Corporate Control and International Diversification: Evidence from Italian Firms

1 Introduction

The process of international diversification brings many potential benefits to firms, notably the possibility of efficiency gains due to economies of scale, enhanced capabilities due to experiential learning, greater market power, and risk diversification. However, the expansion of the firms' strategic scope also adds complexity to the management of the firm, due not only to the greater information-processing demands and costs of internal governance but also to the difficulties of coordinating activities across national boundaries, and increased firm risk due to the increased exposure to uncertain environments (Hitt *et al*, 2006: 854). It is perhaps unsurprising therefore that empirical studies of the relationship between the degree of firm multinationality and firm performance show mixed results (Geringer *et al*, 1989; Kim *et al*, 1989; Tallman and Li, 1996; Gomes and Ramaswamy, 1999; Qian and Li, 2002; Denis *et al*, 2002; Ruigrok and Wagner, 2003; Contractor *et al*, 2003; Lu and Beamish, 2004). This indeterminacy suggests, at the very least, that international diversification is not necessarily a value-enhancing strategy. It is possible that international diversification may be *ex post* value-reducing simply because of poor implementation, but agency theory also suggests that managers and various groups of shareholders may well favour expansion strategies that are not *ex ante* value-maximising for the firm.

The objective of this paper is to model the determinants of international diversification, using data for a panel of Italian firms. Much of the previous literature on international diversification has used data on US firms, though there have been several studies using data for emerging and newly-industrialised economies. We draw upon this literature to include various firm-specific attributes (e.g. industry, firm size, leverage) that have been shown to be associated with international diversification. But the main contribution of this paper is to introduce as potential determinants: (a) the ownership structure of the firm, (b) the market for corporate control, (c) the independence of the Board of Directors, and (d) the degree of product market competition.

The Italian context is particularly appropriate for this study for two main reasons. First, Italian industry demonstrates a high level of internationalisation. Italy was the sixth

largest exporter of manufactured goods in the world in 2008, and accounts for significant shares of the world market in many industrial sectors (e.g. footwear, furniture, non-metallic mineral products). Second, Italy has a distinctive corporate governance system involving *inter alia* appreciable degrees of family and/or public ownership in many firms, and also widespread firm-specific restrictions on the transfer of shares and independent voting. Moreover, the Italian regulatory authorities have, within the last decade, increased the level of disclosure required of listed firms to a high level of detail. For example, all shareholders with holdings of 2% or more must be separately identified: this is the greatest level of detail required in any European country, and allows us to establish a very clear picture of the ownership structure of listed firms.

The structure of the paper is as follows. In the next section we review the extant literature on international diversification, and formulate our research hypotheses. In section 3, we briefly describe the Italian corporate governance system and highlight some of its distinctive features, explain how we have operationalised the variables used in the model and detail the data sources, present descriptive statistics on these variables, and outline the estimation methodology and the statistical tests used. We present and discuss the regression results in section 4: these confirm that all our hypothesised determinants (apart from product market competition) have statistically significant effects upon international diversification. The final section concludes, and suggests avenues for further research.

2 Review of the Literature and Research Hypotheses

Two theoretical approaches dominate the academic literature on international diversification and the existence of the multinational enterprise (MNE): internalisation theory and the resource-based view (RBV). The emphasis in internalisation theory (Hymer, 1968; McManus, 1972; Buckley & Casson, 1976; Rugman, 1981; Hennart, 1982) is on the costs and benefits of coordinating related economic activities internally by the management of a firm relative to those incurred through external coordination through the market. In contrast, the resource-based view (Lippman and Rumelt, 1982; Rumelt, 1984; Wernerfelt, 1984; Barney, 1986, 1991; Dierickx and Cool, 1989; Peteraf, 1993; Teece *et al*, 1997) is primarily concerned with understanding performance differentials between firms. The objective of the firm is to earn above-normal returns, and the firm is conceptualised as a heterogeneous bundle of resources which are valuable, rare, costly-to-imitate, non-substitutable and non-tradeable.

From the RBV perspective, international diversification is viewed as a means by which the firm can both exploit and augment its resources (Luo, 2002). A key driver of the diversification process is the existence of excess capacity, either of physical assets or human expertise (Mahoney and Pandian, 1992). One strategy through which the firm can exploit these underused resources is by entering foreign markets. On the other hand, the firm may choose to diversify in order to augment its resources either through accessing completely new resources or by organisational learning (Barkema and Vermeulen, 1998). To the extent that the resources to be exploited and/or augmented involve tacit knowledge then the chosen strategy is likely to involve the transfer of resources within the firm. In the language of internalisation theory, the firm's resources and capabilities are both intermediate products, the markets for which suffer from the standard problems of buyer uncertainty, indeterminate bargaining situations etc. Knowledge is a public good which can often be easily transmitted across national boundaries (Buckley and Casson, 1976), and thus its exploitation is essentially an international operation. The result is that the firm will find it impossible to extract the maximum rent through arm's length transactions, and the transaction cost economising solution will be to internalise the transfer of the intermediate products within the firm.

Hitt *et al* (2006) provide an excellent and concise summary of the empirical research published on international diversification since 1995. Consistent with both internalisation theory and the RBV, they report (Hitt *el al*, 2006: 835) that prior research has shown that variables such as firm size, organisational age, product diversification, and R&D intensity are positively associated with international diversification. Kochhar (1996) further suggests that the capital structure of the firm influences diversification strategy. We thus include firm size, organisational age, product diversification, and the debt/equity ratio as control variables in the model, along with industry dummies to capture intra-industry differences in R&D intensity and other unspecified variables.

More recently, various studies (see, for example, Sanders and Carpenter, 1998; Tihanyi *et al*, 2000; Tihanyi *et al*, 2003; Lien *et al*, 2005; Filatotchev *et al*, 2007) have begun to incorporate governance variables in their regression models. This paper contributes to this line of research and introduces, as potential determinants of the level of international diversification: (a) the ownership structure of the firm, (b) the market for corporate control, (c) the independence of the Board of Directors, and (d) the degree of product market competition.

