Aalto University
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The Effect of Owner Identity and Investor Protection on Unrelated Corporate Diversification

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Abstract
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PURPOSE OF THE STUDY

The effects of ownership structure and corporate governance mechanisms on corporate diversification have been widely investigated in corporate strategy research. However, majority of the previous studies have presumed that all owners have identical decision making objectives and motivation. This paper contributes to the existing knowledge on the implications of different owner identities by pointing out a link between owner identity and unrelated corporate diversification decision. In addition, this paper further investigates the association between unrelated corporate diversification and investor protection and demonstrates that the effect of owner identity on corporate decision making is dependent on the institutional environment.

DATA

The company information used in the analysis is obtained from the Worldscope database. The sample consists of 2,956 publicly traded firms from 14 countries representing Common law, German civil law, French civil law and Scandinavian law countries. The analysis is effectively a cross-section of the year-end situation in 2010 and most of the data is from 2010 financial statements. The information on the identity and ownership share of the largest owner is manually collected from the Thomson ONE Banker database.

RESULTS

The results show that the owner identity is an important factor in corporate decision making, and that there are significant differences in how owner identities behave in respect to corporate diversification decisions. Of all owner identities, unrelated corporate diversification is least common among private equity owners. I also observe a negative relationship between institutionally owned firms and unrelated corporate diversification. Further, the results show that unrelated corporate diversification is most common in German and French civil law countries, characterized with weak shareholder protection, and least prevalent in Common law environment known for high level of investor protection. In line with this, investor protection measures ASD and ADR are negatively associated with the level of unrelated corporate diversification. In addition, the results indicate that the influence of owner identity on corporate diversification decisions is dependent on the institutional background and owner identity plays bigger role in an environment characterized with weak shareholder protection.

KEYWORDS

Unrelated corporate diversification, investor protection, owner identity

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OMISTAJAIDENTITEETIN JA SIJOITTAJANSUOJAN VAIKUTUS YRITYKSEN YDINLIIKETOIMINNAN ULKOPUOLISEEN HAJAUTTAMISEEN

TUTKIELMAN TAVOITTEET

Omistusrakenteen ja corporate governance -mekanismien vaikutusta yrityksen hajauttamispäätökseen on tutkittu laajasti strategiakirjallisuudessa. Suurimmalta osin aikaisemmat tutkimukset ovat kuitenkin olettaneet, että omistajien tavoitteet koskien päätöksentekoa ovat yhteneväiset. Tämän tutkimuksen tavoitteena on osoittaa, että omistajien päätöksentekomotiivit ovat hyvin erilaiset, ja omistajaidentiteetillä on merkittävä vaikutus yrityksen ydinliiketoiminnan ulkopuolisen hajauttamisen määrään. Lisäksi tutkimus selvittää sijoittajansuojan ja ydinliiketoiminnan ulkopuolisen hajauttamisen välistä suhdetta, ja pyrkii todentamaan, että omistajaidentiteetin vaikutus hajauttamispäätökseen on riippuvainen liiketoimintaympäristöstä.

LÄHDEAINEISTO

Tutkimuksessa käytetty yrityskohtainen lähdeaineisto on kerätty Worldscope -tietokannasta. Tutkimuksen otos sisältää 2,956 yritystä 14 eri maasta, jotka edustavat neljää eri lakiperhettä. Analyysi on läpileikkaus vuodesta 2010 ja suurin osa tiedoista on vuoden 2010 tilinpäätöksistä. Yritysten omistustiedot on kerätty manuaalisesti Thomson ONE Banker tietokannasta.

TULOKSET

Tulokset osoittavat, että omistajaidentiteetillä on huomattava vaikutus yrityksen ydinliiketoiminnan ulkopuoliseen hajauttamiseen. Etenkin pääomasijoittajien omistamat yritykset hajauttavat merkittävästi vähemmän ydinliiketoiminnan ulkopuolelle. Ydinliiketoiminnan ulkopuolinen hajauttaminen on myös selkeästi alhaisempaa institutionaalisten sijoittajien omistamissa yrityksissä. Lisäksi tulokset osoittavat, että ydinliiketoiminnan ulkopuolinen hajauttaminen on vähäisempää maissa, missä sijoittajansuoja on parempi. Edelleen tulokset indikoivat, että omistajaidentiteetin vaikutus yrityksen hajauttamispäätökseen on riippuvainen liiketoimintaympäristöstä, ja että omistajaidentiteetin vaikutus päätöksentekoon on suurempi maissa, missä sijoittajansuoja on alhainen.

AVAINSANAT

Ydinliiketoiminnan ulkopuolinen hajauttaminen, omistajaidentiteetti, sijoittajansuoja

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1 INTRODUCTION

1.1 BACKGROUND

Determinants of corporate diversification[1] have been one of the most debated issues in corporate strategy research and it has intrigued academics from several fields. In particular, the role of corporate governance mechanisms and ownership structure has been investigated extensively. Majority of the previous studies have presumed homogeneity of the owners assuming that all owners have identical decision making objectives and motivation. However, it has been shown that owner identity has significant implications for corporate strategy and performance (e.g. Pedersen and Thomsen, 2000). This paper contributes to the existing knowledge on the implications of different owner identities by pointing out a link between owner identity and corporate diversification decision. In addition, this paper further investigates the association between corporate diversification and investor protection and demonstrates that the effect of owner identity on corporate decision making is dependent on the institutional environment[2] where the company operates.

Agency cost theory is among the most widely used explanations for the existence of corporate diversification. According to Amihud and Lev (1999) managers employ diversification strategies to diversify their own employment risk, and reduce firm risk at the expense of investors. Diversification also increases firm size which in turn might increase managers' private benefits such as improvements in compensation schemes (Stulz, 1990). Accordingly, most of the studies (e.g. Berger and Ofek, 1995; Chen and Ho, 2000; Lins and Servaes, 1999) show significant value losses related to corporate diversification strategies thus demonstrating a conflict of interest between managers and shareholders. However, some academics have stirred the debate by uncovering the existence of diversification premium (Villalonga, 2004; He, 2009) which indicates that managers would actually drive shareholders' interest when diversifying. Despite the mixed results for corporate diversification in general, the evidence on the value-reducing effects of unrelated diversification is virtually unanimous (see e.g. Rumelt 1974; Villalonga, 2004; Nayaar, 1993).

Ramaswamy et al. (2002) study the relationship between corporate diversification and ownership structure by considering the effect of the identity of the largest owner on the level of corporate

[1]Diversification is a corporate strategy whereby a business builds its total sales by acquiring or establishing other businesses that are not directly related to the company's present product or market. In this paper the level of corporate diversification is measured based on the 2-digit SIC business segments where the company operates. This method is regarded to indicate the level of unrelated corporate diversification (see e.g. Hoskisson and Johnson, 1992).

[2] In this study 'institutional environment/background' refers to the effect of the legal origin of the country on the corporate decision making

diversification. They demonstrate that different ownership groups adopt diverse positions in monitoring and influencing corporate diversification. Ramaswamy et al. (2002) document that institutional ownership is negatively associated with the level of unrelated diversification, while ownership by banking groups and insurance companies is positively associated with the level of unrelated diversification. Moreover, Zhao (2010) shows that compared with other owner identities the level of diversification is higher in government owned Chinese firms. Zhang and Li (2006) further demonstrate that government owned Chinese firms tend to engage in value-reducing diversification strategies. Thus, it seems that not only managers, but also certain owner identities promote corporate diversification.

Ownership concentration and legal and regulatory system are considered to be alternative vehicles to alleviate agency problems at national level. As large shareholders have strong incentives to monitor managers and power to enforce their will, concentrated ownership has been seen as an effective mean to attenuate the agency problem. The landmark study on the relationship between corporate diversification and ownership structure by Amihud and Lev (1981), documents that the absence of large block shareholders increases the number of unrelated acquisitions and the level of corporate diversification. However, the existence of large shareholders might bring forth other agency-related problems, notably the expropriation[3] of minority shareholders by the controlling shareholder (see e.g. La Porta et al., 1998; Djankov et al., 2008).

It is thus considered that the key corporate governance mechanism is the protection of outside investors through legal and regulatory system, which includes both the laws and their enforcement (La Porta et al., 2000). However, the extent of applicable laws and the enforcement of those laws vary a lot between countries. In certain countries investors do not have the rights or proper means to enforce those rights in order to mitigate the harmful actions of corporate insiders[4]. Therefore, in countries where the degree of legal investor protection is lower, the degree of ownership concentration in firms tends to be higher (La Porta et al., 1998, 2000). So to say, ownership concentration can be regarded as a substitute for legal investor protection in countries characterized by weak shareholder protection.

[3] In general, expropriation is related to the agency problem documented by Jensen and Meckling (1976), who focus on the consumption of perquisites by managers from the firm's profits. It means that the corporate insiders use the profits of the firm to benefit themselves rather than return the money to the outside investors (La Porta et al., 2000).

[4] Corporate insiders are the ones who control the company. It does not necessarily require legal capability or majority of the votes to have control in the company. If no one controls the management managers can be corporate insiders without owning any shares. Likewise, large shareholders might not be corporate insiders if they do not have control over corporate actions (Blomqvist, 2008).

Furthermore, some academics claim that there exists a link between the effect of owner identity and institutional environment. Thomsen and Pedersen (2003) argue that the level of legal investor protection moderates the influence that ownership structure has on firm value. They suggest that the effect of ownership structure on firm value should be almost insignificant in countries where investor protection is high as the costs of diverting private benefits increase when investor protection is good. Thus, ownership structure would have less significant role when the law protects minority investors, and the differences between various owner identities should be smaller in countries with good investor protection. Contrary, in an environment of weak shareholder protection where private benefits are more easily captured, the objectives of the corporate insiders and the outside investors conflict significantly and expropriation is profuse. In this scenario certain owner identities would have even stronger influence on corporate affairs.

The empirical evidence implies that corporate diversification, and unrelated diversification in particular, reduces firm value and thus represents a form of agency problem between corporate insiders and outside investors. In this paper I demonstrate that in addition to entrenched managers certain owner identities drive unrelated diversification. Further, I show that legal and regulatory system is a powerful corporate governance mechanism, which thus reduces unrelated corporate diversification. Finally, I argue that the effect of owner identity on corporate diversification decision depends on the institutional background and is more significant in countries where investor protection is weak.

1.2 RESEARCH QUESTION AND CONTRIBUTION

The aim of this paper is to provide new evidence on the effects of owner identity and investor protection on unrelated corporate diversification decision. The research question is three-fold:

(1) Do certain owner identities tend to engage in unrelated corporate diversification more than others?

(2) Does better investor protection reduce the level of unrelated corporate diversification?

(3) Does the effect of owner identity on the corporate diversification strategy depend on the institutional environment?

This paper contributes to the existing corporate diversification literature in several ways. To date, evidence on the association between owner identity and the level of corporate diversification has been limited. Ramaswamy et al. (2002) study the relation in the Indian context while Hautz et al.

(2011) provide evidence on France, U.K. and Germany, thus leaving the comprehensive international evidence incomplete. I use a broader selection of countries to explore the relation between owner identity and the level of unrelated corporate diversification across countries.

Second, I apply two specific investor protection measures in addition to the legal origin of the country, which has been used in previous corporate diversification studies. John et al. (2008) and Blomqvist (2008) measure the level of investor protection within a country with two variables, anti-self-dealing index (ASD) and anti-director-rights index (ADR) when investigating the link between investor protection and corporate risk-taking. Similarly I include ASD and ADR variables into my model.

Third, empirical evidence on the link between the effect of owner identity and institutional environment is very scarce. In their study Del Brio et al. (2011) examine the relationship between ownership structure and corporate diversification strategy in an environment characterized with weak shareholder protection. However, their study covers only companies listed in the Spanish stock exchange and they do not differentiate between various owner identities. In this study, I both extend the sample to cover countries from all legal families (Common law, French civil law, German civil law and Scandinavian law), and distinguish between different owner identities.

In addition, I introduce a new ownership group, private equity investors, which has not been, at least to my knowledge, investigated in any other study that looks into the association between unrelated diversification and owner identity.

1.3 KEY RESULTS AND LIMITATIONS

The regression results demonstrate that owner identity is a significant determinant of the level of unrelated corporate diversification. The results are robust especially for private equity owner identity demonstrating a strong negative association between the level of unrelated diversification and private equity ownership. Similarly, the level of unrelated corporate diversification seems to be significantly lower in institutionally owned firms, especially in Common law countries. This is in line with previous findings suggesting a negative relationship between institutional ownership and the level of corporate diversification (Hautz et al., 2011; Ramaswamy et al., 2002).

Further, the statistics show that the level of investor protection seems to reduce the level of unrelated corporate diversification. Unrelated corporate diversification is most common in German and French civil law countries which are often characterized with weak investor protection, and least prevalent in Common law countries known for high level of investor protection. Accordingly,

the level of unrelated corporate diversification is lower in countries where ASD and ADR scores are higher. However, it seems that relative to the legal origin of the country investor protection indices are of second-order importance in explaining the level of unrelated diversification.

Finally, the results indicate that the influence of owner identity on corporate diversification decision is dependent on the institutional background. In Common law countries the effect of owner identity on unrelated diversification is somewhat weaker than in continental European context (German and French civil law countries). This supports the argument that owner identity plays a smaller role in an environment characterized with good shareholder protection (e.g. Thomsen and Pedersen, 2003; Blomqvist, 2008). Furthermore, not only the magnitude of the effect, but also the direction of the effect differs between Common law and continental European countries. In Common law environment institutional investors engage significantly less in corporate diversification than widely held firms while in continental Europe institutional investors is the only ownership category that is more associated with unrelated diversification than widely held firms. Furthermore, the results suggest that agency problems between managers and outside shareholders are more severe in continental European environment as, contrary to Common law context, all owner identities except for institutional investors engage less in unrelated diversification than widely held firms. This supports the assumption that ownership concentration acts as a substitute for legal investor protection in countries characterized by weak shareholder protection.

However, the limitations of the study should be kept in mind when interpreting the results. First, I use the identity of the largest shareholder as an approximate of firm's ownership structure. Even though this is a widely used practice in research it does not capture the full extent of the ownership structure. As the focus is put only on the largest shareholder all the other owners are dismissed. This might cause some bias in the data as the influence of the largest owner might depend on the shareholdings of other owners. For example, in a company where ownership is very diffuse investor with only 5 percent shareholding might have a significant say in corporate affairs while in another company 20 percent ownership might not give any decision making power. Further, the method disregards the possibility that the largest shareholder owns the company through different sources. In addition, I do not track the ultimate owner of the company except for holding companies and cases where the identity of the owner is somewhat ambiguous. This might distort the data as the ultimate owner of the company might be different from the one stated in the database.

Second, I use Thomson ONE Banker as the single source for the ownership data, and thus I have to rely on their owner identity classification. Hand-collected data from the proxy statements would

probably be a more reliable way to track the ownership structure. Finally, I look directly at the ownership share instead of the control rights of the largest owner. Ownership share demonstrates investor's cash-flow rights which might in some cases differ greatly from the control rights that are more essential in regard with corporate decision making. As the focus of the study is to investigate the link between owner identity and corporate decision making it would be more appropriate to use control rights. However, information on control rights of owners is not readily available, and therefore I have to rely on ownership share as an approximation of decision making capacity.

Finally, there has also been a lot of criticism towards SIC-code classifications that are used to calculate the diversification indices. The critics claim that SIC-code classification is inaccurate and fails to classify firms' operations correctly into related and unrelated business segments. Villalonga (2004) even argues that diversification discount is an artifact of SIC segment data. However, most diversification studies continue to rely on SIC data despite its shortcomings.

Although the study has above described limitations, the reliability of the results is not compromised due to the limitations.

