-0,01	0,00	-0,06	,07*	-,11**	,07*	0,02	0,05	0,01	,07*	0,02	0,04	0,07	,19**	0,02	0,00	-0,01	0,03											
28 LnExport	14,36	2,60	0,01	-0,04	0,00	-,11**	-0,04	-0,06	0,04	-,12**	,10**	-0,02	0,03	,14**	-0,05	0,02	-0,01	0,05	,14**	,08*	-,14**	,41**	,77**	,17**	,16**	,16**	,34**	,14**	,15**										
29 Explnt	1,415	2,53	,084*	0,05	-0,02	-0,01	-0,07	,11**	-0,03	,07*	0,05	0,03	0,01	-,08*	-0,02	-0,02	-0,04	-0,01	-,10**	-0,04	0,05	-,07*	-,18**	-0,05	-0,05	-0,02	-,09**	-0,04	-,13**	-,44**									
30 Mode	2,915	1,36	0,04	-0,04	-0,02	,11**	-0,03	-0,01	0,05	-0,01	0,02	-0,04	0,04	0,06	-0,02	-0,03	-0,02	0,03	-,09*	-0,03	0,01	,16**	,20**	,09**	0,05	-0,01	,21**	,10**	0,01	,25**	-,11**								
31 MrkDiv	6,751	2,47	-0,03	-0,01	-0,02	0,05	-0,01	-0,07	-0,05	-,07*	,07*	-0,05	,07*	0,03	-0,02	0,06	0,04	,08*	-,09*	-0,04	-0,05	,13**	,27**	,15**	0,05	-0,02	,16**	,13**	,15**	,40**	-,24**	,31**							
32 IncExport	240,9	467,72	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	0,00	-0,01	,12**	-0,01	-0,01	-0,01	-0,01	-0,01	0,00	-0,01	-0,01	0,01	-0,01	0,00	-0,01	-0,02	-0,01	0,03	-0,02	-0,01	0,02	-,10**	0,02	-0,05	-0,04						
33 IncMode	0,219	1,62	-0,07	-0,01	0,01	-0,04	,078*	-0,02	-0,02	,07*	-0,02	0,03	0,00	-0,01	0,02	0,00	-0,01	-0,05	0,06	0,01	-0,03	-0,04	-0,05	-0,05	0,02	-0,01	-0,03	-0,04	0,02	-0,02	-0,01	-,58**	-,09*	0,07					
34 IncMrkDiv	0,297	42,11	-0,03	0,00	0,02	-0,01	0,05	-,10**	0,01	0,07	0,05	0,01	-0,01	-0,04	-0,01	-0,02	0,02	-0,01	0,07	0,04	-0,06	,10**	,07*	0,05	0,01	0,05	0,07	0,00	0,03	,15**	-0,07	0,05	-,14**	0,06	,28**				