If all shareholders are risk-neutral and are primarily concerned with maximising the value of the firm, and it can be assumed that managers act in accordance with the

shareholders' wishes, then the ownership structure of the firm should have no impact upon firm strategy – the degree of international diversification will then be determined by the firm-specific attributes discussed above. However, agency theory (Jensen & Meckling, 1976; Denis et al, 1999) suggests that the interests of managers and shareholders are not necessarily aligned, and may well conflict. Furthermore, different types of shareholders will typically have different decision-making time horizons and different attitudes towards risk, in which case the ownership structure of the firm is likely to have an impact upon the formulation of firm strategy. For instance, family-owned firms typically hold relatively undiversified investment portfolios and their equity holdings show limited liquidity. Furthermore, because the owners in the current generation have an obligation to preserve wealth for the next generation, family firms often possess longer time horizons compared to non-family firms (Chrisman et al, 2005; Bruton *et al*. 2008). In an emerging economy, international diversification might thus provide an opportunity for long-term growth and a reduction in cash flow volatility (Lien et al, 2005). But in a developed economy setting, such considerations might not be as important as the fact that family shareholders are likely to be more risk-averse as they typically have most of their wealth tied up in the business, and are thus less likely to pursue high-risk strategies such as international diversification. Financial institutions are a second important constituency and are likely to be particularly active investors in firms, as they will typically have the financial interest, the independence and the expertise to monitor the firm's management and policies. There is some evidence (Hoskisson et al, 1994; Young et al, 2008) that institutional shareholders promote good governance, with a resultant improvement in firm performance. Such firms are likely to be those that are most actively seeking foreign expansion, especially in Italy where the financial system has been completely privatised and the banking sector shows an increasing degree of internationalisation. The equity participation of such financial institutions may well provide the firms with access to the institutions' networks in overseas markets, and thus facilitate internationalisation (Filatotchev et al, 2008). A third constituency, particularly important in the Italian context but also elsewhere in Continental Europe, is the public sector. On the one hand, one might expect the public sector to be risk-neutral as the officials are investing the money of other people, and individual taxpayers will each have only a small financial interest. But public sector officials are also sensitive to political considerations, and investments may be made for objectives (e.g. the preservation of local employment) other that value-maximisation for the firm. In practice, such political considerations are likely to weigh rather more heavily than the risk preferences. Our first group of hypotheses is thus:

H1a: A high level of family shareholding will be associated with a lower level of international diversification.

H1b: A high level of financial institution shareholding will be associated with a higher level of international diversification.

H1c: A high level of public shareholding will be associated with a lower level of international diversification.

The 'agency cost hypothesis' (Denis *et al*, 1997; 2002) suggests that managers derive various private benefits from international diversification, and that these benefits may exceed their private costs. Managers may thus have an incentive to diversify their firms because their compensation is linked to firm size (Baker, Jensen & Murphy, 1988), because they derive power and prestige from being associated with a larger firm (Jensen, 1986), because their job security is enhanced (Shleifer and Vishny, 1989), or because firm diversification reduces the risks attached to their undiversified personal portfolios (Amihud and Lev, 1991). Thus it is argued that managers may opt for a strategy of international diversification, even if it is expected to lead to a reduction in shareholder wealth[1]. Furthermore managerial proclivity for non-profitable strategies may be exacerbated by the presence of free cash flow in firms, which is assumed to breed inefficiencies and poor managerial decision-making (Jensen 1986, 1989).

But if the management of the firm does not implement strategies that maximise the value of a publicly-traded firm then outside parties may well perceive a profitable opportunity (Denis, 2001) and launch a takeover bid. A constraint on managerial discretion is thus provided by the external market for corporate control, with an active market proving management with the incentive not to stray too far from profit-maximising behaviour. In contrast, if the market for corporate control does not function effectively, either because not all the shares are tradeable or because certain shareholders have concluded agreements to vote together, then there will be more leeway for management to exercise their discretion and pursue strategies that promote their own interests even if these are at the expense of firm value maximisation. Furthermore, the influence of individual shareholder constituencies on firm strategy will be reduced. Our second pair of hypotheses is thus:

[1] However, Fama (1980) suggests that increases in the shareholder value of the firm may be interpreted as signals of managerial effectiveness, and thus linked to managerial compensation.

H2a: An inactive market for corporate control will be associated with a higher level of international diversification.
H2b: An inactive market for corporate control will reduce the impact of the various shareholder constituencies on the level of international diversification.

One of the principal roles of the Board of Directors is to monitor whether management represents the shareholders' interests (Finkelstein and Hambrick, 1996): the Board thus provides an internal control mechanism which should guard against managerial strategies that reduce the value of the firm (Jensen, 1993). But a different problem emerges if the firm's executives are too closely aligned with the interests of one particular group of shareholders. In countries (such as Italy) where voting agreements and pyramidal share and cross-ownership structures are commonplace, families often maintain control of firms by appointing executives with family links rather than on the basis of proven managerial experience and expertise (Carpenter and Westphal, 2001). Enriques and Volpin (2007) note that the Boards of family-controlled firms often do not represent the shareholders' interests but pay obeisance to the controlling families that have the power to appoint and remove them. In particular, the firm is more likely to pursue the objectives of the controlling family if either the Chief Executive Officer (CEO) or the President of the Board are family members.