1.4 STRUCTURE OF THE STUDY

The rest of the study is structured as follows. Section 2 covers the theoretical framework and previous empirical findings. The section is divided into four parts; the first covers existing literature on corporate diversification, second discusses findings on owner identity, third focuses on investor protection and final part presents evidence on the joint effect of investor protection and owner identity. Section 3 presents the hypotheses developed based on the literature documented in section 2. Section 4 discusses the data and methodology applied in the analysis. Section 5 goes through the empirical findings that provide answers to the research questions. Section 6 introduces the results of robustness tests that are run to confirm the results obtained in the main analysis. Finally, section 7 concludes the main findings of the study and makes suggestions for future research.

2 LITERATURE REVIEW

This section provides a theoretical framework and a review of the previous empirical evidence to shed light on the reasons behind corporations' diversification choices. First, I discuss the agency theory explanation for corporate diversification and go through the previous findings on corporate diversification. Second, I look into owner identity and its role in the corporate diversification decisions. Third, I discuss possible investor protection measures to mitigate the agency problems

that cause unrelated corporate diversification. Finally, I review the joint effects of investor protection and owner identity on the level of corporate diversification.

2.1 CORPORATE DIVERSIFICATION

This section provides the theoretical framework and previous empirical findings on corporate diversification. First, I shortly go through agency theory and its implications for corporate decision making. Second, I look into the previous literature on the level of diversification. Finally, I review the implications of corporate diversification on the firm value.

2.1.1 Theoretical framework

Jensen's and Meckling's (1976) model on the costs resulting from non-aligned interests of managers and shareholders holds a central role in the field of corporate governance. Building on financial theories developed by Adam Smith (1937) and Berle and Means (1932), Jensen and Meckling claim that utility maximizing managers will never fully act in line with the value-maximization goal of shareholders. This misalignment of interests creates costs to both parties as owners have to encourage managers to act in their interest by monitoring managers or improving incentive alignment through instruments like managerial ownership or stock options. On the other hand, managers incur bonding costs as they have to convince the owners that they are acting in owners' best interests. However, despite the efforts, the interests of the two parties are rarely aligned perfectly, thus resulting in lost firm value (Jensen and Meckling, 1976).

In examining corporate diversification, there are two prominent agency explanations on why managers choose to diversify (Aggarwal and Samwick, 2003). The first theory suggests that managers increase utility from diminishing the risk they face by diversifying as they typically hold large, undiversified positions in the firms they manage. Managers who hold high equity positions encounter higher unsystematic risk from incentives, and thus diversify more to decrease that risk (Amihud and Lev, 1981). May (1995) supports this assumption by documenting that CEOs with high equity stakes in the firm engage in more diversifying acquisitions. The second agency explanation assumes that managers diversify because they derive private benefits from it. There are several possible sources for these private benefits. Diversification may benefit managers due to the power and prestige related with managing a larger firm (Jensen, 1986), because managerial compensation increases with firm size (Jensen and Murphy, 1990), or because diversification makes the manager more valuable to the firm (Shleifer and Vishny, 1989). Contrary to findings in May (1995), Denis et al. (1997) document a lower level of diversification in firms where managers have

high equity holdings. The evidence would imply that higher equity holdings surrogate the private benefits that managers derive from diversification.

However, Aggarwal and Samwick (2003) deem both of the above agency explanations as incomplete. According to them the risk reduction model does not account correctly for the positive effects of incentives (managerial ownership), and thus fails to fully explain why diversification results from agency behavior. Similarly, the private benefits model fails as it does not explicitly include the costs associated with providing incentives. Thereby Aggarwal and Samwick (2003) present a modified model that incorporates the two agency explanations. When testing their model Aggarwal and Samwick confirm that diversification is indeed related to agency problems. However, their findings do not support the explanation that managers diversify to reduce their exposure to risk. However, they uncover strong evidence on the existence of private benefits of diversification.

In addition to agency theory there exist several other theories that seek to explain corporate diversification. The resource-based theory (see e.g. Chandler, 1977; Wernerfelt and Montgomery, 1988) emphasizes the economies of scale and scope derived from diversification. According to this theory diversification is a norm in companies that have excess resources and ability to exploit those resource across industries through production and marketing synergies. Market power theory (Villalonga, 2000) suggests that by diversifying a company can use profits generated in one industry to support predatory pricing in another industry. Several authors (see e.g. Weston 1970; Gertner et al., 1994) suggest that diversification is effective in creating larger internal capital markets. Especially capital-constrained firms should diversify in order to establish internal capital markets to better allocate capital within the firm.

2.1.2 Evidence on corporate diversification

Lins and Servaes (1999) study corporate diversification using a sample of firms from Germany, Japan and UK in 1994. They report that the prevalence of diversified firms is very similar in all three countries; Japan having slightly the highest proportion of diversified firms (40%) and Germany the least (36%). On the other hand Berger and Ofek (1995) report that 23 percent of the US firms are diversified. In his master's thesis Walther (2003) examines the cross-section determinants of firm- and country-level corporate diversification by using a sample of firms from 45 countries. Walther documents that unrelated diversification is highly prevalent across countries as 60 percent of his sample firms operate in more than one unrelated SIC segments. Walther (2003) further shows that firms operating in Eastern Europe, Southeast Asia and German-speaking

countries tend to be more diversified, while firms operating in English-speaking countries are significantly less diversified.

As corporate diversification seems to be a norm around the world, it is interesting to look into its determinants. All studies investigating the determinants of corporate diversification report that diversification increases with firm size (e.g. Denis et al., 1997; Lind and Servaes, 1999, Berger and Ofek, 1995). Denis et al. (1997) also document that more mature firms that have firm-specific knowledge tend to diversify more. On the other hand Chen and Ho (2000) do not find evidence on the effect of firm-age and firm-specific knowledge on the diversification levels in Singapore. Berger and Ofek (1995) also find that diversified firms tend to hold on more debt in United States. This supports the argument that one of the advantages of diversification is that diversified firms are able to bear more on debt than single-segment firms. However, Lins and Servaes (1999) do not find differences in the debt levels of single-segment and diversified firms in Germany, Japan and United Kingdom. Furthermore, Walther (2003) demonstrates that level of diversification is higher in countries where earnings management is common. This might indicate that in these countries corporate insiders manage the earnings to cover their private benefits of diversification. Walther's results also indicate a positive relationship between GDP growth and the level of corporate diversification. The possible explanation for this is that the fastest growing economies tend to be emerging markets where diversification has actually been shown to be beneficial (see e.g. Khanna and Palepu, 2000; Fauver et al., 2003).

In addition to the determinants mentioned above the effect of ownership structure on the level of diversification has been widely researched. One of the most cited studies is by Denis et al. (1997), in which they provide evidence on the level of diversification for a sample of 933 U.S. firms. They document a strong negative relation between the level of diversification and the proportion of equity ownership of managers as well as the equity ownership of outside blockholders. Overall, their findings support the hypothesis that firms maintain value-reducing diversification strategies due to agency problems. In line with Denis et al. (1997), Chen and Ho (2000) discover a negative relationship between equity ownership of outside blockholders and the level of diversification in Singapore. Similarly, Walther (2003) reports a negative relation between the presence of a large shareholder and corporate diversification in a study covering 45 countries.

Based on the above evidence it can be concluded that corporate diversification is prevalent around the world, yet the level of diversification seems to vary across countries. As corporate

diversification seems to be essential part of corporate strategy, it is intriguing to investigate the value implication of corporate diversification.

2.1.3 Corporate diversification and firm value

The connection between the level of corporate diversification and the value of the firm has generated substantial interest among the academics. Finance theory suggests that corporate diversification can be both beneficial and destructive for shareholder value. However, majority of the empirical studies report that on average the costs of diversification exceed the benefits.

Several earlier studies (e.g. Berger and Ofek, 1995; Lang and Stulz, 1994) report significant value losses related to corporate diversification strategies in the United States. More recently, Lins and Servaes (1999) demonstrate a significant diversification discount for companies located in Japan and United Kingdom, while Chen and Ho (2000) report identical results in Singapore. Similarly, Fauver et al. (2003) investigate the value effects of corporate diversification on a data set covering 35 countries and find that diversified firms trade at significant discount relative to single-segment firms in developed countries. However, analogical results have been found in developing countries as well. Zhang and Li (2006) document that diversified government owned firms trade at discount in China. Accordingly, Lins and Servaes (2002) study a sample of firms from seven emerging markets in Asia and find that diversified firms trade at discount relative to single-segment firms.

Nevertheless, there exists vast amount of literature suggesting that not in all cases is corporate diversification associated with value losses. Khanna and Palepu (2000) investigate the performance of diversified business groups in India and discover that highly diversified business groups tend to outperform single-segment firms. They suggest that as institutional voids in emerging markets make it costly for firms to deal with labor, product and capital markets, diversified firms can create value by mimicking the functions of institutions missing from the emerging markets. Similarly, Fauver et al. (2003) find no evidence on discount and in few cases even a notable diversification premium, in developing countries where capital markets are less developed and internationally integrated. Moreover, Lins and Servaes (1999) do not find evidence on diversification discount for firms located in Germany.

In their article Campa and Kedia (2002) explore the value effects of diversification from an alternative perspective. They claim that firm's diversification choice is a response to exogenous changes in firm's operating environment that affect firm value. Firms that operate in industries with relative low growth and high exit rates are more likely to diversify away from those industries.

Campa and Kedia (2002) suggest that diversification is a value creating strategy for firms that actually pursue it. Basing on this theory Villalonga (2004) argues that diversified firms already trade at discount prior diversifying. Further, she claims that the evidence on the existence of diversification discount is a result of inconsistencies in the data reported in COMPUSTAT. He (2009) supports the arguments laid down by Villalonga (2004) and suggests that diversification discount documented in the earlier papers might be due to unreliable data or a failure to control for endogeneity.

As it can be seen, academics seem to strongly disagree on the value implications of corporate diversification. However, most of researchers agree on the effect of unrelated diversification on firm value. The general implication is that low or moderate level of diversification is likely to be more beneficial for the firm. As the level of diversification increases segments tend to become more unique and unrelated. Accordingly, the evidence on the existence of diversification discount is more solid for unrelated diversification (often defined as business segments with different 2-digit SIC codes). Already Rumelt (1974) argued that related diversification is more beneficial for a firm than unrelated diversification as skills and resources can be utilized in related markets. In line with this, Nayaar (1993) documents that the advantages of positive reputation in existing business and the economies of scope are available in related but not in unrelated diversification. Further, Khanna and Tice (2001) argue that informational asymmetry between headquarters and divisions is less prevalent when business divisions are in related businesses. Even the academics arguing against the existence of the diversification discount (e.g. Villalonga, 2004; He, 2009) admit that the possible premium applies only for related diversification. However, Khanna and Palepu (1997) argue that unrelated diversification might be beneficial in emerging markets.

The literature on the value effects of corporate diversification is vast, yet inconclusive. However, it seems that the majority of the studies support the existence of diversification discount. Particularly the evidence on the value-reducing effects of unrelated diversification is virtually analogical.

2.2 OWNER IDENTITY

As La Porta et al. (1999) demonstrate ownership concentration is highly prevalent across countries. However, owners can be very different from one another based on the expectations they have and the level of monitoring they perform. This brings forth an interesting question on the effect that specific owner identity might have on the corporate diversification decision. Thus, this section provides a closer look in to the effects of owner identity on corporate decision making. First I discuss the evidence on owner identity in general. Second, I look into the relationship between

owner identity and firm performance. Finally the link between owner identity and corporate diversification is explored.

2.2.1 Evidence on owner identity

As mentioned earlier, the traditional view of the modern corporation as being widely held has been refuted by recent studies reporting the existence of ownership concentration across countries. La Porta et al. (1999) document that in the 27 countries they study only 36 percent of the firms are widely held, the threshold for control being 20 percent. Faccio and Lang (2002) study the ownership structure of Western European countries and report that widely held companies account for 37 percent of all companies. Further, they document that widely held companies are more common in United Kingdom and Ireland while family controlled firms are more prevalent in continental Europe. Besides, La Porta et al. (1999) investigate the identity of the largest owner across countries. Measured again with the 20 percent threshold for control, they document that of the sample firms 30 percent are family controlled, 18 percent government controlled, 5 percent have institutional owner and 3 percent are controlled by other corporation. The percentages for European sample reported by Faccio and Lang (2002) are 44, 4, 2 and 10 respectively.

However, the variation in ownership structures is extensive across the countries. Most of the academics believe that the differences in investor protection explain the variation between countries. Accordingly, several studies document a strong positive relationship between the level of ownership concentration and the level of investor protection (e.g. La Porta et al., 1998; Djankov et al., 2008). La Porta et al. (1999) show that in countries where investor protection (measured with ADR1993) is above median, close to 50 percent of the companies are considered as widely held, while in countries where the score is below median only 27 percent are widely held. The figures for family controlled firms are 25 and 34 percent and for state controlled firms 12 and 22 percent, respectively.

2.2.2 Owner identity and firm performance

Although the association of ownership with diversification, growth and company performance has been broadly investigated, the differences between owner identities have not been adequately accounted for. Even though it has been shown that owners differ both in their power and performance goals, the literature linking owner identity and the economic performance of the company remains very limited.

Thomsen and Pedersen (2000) explore the association between ownership structure and firm performance with a sample consisting of the largest European companies. They find that owner identity is as important as ownership concentration in determining firm performance. The results also indicate that system effects influence the relationship between ownership structure and economic performance, which supports the view of La Porta et al. (2002) that ownership structure is dependent on the national institutions (e.g. legal and regulatory system). In the following paragraphs I review the implications of different owner identities on corporate strategy and performance. In line with Ramaswamy et al. (2002) I explore institutional, bank, corporate and government owner identities. Furthermore, I include family/individual and private equity ownership into the analysis. Institutional investors include insurance companies, retirement or pension funds, hedge funds, investment advisors and mutual funds.

Family ownership has received significantly more attention in the literature than the other owner identities. It is often regarded that families are reluctant to give up control as they make large firm-specific investments in human capital (Maug, 1996). This in turn makes families committed to the survival of the company in long-term. On the other hand, family-owned companies are considered as rather risk averse because they have large proportion of their wealth invested in one company. The empirical evidence on the relation between family ownership and firm performance is inconclusive. Several authors demonstrate a positive relationship between family ownership and firm value (McConaughy et al., 2001; Mishra et al., 2001). Similraly, when studying a sample of U.S. firms Anderson and Reeb (2003) find that family firms create value better than non-family firms. Wenyi (2011) provides similar evidence on emerging market as he documents a positive association between family ownership and firm value in Taiwan. He further shows that the relation is particularly strong when the family members manage the firm.

On the other hand Claessens et al. (1999) find high conflicts of interest between outside investors and controlling family and in general inferior performance of family firms in East Asian economies. The authors suggest that the inferior performance might result from the extensive expropriation allowed by the regulatory environment. Similarly, Ibrahim and Samad (2011) document that on average the firm value of Malaysian family firms is lower than the value of non-family firms. Further, King and Santor (2008) find evidence that family owned firms that use dual-class shares have significantly lower valuations in Canada. Several studies also find that there is no association between family ownership and firm performance (see e.g. Jayraman et al., 2000; Thomsen and Pedersen, 2003).

Institutional investors are argued to be highly concerned with shareholder value as they typically hold a large portfolio of shares at arms-length and are evaluated based on their financial results. Some academics even claim that strong performance orientation makes fund managers too short-term oriented (see e.g. Brown et al., 1996). Empirical evidence indicates that institutional investors have positive impact on corporate performance. McConnell and Servaes (1990) illustrate a positive link between institutional ownership and shareholder value. Similarly, Thomsen and Pedersen (2003) find evidence on the positive association between financial institution as the controlling owner and firm value. Ruiz-Mallorquí and Santana-Martín (2011) study Spanish firms and discover that investment fund as the dominant owner has a positive effect on firm value.