Table 2: Regression Models with dependent variable: IncExport

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
(Constant)	274,9	4906,8*	513,8	5199,8*	4612,4*	566,364	347,0	433,7
Sector 1	,006	,014	,002	,019	,013	,005	,000	-,001
Sector 2	,009	,001	-,003	,000	,002	-,003	-,002	,001
Sector 3	,011	,003	-,001	,001	,000	-,002	-,005	,004
Sector 4	,006	,008	-,001	,002	,007	-,004	-,001	,005
Sector 5	,001	,009	,001	,001	,008	-,006	,000	,002
Sector 6	-,001	-,003	-,009	,004	-,003	-,005	-,009	-,010
Sector 7	,007	,009	,002	,009	,011	,003	,004	,005
Sector 8	,007	-,009	-,011	-,022	-,010	-,019	-,012	-,003
Sector 9	,141+	,162*	,146+	,158+	,159*	,143+	,142+	,133
Sector 10	,007	,016	,001	,014	,016	-,001	,000	,003
Sector 11	,008	,008	,006	,005	,009	,004	,007	,000
Sector 12	,008	,031	,017	,035	,029	,018	,014	,009
Sector 13	,010	,015	,005	,013	,013	,004	,003	-,001
Sector 14	,004	,020	,006	,022	,017	,007	,002	,003
Sector 15	,006	,008	,002	,007	,007	,001	,001	,005
Sector 16	,006	,014	,005	,015	,014	,006	,006	,003
Sector 17	,009	,029	-,001	,026	,025	-,004	-,004	,006
Sector 18	,025	,038	,015	,039	,037	,014	,014	,026
Sector 19	,004	-,015	-,013	-,015	-,014	-,011	-,010	-,001
LnSales	-,006	,033	,017	,027	,033	,011	,017	-,004
LnEmployees	-,020	,206**	,102+	,224***	,198**	,102+	,094	-,010
LnAge	-,041	-,034	-,035	-,033	-,035	-,033	-,036	-,034
Public	-,009	-,009	-,008	-,011	-,009	-,010	-,009	-,009
Family	,023	,042	,031	,043	,042	,031	,031	,024
FDI	-,007	,015	,008	,009	,018	,002	,012	-,009
ForAffi	,006	,012	,012	,011	,011	,012	,011	,008
Exp98	,029	,050	,039	,048	,051	,036	,041	
LnExport		-,359**		-,397***	-,348***			
ExpInt		-,091*		-,093*	-,091*			
Mode		-,027		,012	-,027			
MrkDiv		,007		,022	,012			
LnExport x Mode			-,265**			-,258*	-,244*	
ExpInt x Mode			-,035			-,022	-,045	
LnExport x MrkDiv			-,273**			-,290***	-,253**	
ExpInt x MrkDiv			-,008			-,015	,001	
MrkDiv x Mode			,334**			,369**	,310*	
IncMode				,068		,058		
IncMrkDiv				,070+		,044		
IncMode x IncMrkDiv					,038		,047	
Exp98 x LnExport								-,028
Exp98 x ExpInt								,029
Exp98 x Mode								-,025
Exp98x MrkDiv								,024
R2	,019	,055	,036	,065	,056	,042	,038	,020
R2ajust	-,017	,015	-,006	,022	,015	-,003	-,006	-,021
F	0.522	1.361	0.853	1.519	1.349	0.925	0.872	0.484
Sig	0.979	0.093	0.701	0.033	0.096	0.593	0.675	0.992
VIF	5,572	4,836	11,675	5,607	5,606	11,918	11,963	4,803

Table 3: Regression Models with dependent variable: IncMode

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
(Constant)	,862	,903	,790	1,591**	,824	1,276**	,784	,825
Sector 1	-,078	-,049	-,041	-,043	-,049	-,037	-,041	-,054
Sector 2	-,030	-,036	-,043	-,051	-,036	-,058	-,043	-,039
Sector 3	,009	-,008	-,009	-,018	-,008	-,019	-,009	-,018
Sector 4	-,067	,027	,012	,009	,027	-,007	,013	,013
Sector 5	,058	,051	,060	,030	,051	,034	,060	,056
Sector 6	-,036	-,019	-,025	,004	-,019	-,001	-,024	-,039
Sector 7	-,031	-,002	-,010	-,003	-,002	-,013	-,010	-,004
Sector 8	,058	,083+	,070	,050	,083+	,037	,071	,061
Sector 9	-,030	-,029	-,025	-,060	-,037	-,061	-,031	-,011
Sector 10	,007	-,004	-,001	-,016	-,004	-,017	-,001	,020
Sector 11	-,004	,010	,007	,000	,010	-,004	,007	,018
Sector 12	-,026	-,005	,002	,009	-,006	,011	,002	-,006
Sector 13	-,009	-,006	-,012	-,017	-,007	-,027	-,012	-,008
Sector 14	-,026	-,046	-,042	-,053	-,047	-,053	-,042	-,030
Sector 15	-,023	-,030	-,030	-,045	-,031	-,046	-,030	-,014
Sector 16	-,070	-,051	-,055	-,062	-,052	-,068	-,055	-,042
Sector 17	,032	-,019	-,008	-,037	-,020	-,037	-,008	-,009
Sector 18	,002	-,029	-,015	-,035	-,029	-,029	-,014	-,023
Sector 19	-,049	-,004	-,018	-,001	-,004	-,013	-,017	-,017
LnSales	-,014	,029	,048	,010	,027	,023	,048	,026
LnEmployees	-,038	-,105*	,013	-,062	-,114*	,011	,009	-,102*
LnAge	-,056	-,036	-,036	-,040	-,034	-,042	-,035	-,037
Public	,038	,033	,029	,032	,033	,028	,029	,043
Family	-,009	-,034	-,020	-,043	-,036	-,033	-,021	-,048
FDI	,004	,070*	,083*	,060+	,069*	,069*	,083*	,054
ForAffi	-,035	-,007	-,005	-,013	-,008	-,010	-,005	-,009
Exp98	,038	,007	,020	-,004	,004	,004	,018	
LnExport		,206***		,112*	,223***			
ExpInt		,011		,011	,016			
Mode		-,649***		-,672***	-,647***			
MrkDiv		,058+		,147***	,058*			
LnExport x Mode			-,386***			-,494***	-,377***	
ExpInt x Mode			-,195***			-,181***	-,194***	
LnExport x MrkDiv			,349***			,384***	,359***	
InExp x MrkDiv			,132*			,134**	,132*	
MrkDiv x Mode			-,375***			-,283**	-,387***	
IncExport				0,038		,032		
IncMrkDiv				0,322***		,337***		
IncExport x IncMrkDiv					,051+		,042	
Exp98 x LnExport								,527***
Exp98 x ExpInt								,039
Exp98 x Mode								-,824***
Exp98 x MrkDiv								,136*
R2	,035	,390	,369	,485	,392	,473	,370	,300
R2ajust	-,001	,364	,341	,461	,366	,449	,342	,271
F	0.963	14.888	13.160	20.51	14.555	19.016	12.84	10.326
Sig	0.560	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	5,572	5,605	11,675	5,594	5,590	11,91	11,75	5,637