On the other hand, the Board also performs other roles, notably assistance in strategy formulation and in providing access to critical resources and information: Board members are 'boundary spanners' to use the term popularised by Zahra and Pearce (1989). In this context, the involvement of outside directors has been identified in the literature as having particular importance (Kor and Misangyi, 2008), in that such directors not only monitor managers on behalf of all the shareholders but also provide the firm with crucial managerial competencies. These competencies take the form of knowledge, advice, legitimacy, reputation and a network of external ties that promote firm growth. These are essential not only to improve firm performance but also to promote effective internationalisation strategies. There is evidence that the independence of the Board, in terms of the proportion of outside to inside directors, has a positive impact on international diversification (Sherman *et al*, 1998: 319-320). Our third group of hypotheses is thus:

H3a: If the CEO or the President is a member of a controlling family, then the firm will have a lower level of international diversification.

H3b: A high proportion of outside to inside Directors on the Board will be associated with a higher level of international diversification.

A final potential determinant is the degree of product market competition that the firm experiences in its domestic market. On the one hand, a competitive domestic market should push the firm to seek profitable opportunities elsewhere and should thus be associated with a higher level of international diversification. On the other hand, a competitive domestic market provides a discipline for management. As Denis (2001: 206-7) points out, 'ultimately, a firm must produce products that people want with a cost structure – including the cost of capital – that allows them to sell the products at a competitive price. Management wastefulness and/or inefficiency that interferes with the ability to do so will be reflected in poor performance in its product markets, as will a cost of capital that is high.' From this perspective, a high level of domestic competition should curb managerial discretion and should thus be associated with a lower level of international diversification. On balance, however, we would expect the first effect to outweigh the second, and our final hypothesis is thus:

H4: A high degree of domestic product market competition will be associated with a higher level of international diversification.

The general framework of our analysis is depicted in Figure 1. Our model hypothesises that the degree of international diversification is a function of industry characteristics, some firm- specific characteristics (size, age, product diversification, and financial leverage) and some corporate governance variables. We enter the industry and firm-specific characteristics as control variables, and focus primarily on the effects on international diversification of the four broad categories of corporate governance variables: i.e. ownership structure, the market for corporate control, the Board of Directors, and the level of product market competition.

****** Insert Figure 1 about here ******

3 Data and Methodology

3.1 The Italian Corporate Governance System

There are a plurality of corporate governance systems around the world, but much of the academic literature focuses on two models. The first model is generally referred to as the Anglo-Saxon model, and is mainly identified with the United Kingdom and the United States. The second is the German model, which is mainly identified with the countries of Continental Europe and Japan. In the Anglo-Saxon model, financial markets play a crucial role in monitoring and disciplining managerial behaviour, whilst banks limit their role to the supply of short-term finance and do not no have direct interest in the firm. In this system, firms have a broad shareholder base with both private and financial institutional owners (De Jong, 1997) and the top management team is typically made of autonomous figures. If managers do not perform well, a takeover bid for the firm is likely. This threat provides a strong incentive for managers to behave in the interests of the shareholders. In contrast, the monitoring role in the German system is typically played by the banks and insurance companies, which hold important stakes in the company. In this model, the banks not only supply short-term finance but also long-term capital, also in the form of equity, and play a crucial role also in shaping company policies and in selecting and influencing the top management team.

Both models are subject to change, and a huge amount of literature (see, for example, De Jong, 1997; La Porta *et al*. 1999) has discussed the strengths and weaknesses of the two approaches. Nevertheless, these models provide the standard reference when assessing any national corporate governance system. For instance, most of the literature (Cescon, 2000) agrees that the set of formal and informal rules that guide business in Italy is more similar to the German system than to the Anglo-Saxon system. However, in the last decade a new set of rules has been introduced, mainly thanks to the implementation of European directives, which progressively align Italy with other countries of Continental Europe but also to the best practice of the Anglo-Saxon model. A new Banking Law was passed in 1993 allowing banks to have direct holdings in business firms, the stock market and the all banking system have been privatised, disclosure regulations have been tightened, and a new set of regulations have been introduced to strengthen shareholders protection and transparency. Notwithstanding these changes that have improved and upgraded the Italian institutional and regulatory framework, a recent study by the Bank of Italy shows that, even if the mode of control has shown some signs of evolution, many of the peculiar traits that distinguish the Italian system still remain in place.

One important characteristic of the Italian system is the limited contestability of control (Banca d'Italia, 2008). This feature is the result of a series of market characteristics and of control-enhancing mechanisms typical of the Italian market. Among the market

characteristics, the limited role of the equity markets and the marginal role of financial intermediaries (both credit institutions and institutional investors) are well documented (Bajo, Bigelli and Sandri, 1998). As a consequence, ownership and control are mainly concentrated in the hands either of the State (which is still present in some strategic sectors such as energy, defence and public utilities) or in the hands of individuals and families. According to recent data (Banca d'Italia, 2008), the State (the central government or through governmental agencies or local authorities) still plays a dominant role on the Italian Stock Exchange, with almost 30% of the listed companies directly or indirectly controlled by public authorities. This results from the listing, and partial privatisation, of very large utilities that more than offset the significant privatisation process realised during the 1990s.

Another important characteristic of the Italian corporate governance system is the pivotal role played by individuals and families in the control of firms. The strong presence of families has been guaranteed through a widespread series of control-enhancing mechanisms, such as pyramidal group structures, dual-class shares, and cross-ownership and voting agreements. In its review of the ownership and control structure in Italy in the last fifteen years, the Bank of Italy (Banca d'Italia, 2008) found evidence of a slowly decreasing role of families. This process is mainly due to a series of bankruptcies that has driven some large family groups out the market: one well-known example is the case of Parmalat and the Tanzi family. Notwithstanding this evolution, the data clearly show that individuals and family coalitions are still the prevailing control group in the Italian system. Finally, many studies have shown that the pivotal role of families in controlling firms has limited managerial autonomy and has influenced governance mechanisms such as the board of directors, which 'often has the function of ratifying decisions that have already been taken by the general management staff' (Cescon, 2000: p. 258).