Companies may hold equity ownership in other companies as part of cross-ownership or company group structures. Corporate ownership is particularly characteristic of Japanese Keiretsu, French crossholding structures and emerging markets in general (Kester, 1992; Charkham, 1994; Khanna and Palepu, 1999). Corporate ownership may ease the access to valuable technology or other specific resources that might improve the value of the affiliated companies (Kester, 1992). Especially vertical integration is economically profitable when assets are very specific and transaction frequency is high (Williamson, 1996). Further, it is generally considered that the parent company has stronger incentive to transfer proprietary resources to the subsidiary/affiliate it owns, which in turn is assumed to increase its firm value (Caves, 1996). Empirically, Pedersen and Thomsen (2000) find that company ownership has a negative effect on firm value in the largest European companies. They further demonstrate that corporate owners are concerned with growth and survival instead of shareholder value. Contrary, Thomsen and Pedersen (2003) document a positive relationship between corporate ownership and firm value in continental European countries.

Banks are often involved in significant business relationships with companies they invest in. As banks may get notable income from these companies they might be reluctant to step in and prevent management from engaging in corporate action that might destroy shareholder value. Ruiz-Mallorquí and Santana-Martín (2011) discover a negative relationship between controlling bank ownership and firm value. Contrary, Thomsen and Pedersen (2000) find a weak positive relation between bank ownership and firm value. Similarly, Cable (1985) documents a positive performance effect of bank ownership on West German firms.

Theoretical explanation suggests that government ownership is mainly driven by social and political goals like output prices, employment and external effects. Many of these goals are often associated with poor financial performance and low firm value (e.g. Hart et al., 1997; Shepherd, 1989). Most

of the empirical studies document a lower performance of government-owned firms (e.g. Shirley and Walsh, 1998; Dewenter and Malatesta 2001). Similarly, Thomsen and Pedersen (2003) discover a negative relationship between government ownership and firm value and accounting profitability. However, some studies do not find any relationship between government ownership and firm value (e.g. Kole and Muhlerin 1997; Hausmann and Neufeld, 1991).

In the previous studies investigating the role of owner identity private equity investors have been classified under institutional investors. However, it is intriguing to investigating them as a separate group as their investment strategy differs in some aspects from the traditional institutional investors. Private equity investors are described as "activist investors" who strongly seek to affect corporate decision making in order to increase company value. Private equity owners are claimed to be vigilant monitors as their target companies often experience an increase in R&D –expenditures, a sell-off of assets, a reduction in working capital and optimization of cash flows (Muscarella and Vetsuypens, 1990). Thus, it not surprising that Klein and Zur (2009) record positive announcement returns when the acquirer of voting rights is a private equity fund in the United States. Similarly, Stotz (2011) analyses short-term and long-term wealth effects of private equity investments in already listed target companies and discover risk-adjusted stock returns to be positive. Further, Tykyova and Borell (2012) demonstrate that the bankruptcy rates are lower in companies backed by experienced private equity investors. Contrary, Viviani et al. (2008) claim that private equity ownership has a negative influence on the long- run performance of their listed target companies.

2.2.3 Owner identity and corporate diversification

As demonstrated in the above section owners can't be treated as homogenous group as they might have very differing objectives. According to Hautz et al. (2011) owners differ mainly on three measures being motivation, capabilities and control. The above mentioned dimensions are assumed to explain the differences in the effect of various owner identities on corporate diversification. Thus, this section considers in more detail how different owner identities pursue diversification strategies.

It is generally considered that family firms' main motivation is to ensure family ownership and involvement in firm operations as well as the long-term survival of the firm. In fear of losing control families might be unwilling to take on debt or issue shares to raise more capital (Thomsen and Pedersen, 2003). Accordingly, Schulze et al. (2003a) suggest that as higher debt levels increase the risk of financial distress and loss of family control, family firms would be less willing to diversify and take on such debt. Further, Schulze et al. (2003b) and McConaughy et al. (2001)

argue that family firms might diversify less because diversification requires external expertise and resources and family firms are less willing to allow outsiders' affect their decision making.

However, family-owned companies are in general assumed to engage in unrelated diversification more than other companies. As family owners want to retain control, they concentrate their investment in one firm and often have a large proportion of their wealth tied in the firm. Consequently, they can reduce their personal risk by reducing the firm risk through diversification. Further, corporate diversification can be used to reduce the volatility in earnings (Faccio and Stolin, 2006) which increases the chance of firm survival (Casson, 1999). Miller et al. (2010) document that family-owned firms tend to pursue acquisitions that are outside their firm's core industry. Further, Hautz et al. (2011) study 222 European firms and report a positive relationship between family ownership and the level of diversification. The reasoning and empirical evidence above indicates that family firms are more concerned with the firm survival and risk management than preserving wealth and control.

Institutional investors are regarded as portfolio investors whose main objective is to increase shareholder value. They are also often characterized with low-risk aversion and long investment horizon. Institutional investors essentially invest 'other people's money' and therefore have legal obligation to proactively protect their investments against value-reducing actions (David et al., 1998). Thus, institutional investors are expected to influence the diversification strategies that the managers wish to adopt. Consequently, is can be expected that the link between institutional shareholding and unrelated diversification is negative. The empirical findings of Ramaswamy et al. (2002) and Hautz et al. (2011) support this argument. Ramaswamy et al. (2002) show that firms institutional ownership is negatively associated with the level of unrelated diversification in India. Similarly, Hautz et al. (2011) document a negative relation between financial institution ownership and the level of diversification in European firms.

Corporate ownership usually originates from cross-ownership or group structure. The research on the association between corporate ownership and the level of diversification is limited as most of the studies focus on exploring group affiliation per se. Khanna and Palepu (2000) investigate group affiliation in India and discover that there is no difference in the level of diversification between group affiliates and non-group affiliates. Further, they demonstrate that around 80 percent of all affiliates (group/non-group) operate in one business segment. This would indicate that corporate ownership does not increase the level of diversification. Ramaswamy et al. (2002) characterize corporate owners as investors who have clear profit and growth objectives and cannot be affected

by organization's managers. Therefore, they hypothesize that foreign corporate owners are negatively associated with unrelated diversification. However, they do not find significant relationship between the level of unrelated diversification and foreign corporate ownership.

Unlike other institutional investors banks often have business relationship with firms they own. Usually they derive interest income from the loans they supply to the firms or obtain fees from the financial services they provide. As the banks are in a sense dependent on the firms that they own, they might be less active in monitoring and controlling the management. Thus, banks tend to support the managers and will be reluctant to prevent managers from making corporate strategy decisions that might be detrimental to shareholders (Ramaswamy et al., 2002; Ruiz-Mallorqui et al., 2011). On the other hand, banks may prefer lower risk if they also provide credit to the firm. John et al. (2008) argue that banks might be able to effectuate these conservative investment policies as they often are the only provider of credit. Aggregating the above arguments, it could be assumed that bank ownership is positively associated with the level of unrelated diversification. The findings in Ramaswamy et al. (2002) support this argument by reporting a strong positive relation between bank ownership and the level of unrelated corporate diversification.

As mentioned before, state ownership is strongly driven by political and social goals. Governments tend to favor low output prices, higher employment and positive externalities, that all may be related to weak performance and low corporate value (Pedersen and Thomsen, 2003). Further, state owned firms may prefer less risky projects to secure employment and social stability (Morck et al., 2005). According to Zhao (2010) reduction in the level of diversification leads to reduction in head count. Thus, business groups that have government as the controlling owner and a large employee base might have a political agenda to maintain low unemployment which may make them to maintain unprofitable diversification strategies. As government tends to track less closely the performance of the firms it owns (Andrews and Dowling, 1998), Zhao (2010) claims that government ownership lowers monitoring intensity, resulting in higher level of unrelated diversification.

Contrary, Hautz et al. (2011) argue that the motivations for government ownership are likely to be context dependent. They claim that due to the increased international competition in Europe since the liberalization of trade policies governments' favor focused product strategies as they are considered to be economically more effective. Thus, they predict a negative relationship between state ownership and corporate diversification. Furthermore, Ramaswamy et al. (2002) study the relationship between owner identity and diversification in India and suggest that government

ownership is not related to the level of diversification due to the limited monitoring capability of the Indian state.

There exists no relevant literature on the association between private equity ownership and corporate diversification. However, it can be assumed that private equity investors have very similar association with corporate diversification as institutional investors. Contrary to most institutional investors private equity investors seek to acquire majority stakes in target firms to ensure their say in corporate decision making (Andres et al., 2000). Andres et al. (2000) further point out that private equity investors usually hold sufficiently large stakes in the firms that it pays for them to invest resources into monitoring managers. Therefore private equity ownership is probably associated with even lower levels of corporate diversification than other institutional investors. Further, private equity investors main focus is to improve the operations of the company and increase the firm value. Thus, developing and reselling of a single-segment firm is probably a lot easier than of diversified firm.

The above evidence reveals that the objectives and motivation of various owner identities differ significantly. Further, it supports the assumption that certain owner identities drive unrelated corporate diversification more than others. Therefore, it seems worthwhile to investigate the implications of different owner identities on corporate diversification decisions.

2.3 INVESTOR PROTECTION

As shown in the previous section corporate diversification, and unrelated diversification in particular, seem to reduce company value. One of the prevailing explanations for corporate diversification is the agency problems between corporate insiders and outside investors. Jensen (1993) proposes four categories of corporate governance mechanisms (Legal and regulatory mechanisms, Internal control mechanisms, External control mechanisms, Product market competition) that aim at reducing the costs resulting from agency problems. In this section two of the control mechanisms, legal and regulatory mechanisms and ownership concentration, which is one of the internal control mechanisms, are discussed in more detail. The focus is put on these two measures as they are considered to be the most prominent vehicles to alleviate agency problems at national level.

2.3.1 Legal and regulatory mechanisms

One of the fundamental remedies to the agency problems is the system of law and regulations that govern the firm. La Porta et al. (1999) claim that the differences among countries in ownership

concentration, breadth of capital markets, dividend policies and access to capital markets can be explained by the level of legal protection of investors from the expropriation of managers and controlling shareholders. The laws give the outside investors certain rights and means to protect their investment against the expropriation by insiders.

Several academics have examined the legal rules covering the protection of outside investors and the enforcement of the rules across countries. La Porta et al. (1998) review and document the prevalence of a set of legal rules that protect investors in several countries. Based on these rules they compose two indices; first comprising the protection of shareholders (ADR 1993) and the second the protection of creditors. ADR1993 (anti-director-rights index) measures the level of legal protection of the shareholders against managers. La Porta et al. (1998) uncover significant deviations in the level of investor protection among countries. On average, investor protection is weakest in the French civil law countries while Common law countries have the strongest shareholder protection. German and Scandinavian law countries stand in the middle.

Djankov et al. (2008) construct another measure of investor protection, ASD (anti-self-dealing index), which covers the expropriation of outside investors by corporate outsiders. According to them ASD is superior over ADR1993 in measuring investor protection as it better captures the level of minority shareholder protection against corporate insiders. The scores in ASD range from zero to one, a higher score demonstrating better outside investor protection. Common law countries score highest and French law countries lowest also when measuring with ASD. However, the values for German civil law, Scandinavian law and French civil law legal families are very close to each other. Djankov et al. (2008) also review the ADR1993to depict the legal situation in 2003. However, the results are very similar to those originally attained by La Porta et al. (1998).

In addition to investigating the differences in investor protection across countries, several researchers have studied the implications of weak investor protection. La Porta et al. (1999) and Shleifer and Wolfenzon (2002) claim that good investor protection enhances the development of financial markets by increasing the number of firms going public and increasing the equity market size. Several researchers provide evidence on the role of investor protection in corporate valuation. Empirical studies (e.g. La Porta et al.; Claessens et al., 2002; Lins, 2003) document a positive relation between higher valuation and investor protection claiming that this relation can explain the cross-country differences detected in the valuation levels of firms. It has also been widely shown that investor protection affects corporate decision making, among which the level of investment and corporate risk taking. Himmelberg et al. (1999) suggest that weak investor protection leads to high

endogenous risk-premium which in turn results in underinvestment. On the other hand, John et al. (2008) and Blomqvist (2008) provide empirical evidence on the positive relation between corporate risk-taking and investor protection. According to John et al. (2008) the results demonstrate that better legal protection encourages firms to take on more risk as it mitigates the private benefits of control.

Based on the above evidence it can be concluded that firms operate in very different institutional environments as investor protection differs significantly across countries. Further, empirical evidence suggests that investor protection has a significant impact on firm performance and value. This indicates that legal and regulatory system is an influential corporate governance mechanism and a fundamental determinant of the evolution of the corporate governance structure in a country.

2.3.2 Ownership concentration

Berle and Mean (1932) fixed the image of the ownership structure of the modern corporation for several generations. According to Berle and Mean corporations are widely held and the ownership is dispersed among several shareholders while the control is in the hands of professional managers. However, later studies have questioned the empirical validity of Berle and Mean's perception of corporations being widely held.

Several studies reveal significant ownership concentration across countries. La Porta et al. (1998, 1999) lay down systematic evidence on the ownership patterns across different countries. La Porta et al. (1998) measure the ownership concentration in ten largest non-financial companies in 45 countries and discover that on average three largest shareholders hold 46 percent of the company. They find the highest concentration in French law countries (56 percent) and lowest in the German civil law countries (34 percent). In another study La Porta et al. (1999) look at the ownership structure of twenty largest publicly listed companies in 27 most wealthy economies. Using a 20 percent threshold for control, La Porta et al. discover that only 36 percent of the sample companies are widely held. However, the results reveal strong variation in ownership structures between countries. In U.K, U.S. and Japan most of the companies are widely held (over 80 percent) while in Argentina, Austria and Belgium very few of the corporations are widely held (les s than 5 percent).

As the evidence suggests that ownership concentration, even though at varying levels, is prevalent around the world, it is worthwhile to study the reasons why large shareholders exist. The most prominent theory is the one linking the prevalence of large shareholders to the level of investor protection. Shleifer and Vishny (1997) and La Porta et al. (1998, 2000) claim that highly

concentrated ownership is associated with poor investor protection and large shareholding can be seen as means to control entrenched managers. La Porta et al. (1999) provide evidence on the assumption by documenting that widely held companies are more common in countries with good investor protection. Thus, ownership concentration can be seen as a corporate governance mechanisms and a substitute for legal investor protection in countries characterized by weak shareholder protection.

However, ownership concentration is not entirely solid medium of corporate governance. The evidence proposes that large shareholders seek both to increase the company value (shared benefits of control) and to enjoy benefits not available to other owners (private benefits of control) (Denis, 2001). Private benefits of control refer to the non-aligned objectives of blockholders and minority shareholders as controlling shareholders do not need to take into account the opinions of other investors. Therefore, prevalence of controlling shareholders might bring forth other agency problems, namely the expropriation of minority shareholders by the controlling shareholder. It is thus considered that the key corporate governance mechanism is the protection of outside investors through legal and regulatory system, which includes both the laws and their enforcement (La Porta et al., 2000).

2.3.3 Corporate diversification and investor protection

Weak legal investor protection makes legal action against corporate insiders costly and thus enables corporate insiders to expropriate outside shareholders. Evidence on agency theory suggests that the private benefits of diversification mainly drive unrelated corporate diversification. Strong investor protection reduces the availability of these benefits, thus leading to less corporate diversification. Further, good investor protection narrows the gap between the interests of corporate insiders and outside shareholders. The arguments imply that undesired corporate diversification should be more prevalent in countries with weak legal investor protection where expropriation of outside investors by the corporate insiders is extensive.