Table 4: Regression Models with dependent variable: IncMrkDiv

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
(Constant)	-44,9**	-60,5***	-37,8*	-73,8***	-63,7***	-47,9***	-38,0*	-37,271
Sector 1	,002	-,021	-,012	,001	-,022	,008	-,012	-,017
Sector 2	,058	,047	,046	,063	,047	,067	,047	,036
Sector 3	,040	,029	,031	,033	,029	,036	,031	,026
Sector 4	,066	,055	,057	,042	,055	,051	,057	,052
Sector 5	,086+	,067	,077	,042	,066	,048	,077	,071
Sector 6	-,058	-,073	-,069	-,063	-,072	-,057	-,069	-,073
Sector 7	,037	,003	,008	,003	,003	,012	,008	,009
Sector 8	,113+	,104+	,099	,066	,105+	,066	,100	,100
Sector 9	,100	,076	,093	,081	,064	,100	,086	,081
Sector 10	,068	,036	,049	,037	,035	,049	,049	,036
Sector 11	,033	,031	,032	,026	,031	,028	,031	,022
Sector 12	,000	-,047	-,030	-,047	-,049	-,031	-,030	-,038
Sector 13	,061	,033	,045	,035	,033	,050	,045	,028
Sector 14	,040	,019	,033	,039	,017	,053	,033	,015
Sector 15	,048	,045	,049	,059	,045	,063	,049	,047
Sector 16	,035	,030	,038	,053	,029	,064	,038	,029
Sector 17	,120	,052	,086	,059	,051	,090	,087	,070
Sector 18	,057	,016	,040	,027	,016	,047	,041	,020
Sector 19	-,005	-,008	-,015	-,005	-,007	-,006	-,014	-,022
LnSales	,090*	,054	,073+	,039	,052	,049	,072	,089*
LnEmployees	,004	-,155*	-,003	-,118*	-,171**	-,013	-,008	-,030
LnAge	,008	,017	,019	,035	,020	,038	,021	,023
Public	,011	,003	,003	-,011	,004	-,011	,004	,003
Family	,048	,021	,038	,035	,018	,046	,036	,038
FDI	,050	,030	,039	-,004	,029	-,002	,039	,045
ForAffi	,004	,016	,016	,019	,015	,018	,015	,020
Exp98	,023	,027	,043	,021	,024	,032	,041	
LnExport		,334***		,258***	,359***			
ExpInt		,012		,011	,019			
Mode		,074+		,376***	,076*			
MrkDiv		-,277***		-,304***	-,277***			
LnExport x Mode			,345***			,540***	,357***	
ExpInt x Mode			-,039			,056	-,037	
LnExport x MrkDiv			-,078			-,237**	-,065	
ExpInt x MrkDiv			-,008			-,071	-,007	
MrkDiv x Mode			-,304*			-,135	-,319**	
IncExport				,055+		,034		
IncMode				,464***		,483***		
IncExp x IncMrkDiv					,080*		,053	
Exp98 x LnExport								,329***
Exp98 x ExpInt								-,049
Exp98 x Mode								,101+
Exp98 x MrkDiv								-,414***
R2	,050	,121	,096	,258	0,127	0,246	0,098	,095
R2ajust	,015	,084	,056	,224	0,089	0,21	0,057	,058
F	1.425	3.213	2.385	7.605	3,288	6,881	2,383	2,544
Sig	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	5,572	5,605	11,76	5,605	5,605	12,04	11,76	5,403