3.2 Data Sources and Methodology.

The data used in this paper were extracted from the balance sheets of a sample of manufacturing firms quoted in the Italian stock exchange, and from official documents regarding the corporate governance of these firms supplied by the Italian Stock Exchange and by the supervisory authority of the Italian securities market (CONSOB). The sample for this study consists of a panel of Italian manufacturing firms quoted on the local stock exchange over the period 2005 - 2007. We choose 2005 as the first year of our analysis, even though balance sheet data were available for previous years, since this is the year that Italian firms were first obliged to adopt IAAS/IFRS accounting standards. These standards introduced new

accounting principles for Italian firms, and consequently the data gathered before and after 2005 are not easily comparable. Moreover, the data from 2005 onwards allow a more refined analysis of internationalisation strategies. Among the new requirements of the IAAS/IFRS standards, firms are required to disclose the geographical distribution of their sales. Since we were interested in analysing the degree of internationalisation of the Italian firm, we use these data to develop an index of international diversification (INTDIV). We have decided to concentrate on manufacturing firms, and thus to omit the numerous service firms quoted on the Italian Stock Exchange, because the significance of exports, as a measure of internationalisation, is very limited in the service sector. Often production and consumption of services coincide (Clark *et al,* 1996), the only way for many service firms to enter a foreign market is often limited to arm's length agreements (equity or non-equity) or foreign direct investments. Since, according to Italian and European legislation, the sales realised through agreements and minority stakes are not consolidated in the balance sheets, our data do not take in account this potential share of turnover. This omission is not so problematic in the case of manufacturing firms since, when they are not present in a foreign market with a subsidiary, they can serve the area through export. But this option is not available for service firms that, on average, report very low levels of foreign sales from foreign direct investments. Moreover, detailed data on the geographic distribution of FDI and international commercial agreements are not available in the balance sheet.

We thus consider only the manufacturing firms continuously quoted on the Stock Exchange over the period 2005 - 2007. This provided a selection of 88 firms quoted on the Stock Exchange at the end of 2005, but 10 firms were dropped either because they were de-listed, or acquired by other firms, over the period. We thus end up with a balanced panel of 78 firms over three years, and a total of 234 observations.

Our first step was to define a measure of internationalisation (INTDIV) as the dependent variable. Some empirical works use some measure of foreign sales intensity. The typical choice in this case has been the ratio of foreign sales to total sales (Katsikeas *et al*, 2000; Majocchi *et al*, 2005). This measure gauges the ability of firms to enter foreign markets, but does not consider the geographical distribution of sales. Moreover, as Rugman & Verbeke (2004) point out, foreign sales intensity is not a fully satisfactory measure of geographical diversification since it does not take in account the distribution of sales and whether or not they are geographically well-balanced in the main world markets. For example, using the export-to-sales ratio, two firms can be considered identical in terms of geographical diversification even if one is exporting only in one country while the other has a

real global presence in all the main world markets. Consequently, Rugman & Verbeke (2004: 15) suggest that 'future research.....should study explicitly the regional patterns and scope of MNE sales.' It is clear that, when data are available, a more comprehensive measure of internalisation should be preferred. In our case, the requirements of the IAAS/IFRS standards oblige firms quoted on the Stock Exchange to supply precise information on the geographical distribution of their sales. Unfortunately, our data do not allow us to distinguish whether foreign sales have been realised through export or through domestic sales by foreign subsidiaries. We classify (export plus overseas) sales according to six main geographical areas. The first area is the local national market: i.e. Italy. Then there are the Triad regions: North America, the expanded European Union, and Asia (Rugman and Verbeke, 2004). We add a fifth region following Ohmae's (1985) suggestion that, in order to become global players, firms should identify an additional region to the Triad where it should be easier for them to expand their sales. The additional region we identify is Latin America because of the historical/cultural ties and the large Italian community linking this area with Italy. The sixth and final area is a residual region called the 'Rest of the World'. Using this classification, our measure of international diversification is calculated using the Jacquemin and Berry (1979) entropy index. This measure was initially developed for quantifying the degree of product diversification, but has lately been adapted to measure international diversification (Kim, 1989; Hitt *et al*, 1997). The measure that we named International Diversification Index (INTDIV) is defined in the following way:

$$\text{International Diversification Index} = \sum_{J=1}^{6} x_j \ln\left(\frac{1}{x_j}\right)$$

The subscript j defines one of the six geographical areas, and x_j is the percentage of sales realised in the market j. The natural logarithm of the inverse of the sales realised in every market is the weight given to each geographical segment. The entropy measure will equal 0 for firms that have all their sales concentrated in one country, and will reach a maximum value of 1.79 for firms with exactly the same share of sales in each of the six defined areas. In our sample the average value of INTDIV is 0.95, with a minimum value of 0 and a maximum value of 1.74.

Our hypotheses predict that a relationship exists between the level of international diversification and four groups of explanatory variables: the ownership structure, the board of

director characteristics, the existence of an active market for corporate control, and the degree of product market competition. The definitions and sources of data for these variables, and for the control variables, are reported in the Table 1.

***** Insert Table 1 about here *****

In order to measure the ownership structure of the quoted firms we rely on the information on ownership structure published every year by the Italian supervisory authority (CONSOB). The transparency regulation of the Italian securities markets, following the European Transparency Directive of 1988 (Large Holdings Directive, 88/627/EEC), forces disclosure of shareholdings larger then 2% for all the companies listed on the Stock Exchange. The stakes and the identity of the shareholders are reported by the authorities on their website. The 2% threshold is, according to international standard, very low. The corresponding rates in other European markets vary from 5% for France, Germany and Spain, to 3% in the United Kingdom (Faccio & Lang, 2002). This low rate allows a very detailed mapping of the distribution of the voting rights of the Italian quoted firms. For every firm we compute the stake held by the following constituencies: private families, financial institutions (investments funds, banks and insurance companies) and public bodies (the government, a local authority or a government agency). We named these variables respectively FAM, FIN and PUB. We did not consider in our analysis the stakes held by other kind of constituencies such as financial holdings and industrial firms. This choice is justified by the fact that financial holdings and industrial firms are often used in Italy as tools for building pyramid structures (Bigelli & Mengoli, 2004) in which a firm is controlled through another corporation which the owner does not wholly control. In the words of Faccio & Lang (2002: 372), 'pyramiding implies a discrepancy between the ultimate owner's ownership and control rights.' In Italy, unlike in the United Kingdom, the disclosure rule does not apply to unlisted firms so we were not able to take these kinds of shareholders into account in defining of indirect control. This is clearly a limitation of our database.