Walther (2003) uses the legal origin of a country as a proxy for investor protection and finds a weak negative relationship between the level of investor protection and the level of corporate diversification. The results provide some evidence for the assumption that higher investor protection has the potential to eliminate value-reducing projects such as corporate diversification programs. Fauver et al. (2003) argue that country's legal system defines the level of investor protection, which in turn affects the availability and cost of external capital. Further, they claim that the availability and cost of acquiring external capital determine the value of corporate

diversification. The findings of Fauver et al. (2003) indicate that diversification might provide greater benefits/less costs for firms operating in countries belonging to French civil law, German civil law and Scandinavian law legal families. In line with the findings of Walther (2003) this suggests that the level of diversification should be higher in countries characterized with weak shareholder protection.

Del Brio et al. (2011) investigate the effect of ownership structure on the level of diversification in a scenario of weak shareholder protection. They explore the relationship in Spain because French civil law countries are often characterized with weak investor protection. The results indicate a nonlinear relationship between ownership concentration and diversification, which differs from the linear relationship found often for United States and United Kingdom firms. The differing behavior of Spanish firms is explained by the prevalent corporate governance mechanisms. In Spain the legal protection and market for corporate control are lower while the ownership concentration is significantly higher than in United Kingdom or United States. Del Brio et al. (2011) claim that mainly the high level of ownership concentration accounts for the differences since it enables large shareholders to expropriate rents. Del Brio et al. (2011) emphasize the severity of the agency conflicts between controlling shareholders and minority shareholders that may arise when investor protection is not guaranteed. Similarly, La Porta et al. (1998) claim that in many countries the expropriation of minority shareholders by controlling shareholders might be more severe problem than the agency conflicts between managers and shareholders.

2.4 OWNER IDENTITY, INVESTOR PROTECTION AND CORPORATE DIVERSIFICATION

This section investigates the relationship between owner identity and corporate diversification strategy in different institutional environments. As illustrated in the previous sections both the level of investor protection and the ownership structure of the company determine the level of corporate diversification. Further, La Porta et al. (1999, 2000) demonstrate that investor protection and ownership structure are intercorrelated aspects of corporate governance. Weak investor protection leads to the presence of large shareholders that monitor managers. However, high ownership concentration might lead to conflicts of interest between controlling shareholders and minority shareholders.

It is argued that corporate insider's decisions concerning the corporate strategy results from weighing the personal costs and benefits of different corporate strategies (Wright et al, 1996). If insider's costs related to less diversification, or benefits related to higher level of diversification are

mitigated by good investor protection corporate insiders are encouraged to engage less in unrelated diversification. Further, the evidence provided in the section 2.1.1 suggests that unrelated diversification is mainly driven by the private benefits derived by corporate insiders. Better investor protection reduces these benefits, and thus induces insiders to diversify less. Moreover, Blomqvist (2008) argues that mitigation of the private benefits of control by good investor protection makes corporate insiders more concerned with the economic performance of the company which is also in the interest of outside investors. Based on the above reasoning it can be concluded that the interests of corporate insiders and outside investors seem to be better aligned in an environment characterized with good investor protection.

Del Brio et al. (2011) provide empirical evidence on the above argument as they investigate the effect of ownership structure on the level of diversification in Spain where investor protection is weak. As expected, Del Brio et al. (2011) report very high level of ownership concentration in Spain supporting the argument that ownership concentration compensates for the absence of investor protection. They also discover that entrenched managers increase the level of diversification and drive their own personal goals when investor protection is weak. Further, Del Brio et al. (2011) report serious conflicts of interests between controlling shareholders and minority shareholders. Interestingly, they suggest that the agency problems between controlling shareholders and minority shareholders might be even more severe than the conflict of interests between managers and outside investors.

On the other hand, Thomsen and Pedersen (2003) investigate whether the effect of ownership structure is dependent on the institutional environment. They claim that the influence of ownership structure on firm value should be small or insignificant in countries with good investor protection as the costs of diverting private benefits of control increase when investor protection is good. So to speak according to Thomsen and Pedersen ownership structure plays a smaller role when the law protects minority investors. This indicates that also the differences between various owner identities should be smaller in countries with good investor protection. Contrary, in an environment of weak shareholder protection where private benefits are more easily captured, the objectives of the corporate insiders and the outside investors conflict significantly and expropriation is profuse. In this scenario certain owner identities should have even stronger association with high level of unrelated corporate diversification.

Empirical evidence on the link between the effect of owner identity and institutional environment is very scarce. Ruiz-Mallorqui et al. (2011) study the relation between firm value and bank and

institutional investor ownership in an environment of weak legal investor protection. They find that in a context of concentrated ownership and weak legal protection of minority shareholders, controlling bank ownership leads to expropriation of minority shareholders. Furthermore, the authors conclude that the effect of bank ownership on the value of firm varies across different institutional environments. Similarly, Blomqvist (2008) argues that the effect of owner identity on corporate risk-taking depends on the institutional background. He demonstrates that the influence of owner identity on corporate risk-taking is stronger in countries with weak investor protection. On the other hand, Ruiz-Mallorqui et al. (2011) find a positive link between investment fund ownership and firm value in a scenario of weak shareholder protection. However, their results indicate that contrary to bank ownership the effect of investment fund ownership on firm value is not affected by the level of investor protection.

Based on the reasoning above, it can be assumed that the institutional environment influences the effect ownership structure has on the level of diversification. More precisely, the theory and empirical evidence suggests that ownership structure plays a bigger role in countries where investor protection is weak. Therefore, it is interesting to test if the effect of owner identity on corporate diversification is dependent on the institutional background where the company operates.

3 HYPOTHESES

The previous section addresses a possible case for differentiating between owner identities and country contexts in determining the level of unrelated corporate diversification. This section provides theoretical justification leading to a set of hypothesis that relate investor protection, owner identity and corporate diversification.

3.1 OWNER IDENTITY AND UNRELATED CORPORATE DIVERSIFICATION

Various owner identities have different strategic objectives and incentives and abilities to monitor corporate management as well as divergent attitudes towards portfolio risk, and thus different preferences for diversification strategies. Accordingly, Ramaswamy et al. (2002) and Hautz et al. (2011) show empirically that certain owner identities tend to participate in unrelated diversification more than others. In the following paragraphs I construct hypothesis on the relationship between different owner identities and unrelated corporate diversification. I form separate hypothesis for each of the owner groups being family, institutional, bank, corporate and government and private equity.

Families tend to be reluctant to give up control as they make significant firm-specific investments in human capital (Maug, 1996). This in turn makes families committed to the survival of company in long-term. Further, family-owned companies are rather risk averse because they have large proportions of their wealth invested in one company. On the other hand, the incentive alignment in family firms is good indicating effective mitigation of agency problems between managers and shareholders (James, 1999). However, empirical evidence shows that family-owned firms tend to engage in unrelated diversification more than other companies. As mentioned earlier families have large proportion of their wealth invested in one company which enables them to reduce their personal risk by reducing firm risk through diversification to unrelated business segments. Miller et al. (2010) show that family firms pursue acquisitions that are outside the firm's core business. Further, Hautz et al. (2011) provide evidence on the positive association between family ownership and corporate diversification. Therefore, it can be hypothesized:

H1: Family ownership is associated with higher level of unrelated corporate diversification

Institutional investors are considered as portfolio investors whose main objective is increasing shareholder value. Since institutional investors do not have business relationship with the firms they invest in, they are likely to actively monitor the management and prevent them from engaging in wealth-destroying strategies. Institutional investors are also characterized with low-risk aversion and long investment horizon. Further, institutions can diversify away the unsystematic risk they undertake which suggests that diversification does not bring additional value to them. Ramaswamy et al. (2002) and Hautz (2011) provide empirical evidence on the negative relationship between the level of unrelated corporate diversification and institutional ownership. The second hypothesis is as follows:

H2: Institutional ownership is associated with lower level of unrelated corporate diversification

Corporate ownership usually originates from cross-ownership or group structure. Both the theoretical reasoning and empirical evidence on the benefits of business group membership are mixed and inconclusive. Further, Khanna and Palepu (2000) find no difference in the level of diversification between group affiliates and non-group affiliates. Similarly, Ramaswamy et al. (2002) do not find statistically significant relationship between corporate ownership and the level of unrelated diversification. Thus, the hypothesis is following:

H4: Corporate ownership is not related with the level of unrelated diversification

Contrary to institutional investors banks often have business relationship with firms they own. As the firms that banks own are also a source of income for them banks might be less active in monitoring and controlling the management. Further, banks may prefer lower risk if they also provide credit to the firm. According to John et al. (2008) banks might be able to effectuate these conservative investment policies as they often are the only provider of credit. This could lead to higher unrelated diversification as firm risk can be reduced by diversifying into unrelated business areas. Further, Ramaswamy et al. (2002) document a significantly positive relationship between bank ownership and the level of unrelated corporate diversification. Aggregating the above arguments, it can be hypothesized that:

H3: Bank ownership is associated with higher level of unrelated corporate diversification

State ownership is strongly driven by political and social goals. Government owned firms may prefer less risky projects to secure employment and social stability (Morck et al., 2005). Similarly, business groups that have government as the controlling owner and a large employee base might have a political agenda to maintain low unemployment which may encourage them to maintain unprofitable diversification strategies (Zhao, 2010). As the economic performance of the firm might not be government's main objective (Andrews and Dowling, 1998), government ownership might decrease monitoring intensity resulting in higher level of unrelated diversification (Zhao, 2010). Therefore, the fifth hypothesis is as follows:

H5: Government ownership is associated with higher level of unrelated corporate diversification

Private equity firms are classified as "activist investors" who often hold large equity positions and actively seek to participate in the strategic direction of the company. Further, Gillan (2007) notes that activist investors try to bring about change within the company without a change in control if they are not satisfied with its management or operations. In addition, private equity investors are highly concerned with increasing the shareholder value of the companies they own. Thus, it can be assumed that private equity investors as owners do not wish to engage in unrelated diversification or even seek to reduce the level of diversification. Due to their large shareholding they also have the power to pursue their will. Thus, it can be hypothesized:

H6: Private equity ownership is associated with significantly lower level of unrelated corporate diversification

3.2 INVESTOR PROTECTION AND UNRELATED CORPORATE DIVERSIFICATION

Agency theory claims that utility maximizing managers will never fully act in line with the value-maximization goal of shareholders (Jensen and Meckling, 1976). Significant stream in research suggests that unrelated corporate diversification reduces firm value and is a result of agency problems between corporate insiders and outside investors. The extent to which corporate outsiders are expropriated by corporate insiders is determined by the level of investor protection in the country (John et al., 2008). This indicates that better investor protection would lead to lower level of outside investor expropriation, and thus lower level of unrelated corporate diversification.

As documented in the section 2.3.1 legal and regulatory system is an effective corporate governance mechanisms as good investor protection seems to narrow the gap between the interests of corporate insiders and outside investors. Empirically (see e.g. Aggarwal and Samwick, 2003) it has been shown that diversification is mainly driven by the private benefits that corporate insiders derive from diversification. Legal investor protection mitigates agency problems by 1) improving monitoring 2) hindering outside investor expropriation 3) reducing the private benefits of control 4) contracting the power of non-equity stakeholders investor protection is good. Summarizing the above reasoning, it can be hypothesized that:

H7: Higher level of investor protection is associated with lower level of unrelated corporate diversification

3.3 OWNER IDENTITY, INVESTOR PROTECTION AND UNRELATED CORPORATE DIVERSIFICATION

Investor protection and ownership concentration are intercorrelated aspects of corporate governance (La Porta et al., 1999, 2000). Weak investor protection leads to the existence of large shareholders that control the management. However, the presence of blocholders might lead to possible conflicts of interest between controlling shareholders and minority shareholders. On the other hand, effective investor protection aligns the objectives of controlling shareholders and minority investors. Agency theory suggests that unrelated diversification is driven by the private benefits that corporate insiders derive from diversification. Good investor protection reduces the availability of these benefits, thus encouraging corporate insiders to diversify less.

According to Thomsen and Pedersen (2003) the effect of ownership structure on firm value is smaller in countries where investor protection is good. This indicates that ownership structure is less important when the law protects minority shareholders. It can be further concluded that the

differences of the various owner identities are less evident in an environment of good legal protection. Contrary, weak investor protection renders private benefits of diversification readily available and might make the diversification objectives of certain owner identities more profound. Summarizing the above reasoning the hypothesis are as follows:

H8: The impact of owner identity on the level of unrelated corporate diversification is higher in countries where investor protection is weak

H9: The impact of owner identity on the level of unrelated corporate diversification is weaker in countries where investor protection is good

4 DATA AND METHODOLOGY

In this section I discuss the data and methodology used in the empirical analysis. First, I describe the data selection process and the final sample acquired for the empirical analysis. Second, I define the variables used in the analysis. Finally, I outline the methodology employed in the regression analyses.

4.1 DATA AND SAMPLE SELECTION

The company information used in the analysis is obtained from the Worldscope database. Following Djankov et al. (2008) the sample includes countries from all four legal families being Common law, German and French civil law and Scandinavian law. As the data collection process includes manual work which limits the sample size, the countries are chosen based on the availability and reliability of the data. The initial sample consists of all listed companies from 18 countries as of fiscal year-end 2010. Following previous studies on corporate diversification (see e.g., Denis et al. 1997; Lins and Servaes, 1999) I exclude all the companies whose main line of business is in the financial services industry (SIC 6000-6999) or in the regulated utilities industry (SIC 4900-4999). Further, in line with Blomqvist (2008) all countries with less than 15 firm-level observations are excluded from the sample to prevent redundant influence of a single firm on country averages. The final sample includes companies from 14 countries of which four belong to the German civil law, four to the Scandinavian law, five to the French civil law and one to the Common law family

The analysis is effectively a cross-section of the year-end situation in 2010 and most of the data is from 2010 financial statements. However, some of the control variables are calculated as 3-year averages (see section 4.2.4). Thus, all companies without sufficient data to calculate control

variables are excluded from the sample. In addition, companies for which there is no sufficient business segment sales data to calculate unrelated diversification proxy are left out from the sample. Further, if the business segment sales data does not match with the reported business segment SIC-codes, company is left out from the sample. Finally, if there is no information on the largest owner or the reported owner identity is ambiguous, the company is excluded. The information on the identity and ownership share of the largest owner is manually collected from the Thomson ONE Banker database. After the above mentioned selection process the sample consists of 2,956 company-level observations from 14 countries. The countries reviewed are United States from the Common law family Austria, Germany, Poland, and Switzerland from the German civil law family, Belgium, France, Italy, Netherlands and Spain from the French civil law family and Denmark, Finland, Norway and Sweden from the Scandinavian law family.

4.2 EMPIRICAL VARIABLES

The empirical analysis consists of three parts. The first part evaluates the association between investor protection and the level of unrelated diversification. Diversification is measured using the entropy approach (Hoskisson et al., 1993; Jacquemin and Berry, 1979; Palepu, 1985) applied in most of the diversification studies. Measures for the level of investor protection are the same as the ones used by Blomqvist (2008). Firm- and country-specific control variables are retrieved from several studies investigating corporate diversification (e.g. Denis et al., 1997; Ramaswamy et al. 2002; Goranova et al., 2007). The second part of the analysis investigates the role of ownership structure in corporate diversification decision. The diversification measure and control variables are identical to the first part. Impact of the ownership structure is measured with the identity of the controlling shareholder and the share of the ownership (see e.g. Thomsen and Pedersen, 2003). The third part investigates the joint effect of owner identity and investor protection on corporate diversification. The variables used in this part are same as in the first two parts. In the following paragraphs I describe in more detail the variables used in the analysis. First, I discuss the dependent variable which is the measure of the level of unrelated corporate diversification. Second, I go through the selection process of firm-level control variables and explain them in more detail. Finally, I present the country-specific control variables. Summary of all empirical variables is presented in table 1.

4.2.1 Measures of corporate diversification

As documented in the section 2.1.3 unrelated diversification in particular leads to diversification discount and destroys shareholder value. Thus, the analysis focuses on explaining the level of

unrelated diversification. Diversification is usually measured using both the Herfindahl index approach[5] (Acar and Sankaran 1999; Herfindahl, 1950) and the entropy index approach (Hoskisson et al., 1993; Jacquemin and Berry, 1979; Palepu, 1985). However, some of the previous studies (see e.g. Ramaswamy et al., 2002) show that the entropy measure and the Herfindahl index are highly correlated. Therefore, only the entropy measure is applied in the main analysis. The unrelated entropy index is calculated by using business segment (measured at 2-digit SIC code level) sales data in 2010 obtained from Worldscope database. Entropy index bases the unrelated diversification of the firm on the number of segments and the relative weight of each segment with respect to total firm sales as shown in equation 1

$$DIVER_1 = \sum_{i=1}^{N} P_i * \ln\left(\frac{1}{P_i}\right) \quad (1)$$

where $DIVER_1$ is the measure of firm's unrelated corporate diversification, $P_i$is the proportion of the sales in the *i*th segment and N is the number of two-digit SIC segments where the firm operates. A higher value of $DIVER_1$ implies higher level of unrelated corporate diversification. If the firm operates in single 2-digit SIC segment, $DIVER_1$ receives a value of zero.

4.2.2 Measures of investor protection

Following Blomqvist (2008) I use anti-self-dealing index (ASD) and anti-director rights index (ADR) to measure the level on investor protection. It is important to keep in mind that my analysis covers the fiscal year-end situation in 2010 while the measures of investor protection have been constructed earlier. Both ASD and ADR are based on the situation in 2003. However, John et al. (2008) note that changes in legal environment tend to be slow, and thus using indices based on the situation in 2003 will unlikely distort the results. Further, Blomqvist (2008) documents a relatively high correlation between the original ADR1993 and the revamped ADR2003 which indicates that the indices withstand time. In addition to the indices constructed by the academics, I use the legal origin of the country as a measure of investor protection.

The revamped ADR is based on the legal situation in 2003. The index measures the stance in the country towards minority shareholders, but it does not explicitly address the question of investor expropriation. The ADR score ranges from one to six depending on the inclusion of investor protection clauses in the mandatory legislation of the country. For each of the minority shareholder

[5]The sales-based Herfindahl index of diversification is $H = \sum(P_i^2)$ where $P_i$id the proportion of firm's sales in industry segment *i*. The closer the Herfindahl index is to one, the less diversified is the firm. However, in Table 1 Herfindahl index is scaled in order to be comparable with Entropy index. In Table 1 the closer the index is to 1 the more diversified is the firm.

rights included in the legislation, a country receives one point. The six aspects included in the index are 1) possibility of proxy vote by mail 2) deposition of shares prior to shareholder's meeting is not required 3) cumulative voting or proportional representation in the board 4) legal mechanisms against expropriation of minority shareholders by managers 5) right to call a special shareholders meeting 6) pre-emptive rights to subscribe for equity issued by the company.

Djankov et al. (2008) construct a new index describing legal protection of outside investors against expropriation by corporate insiders. The index is computed for 72 countries based on the legal situation in 2003 and comprises of private enforcement mechanisms such as disclosure, approval, and litigation that govern a certain self-dealing transaction. A country is assigned a score ranging from zero to one for both ex-ante and ex-post control of self-dealing. The final index value is the average of these two scores. As Djankov et al. (2008) claim that ASD works better than the previously introduced ADR and Blomqvist (2008) regards it superior over the other measures, I also use ASD as the main indicator of investor protection.

In addition to the above mentioned indices, different legal families (Common law, French civil law, Scandinavian law, German civil law) are used as additional measures of investor protection in some of the regressions. Legal families are included as dummy variables that are assigned a value of one if the firm belongs to the specific legal family and zero otherwise. The level of legal protection differs significantly across the various legal families (see e.g. La Porta et al., 1998; Djankov et al. 2008). It is thus interesting to examine whether the investor protection indices have predictive power over the impact of the legal families.

4.2.3 Measure of owner identity

According to Thomsen and Pedersen (2000) the identity of the largest shareholder is a rather good approximate of the ownership structure of a firm. In the analysis I use the identity of the largest owner to capture the influence of ownership on the corporate diversification decisions. Following Blomqvist (2008) I use two different ownership classifications in the analysis. First, I use the identity of the firm's largest shareholder to categorize the firms as being widely held, family/individual, institutional, bank, government and private equity owned. If the largest owner controls less than 10 percent, the company is expected to be widely held. Second, I categorize the firms using only the identity of the largest owner and not accounting for the ownership share. It is assumed that the first method will generate more robust results as 10 percent ownership gives significant say into the corporate affairs. The second method is used to explore whether owner identity has more influence on corporate decision making than ownership share.

4.2.4 Firm-level control variables

On the firm level, I control for size, leverage, capital intensity and prior performance. The variables have been collected from previous studies exploring the level of corporate diversification. The variables chosen are the ones that have been used the most and have been shown to best explain corporate diversification. The first control variable is *Firm size* which is relevant as the theory suggests that diversification is pursued to gain scale and scope economies, market power and improve resource availability (see e.g. Chandler, 1969; Grant et al., 1988). Further, several studies show that the size of the firm is positively associated with the level of diversification (see e.g. Denis et al., 1997; Fauver et al., 2003; Lins and Servaes, 1999). To control for any firm size effects I include the natural logarithm of total assets to the equation. The second control variable is *leverage.* Some studies show that the diversification strategy of the company is affected by its capital structure (see e.g. Kocchar and Hitt, 1998). On the other hand, theory suggests that one of the benefits of diversification is the firm's ability to bear more debt. Further, academics have presented the potential of debt in reducing agency costs (see e.g. Grossmann and Hart, 1986). Thus, it can be assumed that leverage in some way affects corporate diversification decisions. Following Ramaswamy et al. (2002) *leverage* is calculated as a 3-year (2008-2010) average of the firm's debt to equity ratio.

Capital intensity is measured as the 3-year (2008-2010) average of firm's capital expenditures to sales ratio. Capital intensity controls for the differences in production capabilities, firm-specific knowledge and firm's ability to generate sales from its investments, which all have been shown to affect firm's willingness to pursue diversification (see e.g. Denis et al., 1997; Hutzschenreuter and Goene, 2009a, 2009b). Finally, *prior performance* is included as the last firm-level control variable as firms with weak profitability are more likely to diversify to other markets to seek new opportunities (Campa and Kedia, 2002). In line with Ramaswamy et al. (2002) *prior performance* is measured as a 3-year (2008-2010) average of return on assets. To control for the differences between countries firm-level return on assets is indexed against the average return on assets of the country.

Following a common practice in the diversification literature I include industry dummy variables to control for industry-specific effects. In line with Denis et al. (1997) I control for *industry membership* based on the primary 2-digit SIC code of the firm. The industry dummy is assigned a value of one if the firm belongs to the specific industry group, and zero otherwise.

Table 1 - Summary of the Empirical Variables

This table presents the empirical variables used in the regression analysis. The first column indicates the name of the variable, second column indicates what the variable is proxying for in the analysis, third column provides a brief describtion of the variable while the last column provides the source of the variable.

Variable	Proxying for	Description	Source
Dependent variable			
$DIVER_1$	Level of unrelated corporate diversification	Calculated using the Entropy measure: $$DIVER_1 = \sum_{i=1}^{N} P_i * \ln(\frac{1}{P_i})$$	Jaquemin and Berry (1979)
Ownership variable			
Identity of the largest shareholder	Ownership structure of the firm	A dummy variable which receives a value of one if the firm's largest shareholder owns at least 10 percent and the owner belongs to the equivalent owner identity group, and zero otherwise	Thomsen and Pedersen (2000)
Investor protection variables			
Anti-director-rights index (ADR)	Shareholder's decision making rights in a country	A country receives ADR score ranging from zero to six depending on the inclusion of minority shareholder protection clauses in its manadatory legislation.	La Porta et al. (1998); Djankov et al. (2008)
Anti-self-dealing index (ASD)	Outside investor expropriation in the country	Country gets a score ranging from zero to one for both ex-ante and ex-post protection of outside investors. ASD is the average of the two measures.	Djankov et al. (2008)
Legal family	The effect of the legal origin of the Company law or Commercial code of given country to the level of investor protection	A dummy variable that is assigned a value of one if the firm belongs to the corresponfding legal family, and zero otherwise	La Porta et al. (1998,1999)
Firm-level control variables			
Assets	Firm size	Natural logarithm of total assets	e.g. Denis et al. (1997)
Leverage	Firm's capital structure	3-year (2008-2010) average of the firms's Debt to Equity ratio	Ramaswamy et al. (2002); Kocchar and Hitt (1998)
Capex	Capital intensity; differences in production capabilities, firm-specific knowledge and firm's ability to generate sales from its investments	3-year (2008-2010) average of firm's Capital expenditures to Sales -ratio	Hutzchenreuter and Goene (2009a, 2009b)
ROA	Firm's profitability in the past	3-year (2008-2010) average of Return on Assets	Campa and Kedia (2002); Ramaswamy et al. (2002)
Two-digit primary SIC-code	Industry effects on corporate diversification	A dummy variable that equals one if firm's primary business segment falls into the corresponding two-digit SIC-code and zero otherwise	e.g. Denis et al. (1997)
Country-level control variables			
GNP	Capital market development	Average GNP per capita in the country in 2010	Fauver et al. (2003)
Earnings smoothing (ES)	Indication of the existence of private benefits of diversification	Median of the ES_{firm} (ratio of STDV of operating income to the STDV of operating cash flow, both variables scaled by total assets) for each country	Leuz et al. (2003)

4.2.5 Country level control variables

Fauver et al. (2003) demonstrate that the value of corporate diversification is negatively related to the level of international capital market integration and capital market development as in countries where capital markets are established they document a diversification discount. Contrary, Fauver et al. (2003) find no diversification discount, and in some cases even diversification premium, in countries where capital markets are less developed and internationally integrated. Following Fauver et al. (2003) I use the average GNP per capita to proxy for the level of capital market development.

Leuz et al. (2003) suggest that earnings management is more prevalent in countries where investor protection is weak. Similarly, the results in Walther (2003) indicate that the level of diversification is higher in countries where earnings management is common. This might imply that corporate insiders of diversified firms derive private benefits that they attempt to hide by earnings smoothing. Therefore, I include a country-level earnings smoothing variable into the regression. Earnings smoothing is calculated as the ratio of standard deviation of the operating income to the standard deviation of operating cash flow, both scaled by total assets. A higher value implies lower earnings smoothing. Median of the firm-level earning smoothing variables is used as the country-level control variable.

4.3 METHODOLOGY

In this section I describe the methodology applied in the empirical analysis. First, I discuss the methodology used in the analysis of the link between owner identity and corporate diversification. Second, I go through the methodology used in the analysis of the relation between the level of unrelated corporate diversification and investor protection. Third, I look into the methodology used in the examination of the influence of owner identity on corporate diversification in different institutional backgrounds.

4.3.1 Owner identity and unrelated corporate diversification

Weighted least squares regression for the whole sample at 10 percent control threshold

The first regression explores the link between owner identity and the level of unrelated corporate diversification and aims at verifying the hypothesis 1-6. In line with the methodology used in Pedersen (2000, 2003) I regress the unrelated corporate diversification measure on the identity of firm's largest shareholder. Firms in which the largest shareholder holds less than 10 percent are considered as widely held. In the regression widely held companies are considered as the base category against which the other owner groups are assessed. As there is significant variation in the

number of firms from specific countries, John et al. (2008) weight each firm-level observation with an inverse of the number of observations from the equivalent country. I apply this methodology as well. Mathematically:

$$DIVER_i = \delta_1 + \delta_2 D_{Family} + \delta_3 D_{Insitution} + \delta_4 D_{Corporation} + \delta_5 D_{Bank} + \delta_6 D_{Government} + \delta_7 D_{Private\ equity} + \delta_8 X_c + \delta_9 Y_i + \varepsilon \quad (2)$$

where $DIVER_1$ is the measure of unrelated corporate diversification and D_i is a dummy variable which receives a value of one if the firm's largest shareholder owns at least 10 percent and the owner belongs to the equivalent owner identity group, and zero otherwise. X_c is a vector for country-level control variables and Y_i is a vector for firm-level control variables.

I expect all δ_2, δ_3, δ_4, δ_5, δ_6 and δ_7 to be negative. This in line with the findings of several previous studies (e.g. Amihud and Lev, 1981; Denis et al, 1997) that the existence of controlling shareholder reduces the level of unrelated diversification. Thus, the expropriation of outside investors would be highest in widely held firms. However, I assume δ_3 and δ_7 to be significantly more negative than the other coefficients. This would indicate that firms owned by institutional investors and private equity firms engage less in unrelated diversification, and thus destroy less shareholder value than other owner identities. Contrary, I expect the coefficients δ_2, δ_5, and δ_6 to be less negative than δ_4. This would imply that family, bank and government owned firms drive unrelated diversification more than corporate owners. Following Blomqvist (2008) I run the above regression controlling also for the level of investor protection, countries and legal families.

Weighted ordinary least square regression for owner identities

Again, in line with Blomqvist (2008) I leave out the ownership share of the largest owner and regress unrelated diversification measure only on the identity of the largest shareholder. Institutional ownership is considered as the base category against which all the other owner identities are compared. The equation is as follows:

$$DIVER_1 = \gamma_1 + \gamma_2 D_{Family} + \gamma_3 D_{Corporation} + \gamma_4 D_{Bank} + \gamma_5 D_{Government} + \gamma_6 D_{Private\ equity} + \gamma_7 X_c + \gamma_8 Y_i + \varepsilon \quad (3)$$

where $DIVER_1$ is the measure of unrelated corporate diversification and D_i is a dummy variable which receives a value of one if the firm's largest shareholder belongs to the equivalent owner identity group, and zero otherwise. X_c is a vector for country-level control variables and Y_i is a vector for firm-level control variables. I expect γ_6 to be negative which would support the

assumption that private equity ownership is least associated with unrelated diversification of all owner identities. Contrary, I believe γ_2, γ_3, γ_4 and γ_5 to be positive indicating that family, bank, corporate and government owned firms engage more in unrelated corporate diversification than institutionally owned firms. As in the previous part I run the regression controlling also for the level of investor protection, countries and legal families.

4.3.2 Investor protection and unrelated corporate diversification

Weighted ordinary least squares regression for the whole sample

The second part of the analysis addresses the hypothesis on the relation between investor protection and the level of unrelated corporate diversification. John et al. (2008) regress corporate level risk-taking measure on measures of investor protection and chosen control variables. I follow the methodology applied in this study, but use the unrelated diversification measure, $DIVER_{1,}$ as the dependent variable and regress it against the control variables described in the previous section. As in the first part, each observation is weighted with the inverse of the number of observation from the equivalent country. The regression equation is as follows

$$DIVER_1 = \alpha_1 + \alpha_2 InvestorProtection_{c,i} + \alpha_3 X_c + \alpha_4 Y_i + \varepsilon \quad (4)$$

where $DIVER_1$ is the measure of unrelated corporate diversification and $InvestorProtection_{c,i}$ refers to ASD and ADR indices that capture the protection of outside investors in country *c* where firm *i* is located. X_c is a vector for country-level control variables and Y_i is a vector for firm-level control variables. As hypothesized I expect the sign of α_2 to be negative. This would indicate that better investor protection leads to lower level of unrelated corporate diversification.