Our data confirm the pivotal role played by private families in the corporate governance of Italian firms. The average percentage of shares controlled by private families in our sample is 35%, with a maximum value of 86%. Out of 234 observations, there are only 15 cases with a family shareholding smaller then 10% whilst more than 55% of the firms have a percentage of family stake larger than 30%. The role of financial institutions is more limited. The average percentage is only 8%, with this rate ranging from 0 to 70%. There were only 12 cases where the percentage possessed by financial institutions is larger than 30%. The role that the State plays in the manufacturing sector is also limited, with only five firms (for all the

three years) that have a public ownership larger then 2%. However, in most of these cases, the State has a large and controlling share of ownership. In two cases (*Finmeccanica* and *ENI*) in the defence and energy sectors, the State has, over the three years, a share larger then 30%. In one case (*Saipem*) in the infrastructure sector, the State ownership is larger then 40%. And in the case of *Bonifiche Ferraresi* in the food sector, the State percentage has been stable at 62.3%.

On the basis of the disclosure requirements reported by CONSOB, we defined a dummy variable (VOTE) which takes the value of 1 when the main shareholders have any kind of formal agreement between them to form a coalition. Such coalitions among shareholders are, as mentioned, a typical device adopted by Italian shareholders to tighten their control. Our data show that this practice is common in the Italian market with almost half of the firms in our sample (111 observations, or 47% of the sample) having some kind of agreement. Most of these firms (82 observations) had a financial institution shareholding, but very few (2 observations) had a State shareholding.

We analyse the composition of the Board of Directors using the Corporate Governance Report that every quoted firm is obliged to deliver yearly to the supervisory authority. We compute two variables. The first variable (PCEO) is a dummy variable which takes the value of 1 if either the President or the Chief Executive Officer (CEO) is a member of the controlling family. In order to infer this information we check if the executives and the controlling family have a common surname. In our sample, this happened in 36% of the cases, a percentage that shows that family ownership is an important feature of Italian manufacturing firms, not only in terms of shareholding percentages, but also in terms of management selection. The second variable (EXT) measures the independence of the Board, as given by the number of outside directors as a proportion of the Board. The inside directors are defined as those persons who have either significant direct or indirect links with the firm or with persons within the firm, and is a rather wider definition than the usual 'non-management members of the Board' adopted in the literature (Johnson et al, 1996: 417). The average percentage of outside directors in the Board in our sample is 37%, with five firms (15 observations) with no external members. The maximum value reported in the sample of this variable is 88% in the case of a company with large public shareholdings.

Our measure of domestic product market competition (COMP) is a count of the number of firms operating in Italy in the same 2-digit NACE industry sector. The data were collated from the Industrial Statistics as supplied by the Italian Statistical Office (Istat). This

variable clearly provides only a crude measure of competition, as 2-digit sectors are very aggregate and no account is taken of import competition.

Finally, we include controls for several variables found to be determinants of international diversification in previous empirical studies. First we define a series of industry dummies. Each of the firms in the sample was classified to one of eight industry sectors – see Table 2 - using the official classification used by the Italian Stock Exchange.

***** Insert Table 2 about here *****

In the empirical analysis, we use the food sector as the base category and include just seven industry dummy variables – see Table 1. In addition, we include control variables for firm size, age, leverage and product diversification. Many studies (Hitt *et al,* 2006; Majocchi *et al*, 2005) have shown that size and age are crucial variables in determining geographical diversification. Large firms find it easier to grow internationally because of the economies of scale that generate larger organisational capabilities (Leonidou, 1998), that can be leveraged to expand international activities. Many authors (Davidson, 1980; Erramilli, 1991) have underlined that international growth requires specific knowledge and experience. Consequently we introduce in the model the logarithm of the number of employees as a measure of the firm size (SIZE) and the years from foundation as a measure of experience (AGE). Financial leverage has been argued to have a negative impact upon firm internationalisation (Clark *et al.,* 1996). We compute the debt-to-equity ratio for each firm by dividing the book value of liabilities to the value of equity (DEQ). Finally, some studies (Hitt *et al*, 1997) have argued that product and international diversification are interdependent and complementary strategies, hence we also insert a measure of product diversification in the analysis. We measure product diversification (PDIV) using an entropy measure (Geringer *et al.*, 2000). The formula is identical to the one we used to define geographical entropy, but with product market shares used in place of the geographical market shares. This entropy variable is now the standard measure of diversification in strategic management research and has been widely used in various papers (e.g. Baysinger & Hoskisson, 1989; Geringer *et al,* 2000).

Descriptive statistics for the sample of firms are reported in Table 2. Table 3 presents the correlation matrix for the continuous explanatory variables. The modest correlations between the variables suggest that multicollinearity will not be an issue in the regression analysis.