Following Blomqvist (2008) I regress unrelated corporate diversification measure on the collection of investor protection variables and dummy variables standing for legal families. As the level of investor protection differs considerably between the legal families, it is interesting to measure the predictive power of investor protection measures relative to the impact of legal families. In the regression Common law legal family is designated as the reference group to which other legal families are compared. The equation is following:

$$DIVER_1 = \beta_1 + \beta_2 InvestorProtection_{c,i} + \beta_3 D_{French} + \beta_4 D_{German} + \beta_5 D_{Scandinavian} + \beta_6 X_c + \beta_7 Y_i + \varepsilon \quad (5)$$

where $DIVER_1$ is the measure of unrelated corporate diversification and $InvestorProtection_{c,i}$ refers to ASD and ADR indices that capture the protection of outside investors in country *c* where firm *i* is

located. D_c is a dummy variable that receives a value of one if a firm belongs to the equivalent legal family, and zero otherwise. X_c is a vector for country-level control variables and Y_i is a vector for firm-level control variables. In line with the findings in Blomqvist (2008) I assume that β_z will stay negative. This implies that the collection of investor protection measures would have predicting power on corporate diversification strategies over the legal origin of the country.

4.3.3 Owner identity, investor protection and unrelated corporate diversification

This section aims at providing evidence on the hypothesis 8 and 9. The assumption is that owner identity has more influence on corporate strategy, such as diversification decision, in an environment characterized by weak shareholder protection. In line with Blomqvist (2008), I assess this hypothesis by running the regressions (1) and (2) separately for Common law sub-sample and continental European sub-sample which consists of French and German civil law countries. In regression 6 widely held firms act as the reference group while in regression 7 institutional investors is the omitted owner identity category. Also in this part each observation is weighted with inverse of the number of observations in the corresponding country. The equations are as follows:

$$DIVER_1 = \theta_1 + \theta_2 D_{Family} + \theta_3 D_{Insitution} + \theta_4 D_{Corporation} + \theta_5 D_{Bank} + \theta_6 D_{Government} + \theta_7 D_{Private\ equity} + \theta_8 Y_i + \varepsilon \quad (6)$$

$$DIVER_i = \mu_1 + \mu_2 D_{Family} + \mu_3 D_{Corporation} + \mu_4 D_{Bank} + \mu_5 D_{Government} + \mu_6 D_{private\ qtuiy} + \mu_7 Y_i + \varepsilon \quad (7)$$

where $DIVER_1$ is the measure of unrelated corporate diversification. In the equation (6) D_i is a dummy variable which receives a value of one if the firm's largest shareholder owns at least 10 percent and the owner belongs to the equivalent owner identity group, and zero otherwise. In the equation (7) D_i is a dummy variable which receives a value of one if the firm's largest shareholder belongs to the equivalent owner identity group, and zero otherwise. Y_i is a vector for firm-level control variables.

It has been shown that investor protection is weaker and expropriation more prevalent in civil law countries (see e.g. La Porta et al. 1998; Djankov et al., 2008). Further, Thomsen and Pedersen (2000, 2003) demonstrate that ownership structure might be less important in countries where the level of investor protection is high. Thus, I expect the coefficients θ_3 and θ_7 to be significantly negative in the continental European sample. Similarly, I assume coefficients θ_2, θ_4, θ_5 and θ_6 to be

negative as the literature suggest that ownership concentration reduces agency problems. However, I expect the coefficients to be significantly less negative than the institutional and private equity investor coefficients. In the Common law sub-sample I expect the coefficients to have similar signs but to be a lot smaller and statistically less significant. For the equation (7) I expect all $ц_2$, $ц_3$, $ц_4$ and $ц_5$ to be positive in civil law countries. Contrary, I predict a strong negative sign for the coefficient $ц_6$. Again, I expect the coefficients to have identical signs, but to be notably smaller and less significant in the Common law sub-sample.

5 EMPIRICAL FINDINGS

This section presents the empirical findings of the study. First, I provide a description of the sample statistics. Second, regression results are discussed in regard with the hypotheses and previous findings in the literature.

5.1 DESCRIPTIVE STATISTICS

In this section, I first discuss the summary statistics for the dependent variable and the control variables included in the model. Second, I go through the descriptive statistics regarding owner identity. Finally, I present statistics jointly for owner identity and unrelated corporate diversification.

5.1.1 Sample summary statistics

Table 2 presents the summary statistics for the variables used in the regression analysis. The sample consists of 2,956 firms from 14 countries. United Stated is the only country from Common law legal family, while there are four countries from German civil law and Scandinavian law family and five from French civil law family. Common law legal family has the most observations (1,934) in the sample. German civil has 409, French civil law 401 and Scandinavian law 212 firms in the sample. The most represented countries in the sample are United States (1,934), Germany (202) and France (191) while Austria (16), Norway (29) and Denmark (37) have the least observations.

Measured with the sales-based Entropy and Herfindahl indices, the level of unrelated corporate diversification is significantly highest in German civil law countries. French civil law and Scandinavian law follow behind while in the sole Common law country, United States, the level of unrelated diversification in considerably lower. The difference between Common law and other legal families is statistically significant. Similarly, German civil law firms are statistically significantly more diversified into unrelated businesses than firms in French civil law and Scandinavian law countries. At the country level Switzerland (0.41) and Germany (0.31) have the

highest level of unrelated corporate diversification, while firms located in the United States (0.14) and Sweden (0.17) are on average least diversified into unrelated businesses.

Table 2 - Descriptive Statistics of the Sample

This table presents the descriptive statistics for the sample. *N* is the number of companies per country in the sample. $DIVER_1$ and $DIVER_2$ are the unrelated diversification proxies. $DIVER_1$ is the country average of the firm-level sales-based Entropy index while $DIVER_2$ is the country average of the firm-level sales-based Herfindahl index. For both measures a higher value indicates a higher level of unrelated corporate diversification. *ROA* is a proxy for prior performance and is a 3-year (2008-2010) country average of return on assets. *Capex* proxies for capital intensity and is a 3-year (2008-2010) average of capital expenditures-to-sales ratio, measured at the country-level. *Leverage* presents the capital structure and is a 3-year (2008-2010) country average of firm-level debt-to-equity ratio. *Assets* demonstrates the average firm size in the country, measured as the nathural logarithm of assets as of 2010. $ES_{country}$ is the country median of the earnings smoothing variable calculated as the ratio of firm-level standard deviation of operating income and operating cash-flow, both scaled by assets. Higher $ES_{country}$ indicates less earnings smoothing in the country. *GNP* is the cross national product per capita in 2010 in $US and demonstrates the level of stock market development in the country. Anti director-rights index *(ADR)* and anti self-dealing index *(ASD)* are measures of investor protection.

Country	N	$DIVER_1$	$DIVER_2$	ROA	Capex	Leverage	Assets ($M)	$ES_{country}$	GNP ($)	ADR	ASD
US	1,934	0.14	0.09	0.05	0.10	0.58	3,080	1.34	49,516	3.00	0.65
Common law	**1,934**	**0.14**	**0.09**	**0.05**	**0.10**	**0.58**	**3,080**	**1.34**	**49,516**	**3.00**	**0.65**
Austria	16	0.24	0.14	0.04	0.18	0.82	4,030	1.70	36,660	2.50	0.21
Germany	202	0.31	0.19	0.02	0.09	1.06	6,651	1.20	37,591	2.50	0.28
Poland	107	0.22	0.13	0.04	0.16	0.37	424	1.26	19,747	2.00	0.30
Swizerland	84	0.41	0.25	0.08	0.09	0.57	4,665	1.33	46,215	3.00	0.27
German Civil law	**409**	**0.30**	**0.19**	**0.04**	**0.13**	**0.71**	**2,608**	**1.26**	**39,874**	**2.50**	**0.27**
Belgium	39	0.21	0.13	0.04	0.08	0.82	1,574	0.77	37,448	2.00	0.50
France	191	0.25	0.15	0.03	0.09	0.83	5,746	0.98	33,820	3.00	0.38
Italy	67	0.23	0.14	0.03	0.11	0.88	2,154	1.05	31,555	2.50	0.39
Netherlands	53	0.29	0.17	0.06	0.11	0.40	9,946	1.09	42,475	3.00	0.21
Spain	51	0.19	0.11	0.03	0.18	1.47	5,090	0.90	32,070	5.00	0.37
French civil law	**401**	**0.24**	**0.15**	**0.04**	**0.11**	**0.88**	**4,902**	**0.97**	**35,474**	**3.10**	**0.37**
Denmark	37	0.28	0.16	0.07	0.10	0.68	994	1.07	39,558	4.00	0.47
Sweden	85	0.17	0.11	0.07	0.13	0.55	1,697	1.22	36,660	3.50	0.34
Norway	29	0.20	0.12	0.00	0.25	0.91	1,272	1.05	56,894	3.50	0.44
Finland	61	0.20	0.13	0.04	0.05	0.55	2,248	0.93	38,947	3.50	0.46
Scandinavian law	**212**	**0.20**	**0.12**	**0.04**	**0.13**	**0.67**	**1,553**	**1.09**	**43,015**	**3.63**	**0.43**
Total sample	**2,956**	**0.18**	**0.11**	**0.04**	**0.12**	**0.75**	**3,541**	**1.26**	**38,511**	**3.07**	**0.38**
T-test of legal family means											
Common vs. German civil law		-8.23***	-8.19***	0.35	-0.03	-0.18	1.43	0.64	-	-	-
Common vs. French civil law		-5.50***	-5.23***	1.38	-0.01	-0.46	-3.99***	4.58***	-	-	-
Common vs. Scandinavian law		-2.44**	-2.40**	0.21	-0.03	-0.14	4.74***	3.00***	-	-	-
German vs. French civil law		2.54**	2.65**	1.00	0.46	-0.54	-4.29***	2.22**	-	-	-
German vs. Scandinavian law		3.52***	3.51***	-0.00	-0.03	0.12	3.05***	1.28	-	-	-
French vs. Scandinavian law		1.43	1.31	-0.67	-0.29	1.03	6.74***	-1.21	-	-	-

*Significant at 10 percent level

**Significant at 5 percent level

***Significant at 1 percent level

In regard with the performance of firms there seems to be no significant differences between the legal families. At the country level the highest average return on assets (ROA) is in Switzerland (8%), and lowest in Norway (0%). The surprisingly low average return on assets in Norway is probably a bias resulting from the small sample size. The average return on assets of the whole sample is 4%.

Similarly, there is no high variation in the capital expenditures to sales ratio (Capex) between the legal families. However, there exist wide variations between the individual countries. Firms in Norway (25%), France (18%) and Austria (18%) have very high capital expenditures to sales – ratios while the average ratio in Belgium is only 8%.

In regard with debt to equity ratio (Leverage) the differences between legal families are more prominent. The firms located in French and German civil law countries bear very high levels of debt the averages being 88% and 78%, respectively. The ratios are lower, yet relatively high also in Scandinavian law (67%) and Common law (56%) counties. High debt to equity levels across legal families are likely explained by the effect of worldwide financial crisis on corporations. During the past three years firms have encountered a challenging business environment which has diminished their profit-making capability. By 2010 the losses or reduced profits might have cumulated to the extent that they reduce the amount of shareholders' equity which results in inflated debt to equity ratios. For example in Spain, which has encountered a lot of difficulties during the crisis the average debt to equity ratio is staggering 147%.

The average firm size in the sample is highest in the French civil law countries. The result is mainly driven by Netherlands where firm total assets are on average almost $10 billion. The average firm size is clearly smallest in Scandinavian law countries, the average total assets of a company being only $1.6 billion. In addition to large differences between legal families the variation within legal families is significant. The average firm size in Poland is only $0.4 billion while in Germany the firm assets total on average $6.7 billion. Similarly, the average size of firms located in Denmark ($0.9 billion) falls significantly below the Scandinavian legal family average.

A higher value for earnings smoothing variable indicates lower level of earnings smoothing. It seems that earnings smoothing is most prevalent in French civil law countries (0.97) and least universal in Common law countries (1.34). This is in line with Leuz et al. (2003) who suggest that earnings management is more prevalent in countries where investor protection is weak. However, earnings management is more common in Scandinavian law countries (1.09) than in German law countries (1.26). At a country-level the level of earnings smoothing is lowest in Austria (1.70),

Switzerland (1.33) and United States (1.34) while Spain (0.90), Finland (0.93) and France (0.98) are very prone to earnings smoothing.

In regard with GNP per capita Common law legal family stands significantly out as the GNP per capita in the United States is nearly $50,000. On the other hand French civil law countries ($35,474) have the lowest GNP per capita. At the country level Norway ($56,894), Switzerland ($46,215) and United States ($49,516) have the highest GNP per capita while the lowest are in Poland ($19,747) and Italy ($31,555). The results support the suitability of GNP per capita as the proxy for the development of stock markets.

As expected investor protection measures receive the highest values in Common law and Scandinavian law legal families. The value of anti-director rights index that measures country's stance towards minority shareholders is highest in Scandinavian law (3.63) countries and lowest in German civil law (2.50) countries. Similarly, anti-self-dealing index that measures country's attitude towards expropriation of outside investors is highest in Common law legal family (0.65) and lowest in German civil law countries (0.27).

5.1.2 Summary statistics for owner identity

This section focuses on describing the sample statistics relative to the identity of the largest owner. Table 3 presents the prevalence of different owner identities across the world. The firms are classified according to two measures. First, I classify the firms according to their largest owner without taking into consideration the ownership share. In this case the different owner identities are institutional, family/individual, corporation, bank, government and private equity. Second I classify the firms using an ownership threshold of 10%. All firms where the largest owner holds less than 10% of the shares are classified as widely held. The other owner identities are the same as in the first case.

When measured at the 10% ownership threshold 32% of the firms in the sample are considered as widely held. The result is mainly driven by United States where 37.5% of firms are widely held. Ownership concentration is highest in French civil law countries where only 17% of the firms are classified as widely held. German civil law and Scandinavian law legal families stand in the middle with 24% and 23% of firms regarded as widely held.

Following widely held firms family/individual (28%) and institutional investors (25%) are the next largest owner identity groups. The prevalence of institutional owners is especially high in United States (33%) while family/individual ownership is most common owner identity in both French

(51%) and German (43%) civil law countries. In the Scandinavian law countries institutional and family/individual owner identities are equally common.

Table 3 - Identity of the Largest Owner (%)

This table presents the prevalence of different owner identities across countries and legal families. Two kinds of ownership classifications are used in the analysis. First, I classify the firms according to the identity of their largest owner without taking into consideration the ownership share owner identities being family/individual, insitutional, corporation, bank, government and private equity. Second, I classify the firms using ownership control treshold of 10%, below which a firm is expected to be widely held. Percentages are provided per country, legal family and the sample as a whole.

			(1)	(2)	(3)	(4)	(5)	(6)	(7)
Country	**N**	**Threshold**	**Family**	**Institutional**	**Corporation**	**Bank**	**Government**	**Private Equity**	**Widely held**
United States	1,934	-	26.47	63.81	6.36	0.21	-	3.15	-
		10%	21.41	32.57	5.79	0.05	-	2.64	37.54
Common law	**1,934**	**-**	**26.47**	**63.81**	**6.36**	**0.21**	**-**	**3.15**	**-**
		10%	**21.41**	**32.57**	**5.79**	**0.05**	**-**	**2.64**	**37.54**
Austria	16	-	31.25	25.00	25.00	6.25	6.25	6.25	-
		10%	31.25	12.50	25.00	6.25	6.25	6.25	12.50
Germany	202	-	39.60	33.17	18.81	3.96	1.98	2.48	-
		10%	34.65	7.43	16.83	1.98	1.98	2.48	34.65
Poland	107	-	41.12	23.36	32.71	-	1.87	0.93	-
		10%	39.25	18.69	32.71	-	1.87	0.93	6.54
Swizerland	84	-	54.76	25.00	11.90	3.57	2.38	2.38	-
		10%	50.00	9.52	10.71	2.38	2.38	1.19	23.81
German civil law	**409**	**-**	**42.79**	**28.61**	**21.27**	**2.93**	**2.20**	**2.20**	**-**
		10%	**38.88**	**11.00**	**20.05**	**1.71**	**2.20**	**1.96**	**24.21**
Belgium	39	-	48.72	23.08	23.08	2.56	-	2.56	-
		10%	43.59	10.26	20.51	2.56	-	2.56	20.51
France	191	-	53.40	18.85	22.51	-	1.57	3.66	-
		10%	50.79	6.81	21.47	-	1.57	3.66	15.71
Italy	67	-	68.66	8.96	16.42	1.49	2.99	1.49	-
		10%	68.66	2.99	16.42	1.49	2.99	2.99	4.48
Netherlands	53	-	22.64	58.49	7.55	7.55	-	3.77	-
		10%	20.75	20.75	7.55	5.66	-	3.77	41.51
Spain	51	-	52.94	5.88	23.53	13.73	1.96	1.96	-
		10%	43.14	1.96	23.53	13.73	1.96	1.96	13.73
French civil law	**401**	**-**	**51.37**	**20.45**	**19.70**	**3.24**	**1.50**	**3.74**	**-**
		10%	**48.13**	**7.73**	**18.95**	**2.99**	**1.50**	**3.24**	**17.46**
Denmark	37	-	24.32	40.54	29.73	2.70	-	2.70	-
		10%	21.62	21.62	27.03	2.70	-	2.70	24.32
Finland	61	-	26.23	37.70	24.59	-	8.20	3.28	-
		10%	18.03	22.95	24.59	-	8.20	3.28	22.95
Norway	29	-	31.03	10.34	51.72	-	-	6.90	-
		10%	27.59	3.45	51.72	-	-	3.45	13.79
Sweden	85	-	29.07	47.67	16.28	-	2.33	4.65	-
		10%	26.74	25.58	16.28	-	1.16	3.49	26.74
Scandinavian law	**212**	**-**	**27.70**	**38.50**	**25.82**	**0.47**	**3.29**	**4.23**	**-**
		10%	**23.47**	**21.13**	**25.35**	**0.47**	**2.82**	**3.29**	**23.47**
Total Sample	**2,956**	**-**	**32.19**	**51.37**	**11.63**	**1.01**	**0.74**	**3.04**	**-**
		10%	**27.60**	**25.40**	**10.96**	**0.71**	**0.71**	**2.67**	**31.96**
N		**-**	**952**	**1,518**	**344**	**30**	**22**	**90**	**-**
		10%	**816**	**751**	**324**	**21**	**21**	**79**	**945**

Among the legal families corporate ownership is most prevalent in Scandinavian law countries (25%) where Norway drives the results with 52% of the firms being owned by another corporation. Corporate ownership is also relatively common in French (19%) and German (20%) civil law countries. On the other hand, corporate ownership is very rare in United States where only 6% of the firms are owned by another corporation.

Bank, government and private equity owners are considerably less universal than the above mentioned owner identities. Bank ownership is most common in French civil law countries where 3% of the sample firms are considered as bank owned. In both Scandinavian law and Common law countries only one firm is identified as bank owned. On the other hand government ownership is most prevalent in Scandinavian law countries (3%). Especially Finland stands out as 8% of the sample firms are classified as government owned. The prevalence of private equity ownership is almost identical across legal families ranging from 2 to 3 percent. The relatively low level of private equity ownership is due to the fact that private equity investors mainly own private companies.

If the firms are classified only according to the largest owner, 51% of the firms are classified as institutionally owned. Again, the result is mainly driven by United States where 64% of the firms fall under the institutional owner category. Also in the Scandinavian law countries the largest owner is institutional investor in the majority (39%) of companies. Contrary, family/individual ownership is most prevalent in French (51%) and German (43%) civil law countries. In line with the statistics for 10% ownership threshold bank, government and private equity ownership are far less common than the other owner identities.

In addition to the differences in the prevalence of owner identities across countries, the level of ownership concentration varies significantly. Several previous studies (see e.g. La Porta et al., 1999; Del Brio et al., 2011) demonstrate the level of ownership concentration is significantly lower in United States than in most of German and French civil law countries. Further, the average ownership share of the largest shareholder differs notably between owner identities (e.g. Thomsen and Pedersen, 2003; Blomqvist, 2008). Table 4 presents the mean and median ownership share of the largest owner by owner identity across countries and legal families.

As it can be seen from the table there is considerable variation in the level of ownership concentration across both countries and owner identities. As expected the average ownership share of institutional investors (15.3%) is lowest. There is also very little variation in the ownership share of institutional investors across legal families. Shareholdings of institutional investors are more diversified and they presumably do not seek control in the firms in the same way as some other

owner identities do which might explain their rather limited ownership share. On the other hand ownership concentration is significantly higher in private equity owned firms where the average ownership share is 26%. This implies that unlike majority of institutional investors private equity investors have preference for control and they desire to influence the corporate decision making.

Table 4 - Ownership Share of the Largest Owner by Owner Identity (%)

This table demonstrates the mean and median ownership share of the largest owner by owner identity across countries and legal families. The classified owner identities are institutional, family/individual, corporation, bank, government and private equity. Ownership share of the largest owner is calculated as the portion of the shares outstanding and does not take into account any means by which ownership differs from control.

		Institutional		Family		Corporation		Bank		Government		Private Equity	
Country	**N**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
United States	**1,934**	12.05	10.11	24.28	19.67	32.23	24.90	9.13	8.76	-	-	24.60	19.60
Common law	**1,934**	**12.05**	**10.11**	**24.28**	**19.67**	**32.23**	**24.90**	**9.13**	**8.76**	**-**	**-**	**24.60**	**19.60**
Austria	16	38.28	31.69	48.28	64.00	40.83	36.70	15.00	15.00	31.50	31.50	65.00	65.00
Germany	202	8.66	5.21	36.52	31.90	52.56	54.79	13.58	12.23	35.27	27.85	32.16	18.25
Poland	107	22.43	17.68	36.49	31.91	53.56	58.67	-	-	62.80	62.80	26.61	
Swizerland	84	12.11	8.98	36.62	30.42	38.18	36.78	17.88	13.90	30.11	30.11	46.54	46.54
German Civil law	**409**	**13.23**	**7.42**	**36.87**	**32.20**	**50.77**	**54.46**	**14.77**	**14.45**	**39.82**	**31.50**	**38.38**	**26.61**
Belgium	39	21.40	9.91	39.40	45.43	45.33	50.12	16.50	16.50	-	-	30.16	30.16
France	191	15.10	6.66	44.50	42.05	54.64	55.59	-	-	23.93	26.57	24.81	22.76
Italy	67	29.36	29.96	49.02	53.80	50.91	53.29	62.37	62.37	23.73	23.73	16.55	13.28
Netherlands	53	9.65	8.23	21.03	20.82	45.93	46.45	11.55	12.70	-	-	15.07	15.07
Spain	51	5.10	1.77	28.71	25.44	45.40	45.49	20.78	20.12	20.05	20.05	10.00	10.00
French civil law	**401**	**14.06**	**8.17**	**41.60**	**41.60**	**51.22**	**50.75**	**20.81**	**18.11**	**23.21**	**23.31**	**21.23**	**17.87**
Denmark	37	15.28	10.63	31.65	31.93	30.21	33.80	16.62	16.62	-	-	28.60	28.60
Finland	61	17.32	12.30	17.78	13.36	30.13	28.49	-	-	29.50	30.84	59.75	59.75
Norway	29	7.76	8.28	27.00	24.21	37.69	26.71	-	-	-	-	12.62	12.62
Sweden	85	14.76	10.24	26.84	22.68	26.77	25.44	-	-	20.97	20.97	24.03	21.78
Scandinavian law	**212**	**15.32**	**10.66**	**25.14**	**22.05**	**31.35**	**28.36**	**16.62**	**16.62**	**27.06**	**30.84**	**22.42**	**22.02**
Total Sample	**2,956**	**12.43**	**9.97**	**30.40**	**25.01**	**41.14**	**38.33**	**16.70**	**15.16**	**31.23**	**29.71**	**25.90**	**19.75**

Contrary to institutional ownership, family/individual, corporate and government ownership are all associated with high levels of ownership concentration. These owner identities seek to control the firms they own and affect corporate strategy. Corporations and families have especially high ownership shares in German and French civil law countries. Families hold on average 42% in French and 37% in German civil law countries of the company shares. For corporations the average ownership share is staggering 51% in both German and French civil law countries. However, the ownership shares of families and corporations are significantly lower in Common and Scandinavian law countries. In both Scandinavian and Common law countries the average ownership share of families is around 25% and corporate ownership share approximately 32%. The ownership share of governments is on average 31%, yet there is a lot of variation across the legal families. In German

civil law countries governments own around 40% of the company shares while in French civil law countries the average ownership is only 23%. Bank ownership falls in the middle of institutional and other owner identities, the average ownership share being 17%.

It can be concluded that ownership concentration is associated with certain owner identities and legal families. The average ownership share of the largest owner is biggest in German and French civil law countries and lowest in Common law countries, while Scandinavian law countries fall somewhere in the middle. In regard with owner identities, institutional investors own distinctly smallest shares across legal families while family, corporate, government and private equity ownership are associated with high ownership concentration.

5.1.3 Summary statistics for owner identity and unrelated corporate diversification

Table 5 presents unrelated corporate diversification by owner identity measured at the 10% ownership control threshold. From the table we can see that private equity (0.08) ownership is least associated with unrelated diversification. This supports the assumption that private equity firms seek to invest in specialized companies that are easy to develop and sell further. Also companies owned by other institutional investors have on average low unrelated diversification levels. However, there is a lot of variation across legal families. The level of unrelated diversification is very low in Common law countries (0.13) while in French (0.33) and German (0.30) civil law countries institutionally owned companies are more diversified than other companies. The reason for this might be that in the United States institutional owners are most often large investment management companies that are willing to take on more risk whilst in Europe institutional owners are more often insurance and pension companies that might have more risk averse investment policies as there are regulations that control their investment activity.

Surprisingly, the level of unrelated diversification in family owned firms is almost the same as in institutionally owned firms. However, there is a lot of variation across legal families. The level of unrelated diversification in family firms is especially low in the United States (0.10) while in German civil law (0.30) countries it is significantly higher. As United States is overrepresented in the sample it pushes the average low for the whole sample. Furthermore, the unexpectedly low level of unrelated diversification in family owned firms is probably due to the fact that diversification tends to increase with firm size while the average firm size is smallest among family owned firms. However, the size-effect will be controlled for in the regression analysis discussed in the next section.

As expected, unrelated diversification is very high in government (0.41) and bank (0.25) owned companies. The level of unrelated diversification is consistently very high in government owned firms across legal families while there is a lot of variation in the diversification levels of bank owned firms. However, measured at the 10% ownership only 21 government- and 21 bank-owned firms were identified. Thus, the rather small number of observations might influence the reliability of the statistics.

Table 5 - Unrelated Corporate Diversification by Owner Identity

This table presents unrelated diversification by owner identity. $DIVER_1$ is the proxy for unrelated diversification and it is calculated using the sales-based Entropy index. A higher value indicates a higher level of unrelated corporate diversification. The identity of the largest owner is classified according to the 10% ownership treshold. N stands for the number of observations in the sample.

		Institutional	Family	Corporation	Bank	Government	Private Equity	Widely held
Country	**N**	**$DIVER_1$**	**$DIVER_1$**	**$DIVER_1$**	**$DIVER_1$**	**$DIVER_1$**	**$DIVER_1$**	**$DIVER_1$**
United States	**1,934**	0.13	0.10	0.14	0.57	-	0.06	0.19
Common law	**1934**	**0.13**	**0.10**	**0.14**	**0.57**	**-**	**0.06**	**0.19**
Austria	16	0.57	0.20	0.00	0.29	0.48	0.46	0.20
Germany	202	0.41	0.29	0.28	0.35	0.51	0.11	0.32
Poland	107	0.40	0.17	0.18	-	0.04	0.00	0.23
Swizerland	84	0.27	0.43	0.50	0.37	0.74	0.00	0.38
German Civil law	**409**	**0.38**	**0.30**	**0.25**	**0.35**	**0.45**	**0.13**	**0.32**
Belgium	39	0.29	0.27	0.08	0.00	-	0.00	0.20
France	191	0.35	0.24	0.19	-	0.53	0.09	0.34
Italy	67	0.28	0.23	0.18	0.00	0.62	0.27	0.11
Netherlands	53	0.35	0.25	0.00	0.00	-	0.14	0.39
Spain	51	0.00	0.21	0.21	0.33	0.00	0.26	0.02
French civil law	**401**	**0.33**	**0.24**	**0.17**	**0.20**	**0.47**	**0.13**	**0.30**
Denmark	37	0.23	0.28	0.32	0.00	-	0.00	0.32
Finland	61	0.20	0.19	0.11	-	0.27	0.31	0.27
Norway	29	0.00	0.26	0.21	-	-	0.00	0.12
Sweden	85	0.21	0.21	0.04	-	0.42	0.00	0.16
Scandinavian law	**212**	**0.21**	**0.23**	**0.16**	**0.00**	**0.30**	**0.10**	**0.22**
Total Sample	**2,956**	**0.16**	**0.18**	**0.18**	**0.25**	**0.41**	**0.08**	**0.21**

The level of unrelated diversification in widely held firms is higher than in firms owned by families, corporations, institutional and private equity investors, but lower than in government and bank owned firms. According to several previous studies (e.g. Amihud and Lev, 1981; Denis et al., 1997) the presence of a large blockholder reduces the number of unrelated acquisitions which suggests that the level of unrelated diversification should be highest in widely held firms where there is no controlling owner that monitors managers. However, the previous studies do not take into account

the identity of the controlling owner. As demonstrated earlier, the prevalence of controlling shareholders might bring forth other agency problems, namely the expropriation of minority shareholders by the controlling shareholder. In the case of certain owner identities the conflict between blockholders and minority shareholders might be more severe than the manager–shareholder conflict. Thus, it might it be that it is rather certain owner identities than the entrenched managers that drive value reducing corporate strategies.

5.2 REGRESSION RESULTS

This section discusses the results obtained from the regression analyses. The first part analyses the relation between owner identity and unrelated corporate diversification. The second part looks into the association between investor protection and unrelated corporate diversification. Finally it is investigated whether the operating environment affects the association between owner identity and unrelated corporate diversification.

5.2.1 Owner identity and unrelated corporate diversification

In this section I analyze the relationship between owner identity and unrelated corporate diversification. I expect certain owner identities to drive unrelated corporate diversification more than others.

I regress the unrelated corporate diversification proxy, $DIVER_{1,}$ against the identity of the largest owner, firm- and country level control variables and industry membership (measured according 2-digit SIC-codes). The ownership threshold used is 10%. If the largest shareholder owns less than 10%, the firm is classified as widely held. The results for the four different weighted ordinary least squares regressions are presented in table 6. Model 1 investigates the association between owner identity and unrelated corporate diversification. In addition to variables used in the first model, model 2 controls for investor protection proxied by anti-self-dealing index (ASD). Model 3 includes dummy variables for the different legal families, common law legal family being the reference group, while model 4 controls for the sample countries.

The signs of the control variables are much as assumed in all of the regressions. Log assets and leverage have expected signs and are statistically significant through all models. Positive sign of log assets supports the assumption that unrelated diversification increases with firm size. On the other hand, negative sign of the leverage coefficient supports the theory on the potential of debt in reducing agency problems. Contrary, the sign of the proxy for capital intensity (Capex) is negative in all regressions against the expectations. Though, the variable is not statistically significant in any

of the regressions. GNP per capita, which measures the development of stock markets, is negative in the first and fourth model but positive in the second and third regression. The volatility through the models suggests that GNP variable might have problems with collinearity with anti-self-dealing index and legal family dummies. The same applies for country-level earnings smoothing variable which suddenly turns positive in model 3 which includes legal family dummies.