***** Table 3 about here *****

We have data for 78 firms over a three-year period, hence we choose an econometric methodology based on a GLS regression in the context of a random effects panel data model – the calculations are undertaken using Release 9 of the Stata package. The choice of the random effects rather than the fixed effects model is typically a matter of discretion. We estimate both the random and fixed-effects models and run a Hausman misspecification test (Baltagi, 2005) to verify if the coefficients estimated with the efficient random-effects estimator are the same as the ones estimated by the consistent fixed-effects estimator. The statistics, with degrees of freedom and related p-values, are reported for all models in Table 3. The insignificant p-values suggest that it is appropriate to use the random-effects estimator. Moreover, the use of a random-effects approach is advisable since there are reasons to believe that not all the relevant variables have been included in our model: some excluded potential explanatory variables may be constant over time but vary between firms (such as the distribution of subsidiaries) whilst others may be constant over firms but vary over time (such as macroeconomic conditions). The explanatory power of all the models may be assessed by reference to the coefficient of determination (R^2) and the adjusted R^2. The significance of each estimated model may be assessed by reference to the Wald χ^2 statistic.

4 Empirical Results

The regression results are presented in Table 4. The first column - Model 1 – shows the estimated coefficients for a model containing the four control variables (PDIV, SIZE, AGE, DEQ) and the seven industry dummies. The explanatory power of the model is very reasonable ($R^2 = 0.37$, Adj-$R^2 = 0.39$, Wald $\chi^2 = 59.22$, $p < 0.01$). All the industry dummies have positive coefficients, suggesting that firms in the food industry are *ceteris paribus* less diversified internationally than those in the other seven industrial sectors. The car (DCARS), electrical (DELEC), metals (DMET) and fashion (DFASH) sectors have similar average levels of international diversification, but the most diversified firms appear to be those in the plant sector (DPLAN). Firm size (SIZE) has a positive and highly significant effect upon international diversification, as expected. The debt/equity ratio (DEQ) has a negative and highly significant impact upon international diversification. This too is in line with previous empirical work (Kochhar, 1996) and the predictions of agency theory. A high level of leverage imposes a fixed financial commitment on the firm, and reduces the free cash flow available to management (Jensen, 1986). There is thus less incentive for management to

engage in international diversification. Both the organisational age (AGE) and the product diversification (PDIV) variables are positive, but both are statistically very insignificant.

***** Table 3 about here *****

Model 2 contains all the variables included in Model 1, and also the three variables (FAM, FIN, PUB) related to the ownership structure of the firms. The inclusion of these three variables leads to a significant increase in the overall explanatory power of the model (R^2 = 0.40, Adj-R^2 = 0.45, Wald χ^2 = 67.69, $p < 0.01$). In line with Hypothesis 1a, increased family ownership (FAM) has a significant negative impact upon international diversification, suggesting that family shareholders may indeed be more risk-averse. In contrast, share ownership by financial institutions (FIN) has a statistically insignificant effect upon international diversification, and Hypothesis 1b is thus not supported. This suggests that these institutions already have well-diversified portfolios, and are content to be passive investors. But the most striking result is the large, negative and statistically significant coefficient of public ownership (PUB) variable, confirming Hypothesis 1c. This suggests that the public sector does have a marked impact upon the strategies of firms in which it invests, and that the officials are motivated less by value maximisation for the firm as a whole, than by maintaining a local manufacturing capability at the expense of international diversification.

In Model 3, we explore the effects of the external market for corporate control on international diversification. The VOTE variable is a dummy variable that takes the value of unity if there is a voting agreement between the shareholders of a particular firm, in which case the shares can be assumed to be not freely traded and there to be an inactive market for corporate control. In the presence of such an agreement, we would expect the managers to have more discretion about strategic decisions and to pursue international diversification to secure personal benefits. This appears to be the case the VOTE variable has a positive and very significant coefficient (β = + 0.211, $p < 0.01$). Furthermore the inclusion of the VOTE variable leads to a very appreciable increase in the explanatory power of the model (R^2 = 0.466: Adj-R^2 = 0.498, Wald χ^2 = 81.90, $p < 0.01$), though both the absolute size and the significance of the family (FAM) and public (PUB) ownership variables decline.

In Model 4, we consider whether the external market for corporate control might affect the influence of the different shareholder constituencies on firm strategy regarding international diversification. We have thus included an interaction term between the VOTE dummy variable and the family shareholding (FAM) variable[2]. The inclusion of this

[2] However, as noted above, most of the firms with voting agreements also have some degree of financial institution shareholding, whilst very few had any State shareholding. These proportions may or may not reflect

interaction term adds modestly to the explanatory power of the model ($R^2 = 0.468$: Adj-$R^2 = 0.502$, Wald $\chi^2 = 85.16$, $p < 0.01$). Interestingly, the size of the VOTE variable falls substantially, and the variable loses its statistical significance. But the interaction term is statistically significant, albeit only at the 10% level. These results suggest, in firms where there is an active market for corporate control, that the family shareholders (FAM) have a negative influence of international diversification. But, in firms where the market is inactive (i.e. when VOTE = 1), the influence of the family shareholders is negated (effect = 0.397 – 0.337). These results support Hypothesis 2b, though admittedly only for family shareholders, but not Hypothesis 2a. Further work is required in this area.

The importance of internal control mechanisms is assessed in Model 5, wherein are included the dummy variable (PCEO) which takes the value of unity if either the President or the CEO is a member of the controlling family, and the proportion of outside directors on the Board (EXT). The inclusion of these two variables once again adds significantly to the explanatory power of the model ($R^2 = 0.500$, Adj-$R^2 = 0.542$, Wald $\chi^2 = 106.7$, $p < 0.01$), and both variables individually are statistically very significant and have the expected signs. The coefficient of the PCEO variable is negative ($\beta = - 0.257$, $p < 0.01$) as suggested by Hypothesis 3a. Interestingly, the absolute size and significance of the public ownership (PUB) variable are restored. The coefficient of the EXT variable is positive ($\beta = + 0.720$, $p < 0.01$) as suggested by Hypothesis 3b suggesting that the greater is the independence of the Board, the better the provision of critical resources and information, and the greater the degree of international diversification.

Finally, we consider the impact of product market competition (COMP). As noted above, a competitive domestic market will produce conflicting pressures for international diversification. It is perhaps unsurprising therefore that the introduction of the COMP variable in Model 6 only leads to a small increase in explanatory power ($R^2 = 0.502$, Adj-$R^2 = 0.547$, Wald $\chi^2 = 107.4$, $p < 0.01$). The coefficient of COMP ($\beta = + 0.043$, $p > 0.05$), although positive as expected, is not statistically significant. Hypothesis 4 is thus not supported. Clearly further work is required to separate out the expansion and market discipline effects of competition on international diversification. Nevertheless, our preferred model is Model (6) which demonstrates significant effects on international diversification due to all seven industry dummies, firm size (SIZE), leverage (DEQ), family ownership (FAM), public

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something essential about the Italian corporate governance system, but these high correlations ruled out the inclusion of similar interaction terms with FIN and PUB. This is unfortunate, and these interaction effects should be need to be tested using data for other countries.

ownership (PUB), Board independence (EXT), family influence through the CEO or the President (PCEO), and the interaction term involving the external market for corporate control (FAM*VOTE). This combination of variables accounts for over 50% of the variance in the level of international diversification across the firms in the sample.

5 Conclusions

This paper addresses some new issues in the study of international diversification, and presents some interesting findings. We use, for the first time in the context of corporate governance analysis, a measure of international diversification which takes into account the geographic distribution of sales. Furthermore, we analyse an interesting context (Italy) which is characterised by some idiosyncrasies in terms of corporate governance rules, but which in recent years has been through a process of profound innovation in terms of regulations and whose firms tend to be characterised by a very high level of international diversification. Our analysis confirms that the corporate governance structure of firms has an impact on their strategy in general and on the level of international diversification in particular. The Italian experience, which is typically characterised by very high degrees of family and State ownership, empirically validates the hypotheses that firms wherein these two constituencies have high degrees of ownership tend to lower their level of international commitment and focus on fewer markets. The findings on the effects of family ownership are reinforced by our results concerning the effects of the CEO or the President coming from a controlling family. This result is extremely important in a context such as Italy where families have introduced a series of mechanisms, such as pyramid structures, in order to enhance their control of the family business.

Notwithstanding the idiosyncrasies of the Italian corporate governance system, many of its essential characteristics (a high degree of family ownership, a prominent role for the State in specific sectors, pyramidal shareholding structures etc.) are also typical features not only of several other Continental European countries (Faccio & Lang, 2002) but also of many newly industrialising and emerging economies (Luo & Chang, 2005; Luo et al, 2009). This suggests that the findings of this paper may well have more general applicability.

Our analysis, given the limitations on data, could not fully take into account the existence of pyramid structures as a result of which the registered shareholders (as reported to the supervisory authorities) might be different from the ‘real’ owners of the voting rights. Our analysis shows that a more open composition of the Board of Directors to outside members

improves the international diversification of the firms. These results taken together show that the choice of the top management team (i.e. the President, the CEO, and the Board members) affects the strategy and the degree of international diversification of the firms.

The findings on the effects of the shareholdings held by financial institutions are not significant. This result could be the effect of passive strategies by investors, which is a peculiar feature of the Italian system where financial intermediaries have typically a limited role in the governance of manufacturing firms. However, in a recent study (Banca d'Italia, 2008), the Italian Central Bank shows that, while the share of ownership of Italian financial institutions is low and have been decreasing in the last decade, the opposite holds for foreign institutions which have increasingly invested in Italian listed companies. The insignificant results of our analysis may be due to our lack of distinction between domestic and foreign institutional investors. This issue requires further analysis. The limited role of financial intermediaries in the Italian market reflects the passive role played by the market for corporate control. Our data on shareholders' voting agreements testify to the importance of coalitions among shareholders in the Italian market. We found that, whilst family shareholders had a negative impact on international diversification when there was an active market for corporate control, this impact was removed when there was a voting agreement in place. We hypothesised that similar effects would be apparent for other (e.g. public) shareholders, but we were not able to test these hypotheses due to data limitations. This issue too merits further analysis. Finally the results of the effect of product market competition are not significant. This surprising result is probably due to the crude measure of competition that we have adopted: the concept of competition is a complex one and a more fine-grained measure of this variable might have led to better results. Future work might not only consider a better measurement of this concept, but might also look at the interaction between product market competition and the market for corporate control.

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Table 1: Definitions of Variables

Variable	Definition	Data Source
INTDIV	Entropy measure of international diversification (dependent variable)	Borsaitaliana
FAM	Family shareholding (%)	Consob
FIN	Financial institution shareholding (%)	Consob
PUB	Public sector shareholding (%)	Consob
VOTE	Dummy variable = 1 if there is a voting agreement between the major shareholders	Consob
PCEO	Dummy variable = 1 if either the President or the CEO is a member of the controlling family	Borsaitaliana
EXT	Number of independent directors as proportion of Board (%)	Borsaitaliana
COMP	Number of firms in same 2-digit NACE Italian industrial sector	Istat
PDIV	Entropy measure of product diversification	Borsaitaliana
SIZE	Natural logarithm of the number of employees	Borsaitaliana
AGE	Age of the firm (years)	Borsaitaliana
DEQ	Debt/equity ratio	Borsaitaliana
DFOOD	Dummy variable = 1 if firm is in the food industry	Borsaitaliana
DCARS	Dummy variable = 1 if firm is in the car industry	Borsaitaliana
DCHEM	Dummy variable = 1 if firm is in the chemical industry	Borsaitaliana
DCONS	Dummy variable = 1 if firm is in the construction industry	Borsaitaliana
DELEC	Dummy variable = 1 if firm is in the electrical industry	Borsaitaliana
DMET	Dummy variable = 1 if firm is in the metals industry	Borsaitaliana
DPLAN	Dummy variable = 1 if firm is in the plant industry	Borsaitaliana
DFASH	Dummy variable = 1 if firm is in the fashion industry	Borsaitaliana

Note: See text for further details of sources.

Table 2: Sample Descriptive Statistics

Characteristic	**Number of firms**	**% number of firms**
Food Industry	7	9%
Car Industry	6	8%
Chemical Industry	14	18%
Construction Industry	9	12%
Electrical Industry	16	20%
Metals Industry	5	6%
Plant Industry	8	10%
Fashion Industry	13	17%
Total firms	*78*	*100%*
VOTE = 1	37	47%
PCEO = 1	28	36%

Notes: (1) All figures are averages for 2005 – 2007.

Table 3: Correlation Matrix of the Continuous Explanatory Variables

	Mean	s.d	FAM	FIN	PUB	PDIV	SIZE	AGE	DEQ	COMP	EXT
FAM	0.35	0.30	1.000								
FIN	0.08	0.11	- 0.205***	1.000							
PUB	0.02	0.099	- 0.266***	- 0.044	1.000						
PDIV	0.71	0.46	+0.048	- 0.023	+0.062	1.000					
SIZE	7.77	23.07	- 0.110*	+0.157*	+0.137*	+0.377***	1.000				
AGE	65.5	45.5	+0.093	- 0.011	+0.066	+0.021	- 0.045	1.000			
DEQ	2.63	3.77	- 0.138 *	+0.003	- 0.039	- 0.011	+0.053	- 0.042	1.000		
COMP	0.46	0.55	+0.033	- 0.074	- 0.104	+0.174***	+0.128**	+0.048	+0.109*	1.000	
EXT	0.37	0.17	- 0.121*	- 0.112*	+0.523***	+0.275***	+0.282***	+0.176***	+0.139**	+0.175***	1.000

Notes: *** denotes a significant correlation at the 1% level; ** at the 5% level; and * at the 10% level.

Table 4: Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
FAM		- 0.246 ** (0.110)	- 0.198 * (0.108)	- 0.337 ** (0.130)	- 0.328** (0.127)	- 0.321** (0.127)
FIN		0.081 (0.220)	- 0.090 (0.222)	- 0.018 (0.225)	- 0.048 (0.218)	0.020 (0.219)
PUB		- 0.770 * (0.401)	- 0.509 (0.389)	- 0.588 (0.393)	- 1.19 *** (0.424)	- 1.17*** (0.425)
VOTE			0.211 *** (0.075)	0.069 (0.107)	0.043 (0.106)	.050 (0.105)
FAM*VOTE				0.397* (0.212)	0.523 ** (0.210)	0.518 ** (0.209)
PCEO					- 0.257 *** (0.078)	- 0..267*** (0.079)
EXT					0.720*** (0.246)	0.718*** (0.246)
COMP						0.043 (0.047)
Industry Dummies						
DCARS	0.474 ** (0.186)	0.377 ** (0.190)	0.464 ** (0.181)	0.520 *** (.184)	0.564*** (0.185)	0.500** (0.197)
DCHEM	0.374 ** (0.152)	0.238 (0.159)	0.273 ** (0.150)	0.314 * (0.152)	0.345 ** (0.152)	0.326** (0.153)
DCONS	0.236 (0.167)	0.095 (0.174)	0.185 (0.166)	0.247 (0.170)	0.379** (0.174)	0.380** (0.174)
DELEC	0.430 *** (0.149)	0.325 ** (0.153)	0.390 *** (0.146)	0.425*** (0.148)	0.452*** (0.1147)	0.445*** (0.147)
DMET	0.450 ** (0.192)	0.356 ** (0.194)	0.411 ** (0.183)	0.427*** (0.184)	0.569*** (0.186)	0.562*** (0.186)
DPLAN	0.692 **** (0.171)	0.594 *** (0.174)	0.659 *** (0.165)	0.698 *** (0.167)	0.728*** (0.166)	0.718*** (0.166)
DFASH	0.465 *** (0.154)	0.415 *** (0.157)	0.427 *** (0.147)	0.434*** (0.148)	0.614*** (0.155)	0.613*** (0.155)
Control Variables						
PDIV	0.015 (0.044)	0.023 (0.044)	0.022 (0.043)	0.025 (0.043)	0.009 (0.042)	0.004 (0.042)
SIZE	0.086 *** (0.019)	0.088 *** (0.019)	0.090 *** (0.018)	0.091*** (0.018)	0.075*** (0.018)	0.076*** (0.18)
AGE	0.0001 (0.0008)	0.0005 (0.0008)	0.0006 (0.0008)	0.0003 (0.0008)	-0.0000 (0.0008)	0.00008 (0.0008)
DEQ	- 0.011 *** (0.004)	- 0.011 *** (0.004)	- 0.012 *** (0.004)	- 0.012*** (0.004)	- 0.013*** (0.004)	-0.013*** (0.004)
constant	0.517 *** (0.140)	0.678 *** (0.154)	0.514 *** (0.157)	0.548*** (0.158)	0.357 * (0.178)	0.351** (0.178)
Diagnostic statistics						
R^2	0.3724	0.4020	0.4663	0.4676	0.5001	0.5021
Adj- R^2	0.3908	0.4468	0.4983	0.5020	0.5419	0.5466
Wald χ^2	59.22	67.69	81.90	85.16	106.7	107.4
dof / p-value	11 / p < 0.01	14 / p < 0.01	15 / p < 0.01	16/ p < 0.01	18/ p < 0.01	19 / p < 0.00
Hausman/dof/p	3.43(4) p=.489	6.02(7) p=.532	8.90(7) p=.256	9.17(8) p=.328	2.54(3) p=.468	2.70(3) p=.443

Notes: (1) All estimates are generated using the random effects model, with international diversification (INTDIV) as the dependent variable.
(2) A balanced panel of data for 78 firms were used for 2005-07: i.e. there are 234 observations in total.
(3) *** denotes significance at the 1% level; ** at the 5% level; * at the 10% level.

Figure 1: The Model of International Diversification