Accordingly, owner identity coefficients are for most part in line with the expectations. Further, the behavior of the coefficient remains virtually identical through the models 1 to 4. Thus, the inclusion of investor protection measure, legal family dummies or country dummies does not seem to alter the influence of owner identity on unrelated corporate diversification. As hypothesized private equity owned firms engage less in unrelated corporate diversification than widely held firms. The coefficient is negative and remains statistically highly significant in all models. Of all owner identities private equity ownership is the least associated with unrelated corporate diversification. This supports the argument that private equity firms are vigilant monitors who step in the corporate decision making if they are not satisfied with the management (Andres et al., 2010). As private equity firms seek to increase the value of the companies they own and then sell them with profit, they are probably highly concerned with the shareholder value of the firms they control. Moreover, private equity funds manage investment portfolios which include companies from various sectors, and thus have no need for further diversification.

Similarly, firms owned by institutional investors engage less in unrelated diversification than widely held firms, the coefficient being negative and statistically significant in all four regressions. The results are in line with the findings of Ramaswamy et al. (2002) who report that the proportion of institutional investor ownership is negatively associated with unrelated diversification. As the literature suggests that unrelated diversification reduces firm value the results provide further evidence on the argument that institutional investors' main concern is increasing shareholder value.

The coefficient for corporate ownership is negative as expected but statistically not significant in any of the four regressions. The t-statistics and coefficient of corporate ownership are very close to zero which supports the hypothesis that the effect of corporate ownership on the level of unrelated diversification is indifferent. However, the results are in regard with widely held firms. Compared with family, bank and government ownership, corporate ownership seems to be notably less associated with unrelated diversification. The natural explanation for this might be that the parent company diversifies through the subsidiary it owns, and thus has no need for the subsidiary to be diversified.

Table 6- Weighted Ordinary Least Squares Regression for the Largest Shareholder measured at 10% Ownership Threshold and Unrelated Corporate Diversification

The table presents the results for weighted ordinary least squares (WOLS) regressions for unrelated corporate diversification, $DIVER_1$, identity of the largest shareholder at 10% ownership treshold, firm- and country-level control variables and two-digit SIC code dummies (1). Regression (2) controls also for investor protection measured by anti-self-dealing index (ASD). Regression (3) includes legal family dummies, common law legal family being the reference group. Finally, regression (4) controls for country dummies. Unrelated corporate diversification, $DIVER_1$, measured by the sales-based Entropy index is the dependent variable and calculated as of the end of 2010. Identity of the firm's largest shareholder is the identity of the owner with the highest ownership share exceeding 10%. The ownership categories are family/individual, institutional, corporation, bank, government and private equity. If the largest shareholder holds less than 10% of the share the firm is categorized as widely held. Firm-level control variables are natural logarithm of assets as of year-end 2010, return on assets (ROA), capital expenditures to sales -ratio, and debt-to-equity -ratio, all measured as 3-year (2008-2010) averages. Country level control variables are GNP per capita in $US for 2010 and country median of the firm-level earnings smoothing variable.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$					
Independent variable	Expected sign	(1)	(2)	(3)	(4)
Intercept		-0.2196**	-0.4167***	-0.7982***	-0.4033***
		(-2.07)	(-4.23)	(-6.24)	(-5.02)
Family/Individual	-	0.0040	0.0037	0.0038	0.0038
		(0.24)	(0.22)	(0.23)	(0.23)
Institutional	-	-0.0367**	-0.0362**	-0.0362**	-0.0346**
		(-2.44)	(-2.41)	(-2.41)	(-2.41)
Corporation	+/-	-0.0028	-0.0031	-0.0029	-0.0030
		(-0.11)	(-0.12)	(-0.11)	(-0.11)
Bank	-	0.1170	0.1000	0.1017	0.1074
		(1.22)	(0.99)	(1.01)	(1.07)
Government	-	0.0478	0.0382	0.0398	0.0376
		(0.52)	(0.43)	(0.45)	(0.42)
Private equity	-	-0.0857***	-0.0857***	-0.0855***	-0.0854***
		(-3.03)	(-3.03)	(-3.02)	(-3.01)
Log assets	+	0.0347***	0.0346***	0.0346***	0.0346***
		(9.41)	(9.37)	(9.35)	(9.33)
Leverage	-	-0.0004**	-0.0004**	-0.0004**	-0.0004**
		(-2.42)	(-2.41)	(-2.4)	(-2.4)
Capex	+	-0.0000	-0.0000	-0.0000	-0.0000
		(-0.21)	(-0.21)	(-0.21)	(-0.21)
ROA	-	-0.0015	-0.0010	-0.0013	-0.0013
		(-0.05)	(-0.03)	(-0.05)	(-0.04)
GNP	-	-0.0000	0.0000	0.0000	-0.0000***
		(-1.03)	(1.56)	(1.52)	(-2.71)
Earnings smoothing ($ES_{country}$)	-	-0.2899**	-0.0173	0.1242	
		(-2.33)	(-0.16)	(1.02)	
Anti-selg-dealing index (ASD)	-		-0.4003***		
			(-4.98)		
German civil law dummy	+			0.1858***	
				(5.19)	
French civil law dummy	+			0.1228***	
				(3.22)	
Scandinavian law dummy	+			0.029***	
				(2.81)	
SIC dummies		yes	yes	yes	yes
Country dummies		no	no	no	yes
R-squared		0.165	0.165	0.165	0.166
N		2,956	2,956	2,956	2,956

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

The coefficients of family/individual, bank and government owner identities are positive in all regressions. In line with the hypotheses these owner identities seem to be associated with unrelated corporate diversification more than institutional, private equity and corporate owners. On the other hand, the results imply that family/individual, bank and government owner identities engage in unrelated diversification more than widely held firms which contradicts with previous findings (e.g. Amihud and Lev, 1981; Denis et al., 1997) suggesting that the presence of a controlling shareholder reduces the level of corporate diversification. Nonetheless, the results are not statistically significant for any of the three owner identities. The insignificance of bank and government ownership coefficients might be due to the small number of observations in the sample as only 21 bank and government owned firms were identified. In particular, the coefficients and t-statics of family and government owner identities are close to zero which indicates that their diversification behavior does not technically differ from widely held firms. The coefficients of bank ownership are significantly larger and t-statistics just slightly insignificant. Thus, it seems that the association between unrelated corporate diversification and bank ownership is stronger than the one between family or government ownership and diversification. The results for bank ownership are in line with the findings of Ramaswamy et al. (2002) which demonstrate a positive relationship between bank ownership and the level of unrelated corporate diversification.

Even though all of the owner identity coefficients are not statistically significant, the results provide interesting implications. Previous studies demonstrating a negative relationship between ownership concentration and the level of corporate diversification have presumed homogeneity of the owners. However, this study differentiates between owner identities and demonstrates that owner identity is a significant moderator of the influence of ownership concentration on diversification strategy. The results suggest that different motivations, resources and capabilities associated with various owner identities affect the relationship between ownership concentration and corporate diversification. Private equity and institutional ownership reduce the level of unrelated diversification while in the case of family/individual, bank and government ownership it seems to be the controlling owner instead of the unmonitored managers who drive unrelated diversification. Further, family/individual, bank and government owner identities tend to hold large shares of the companies they own, so that they have the power to pursue their own agendas. Thus, the results indicate that in some cases unrelated corporate diversification is driven more by certain owner identities than entrenched managers.

5.2.2 Investor protection and unrelated corporate diversification

In this part I regress the unrelated diversification proxy, $DIVER_1$, on investor protection measures, firm- and country level control variables, 2-digit SIC industry dummies and legal family dummies (regressions 4-6). I assume the level of unrelated corporate diversification to be negatively associated with the level of investor protection. The investor protection measures used are anti-self-dealing index (ASD) and anti-director-rights index (ADR). The results for the regression are presented in Table 7. Model 1 regresses $DIVER_1$ against both investor protection measures (ADR and ASD) and firm- and country level control variables. Model 2 includes only ASD while model 3 contains just ADR. Regressions 4 to 6 are similar to models 1 to 3 except for the inclusion of legal family dummies.

As in the first part, the coefficient of log assets is positive and statistically highly significant in all of the regressions. Accordingly, leverage is statistically significant at 5% level through the four models. The proxy for capital intensity, Capex, has expected sign in all of the regressions but is not statistically significant in any of them. Surprisingly, return on assets (ROA) is consistently positive, yet statistically insignificant, in all of the regressions.

Country-level earnings smoothing variable is negative, as expected, in the first three regressions. The coefficient is also significant at 1% level in the second model that does not include anti-self-dealing index. However, in the regressions that include legal family dummies the coefficient turns positive and statistically insignificant. The results might indicate collinearity between the earnings smoothing variable and both the ASD and the legal family dummies. On the other hand, GNP per capita is positive against expectations and statistically significant in all regressions except for the third regression where the coefficient is negative but statistically insignificant. As with the earnings smoothing variable, the variation of GNP per capita might indicate collinearity problems with other explanatory variables.

Anti-self-dealing index (ASD) that measures a country's stance towards expropriation of outside investors by the corporate insiders (managers and large shareholders) is negative and statistically significant at 1% level in models 1 and 3. Model 1 regresses unrelated diversification against both investor protection measures and control variables while model 3 includes only ASD. The results imply that in countries where the level of protection of outside investors against the self-dealing of corporate insiders is higher firms engage less in unrelated diversification. Efficient control over expropriation of outside investors makes it harder for both entrenched managers and large

shareholders to derive private benefits from diversification. This in turn might reduce the willingness of corporate insiders to engage in unrelated diversification.

Table 7 - Weighted Ordinary Least Squares Regression for Investor Protection and the Level of Unrelated Corporate Diversification

This table documents the weighted ordinary least squares (WOLS) regression results for unrelated corporate diversification proxy, $DIVER_1$, investor protection measures, firm- and country level control variables, 2-digit SIC industry dummies and legal family dummies (regressions 4-6). $DIVER_1$ is the sales-based Entropy index measured at the end of year 2010. Anti director-rights index (ADR) and anti-self-dealing index (ASD) are measures of investor protection. Log assets proxies for firm size and is the nathural logarithm of assets in 2010. Leverage demonstrates capital structure and is a 3-year (2008-2010) average of debt to equity -ratio. Capex proxies for capital intensity and is a 3-year (2008-2010) average of capital expenditures to sales -ratio. ROA demonstrates prior performance and is a 3-year (2008-2010) average of return on assets. $ES_{country}$ is the country median of the earnings smoothing variable calculated as the ratio of firm-level standard deviation of operating income and operating cash-flow, both scaled by assets. Higher $ES_{country}$ indicates less earnings smoothing in the country. GNP is the cross national product per capita in 2010 in $US and demonstrates the level of stock market development in the country. German civil, French civil and Scandinavian law are dummy variables for the legal origin of the country, Common law being the ommited reference category.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$							
Independent variable	Expected sign	(1)	(2)	(3)	(4)	(5)	(6)
Intercept		-0.3036***	-0.706	-0.3867***	-1.1315**	-0.7970***	-1.1181***
		(-3.09)	(-0.63)	(-4.34)	(-2.52)	(-6.05)	(-2.84)
Anti director rights index (ADR)	-	-0.0314*	-0.0411**		0.0023	-0.0027	
		(-1.78)	(-2.24)		(0.11)	(-0.15)	
Anti self-dealing index (ASD)	-	-0.4167***		-0.4265***	0.3143		0.3058
		(-5.31)		(-5.34)	(0.83)		(0.88)
Log assets	+	0.0340***	0.0341***	0.0339***	0.0339***	0.0034***	0.0339***
		(9.9)	(9.94)	(9.9)	(9.88)	(9.88)	(9.88)
Leverage	-	-0.0004**	-0.0004**	-0.0004**	-0.0004**	-0.0004**	-0.0004**
		(-2.53)	(-2.54)	(-2.53)	(-2.52)	(-2.52)	(-2.52)
Capex	+	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
ROA	-	0.0035	0.0031	0.0039	0.0036	0.0036	0.0036
		(0.12)	(0.11)	(0.14)	(0.13)	(0.13)	(0.13)
Earnings smoothing ($ES_{country}$)	-	-0.0941	-0.3909***	-0.0586	0.2358	0.1001	0.2310
		(-0.87)	(-3.09)	(-0.55)	(1.05)	(0.82)	(1.11)
GNP	-	0.0000**	-0.0000	0.0000*	0.0000*	0.0000*	0.0000*
		(2.07)	(-0.13)	(1.8)	(1.68)	(1.78)	(1.78)
German civil law dummy	+				0.3378**	0.1981***	0.3336**
					(1.95)	(5.5)	(0.035)
French civil law dummy	+				0.2483*	0.1365***	0.2461*
					(1.7)	(3.65)	(1.77)
Scandinavian law dummy	+				0.1794*	0.0891***	0.1786
					(1.6)	(2.92)	(1.63)
SIC dummies		yes	yes	yes	yes	yes	yes
R^2		0.160	0.159	0.160	0.160	0.161	0.161
N		2,956	2,956	2,956	2,956	2,956	2,956
Number of countries		14	14	14	14	14	14

*Significant at 10 percent level

**Significant at 5 percent level

***Significant at 1 percent level

Accordingly, anti-director rights index (ADR) that measures minority shareholders' rights in a country, is negative and statistically significant at 10% and 5% in models 1 and 2. Model 1 includes both investor protection measures while model 2 contains just ADR. The results suggest that also better protection of general shareholder rights reduces the level of unrelated corporate diversification. However, the coefficient of ADR is smaller and statistically less significant than the coefficient of ASD. Further, the predictive power of ADR reduces significantly when ASD is included into the model. This implies that ASD is superior over ADR in explaining unrelated corporate diversification. This in turn supports the argument that private benefits of diversification are one of the main drivers of corporate diversification (see e.g. Aggarwal and Samwick, 2003) as ASD focuses on the self-dealing by managers and large shareholders on the cost of outside investors. In self-dealing the unmonitored manager or controlling owner takes advantage of his position and acts for his own interest rather than for the interest of all shareholders.

However, both ADR and ASD lose their predictive power when legal family dummies are included in the regression models. Further, ASD turns positive both in models 4 and 6 while ADR turns positive only in model 4 that includes also ASD. There are two probable reasons for the puzzling behavior of the investor protection variables. First, also La Porta et al. (1998) find the predicting power of ADR to be significantly smaller in a model that includes legal family dummies. They suggest that investor protection indices are of second-order importance relative to legal family dummies as country's legal origin accounts for the differences in legal rules and regulations to a significant extent. Further, La Porta et al. (1998) suggest that in addition to legal rules there is something more in legal families that affects corporate decision making. The fact that legal family dummies are statistically significant and have notably higher coefficients than investor protection measures through models 4 to 6 supports these arguments. On the other hand, there might be collinearity between investor protection measures and the legal family dummies which could cause the inconsistent behavior of the investor protection measures. Further, it seems that collinearity between ASD and legal family dummies is more severe as the legal family coefficients are statistically most significant in the regression that includes only ADR.

Based on the results, it can be concluded that the level of investor protection is associated with the level of unrelated corporate diversification. The higher ASD and ADR scores a country has the lower the level of unrelated corporate diversification on average is. However, it seems that the investor protection indices do not have predictive power over the legal origin of the country in explaining the diversification behavior. As La Porta et al. (1998) suggest it seems that there is

something else besides the legal rules and regulation to legal families that affect the diversification behavior in a country.

5.2.3 Owner identity, investor protection and unrelated corporate diversification

As demonstrated earlier the level of investor protection varies across countries and legal families. La Porta et al. (1998) and Djankov et al. (2008) discover that measured by ASD and ADR the level of investor protection is highest in Common law and lowest in French and German civil law countries. Further, it has been shown that the effect of owner identity and ownership structure on firm value depends on the level of investor protection in a country (see e.g. Ruis Mallorqui et al., 2011; Thomsen and Pedersen, 2003). It can be thus assumed that owner identities behave differently depending on the institutional background. To test this, I perform the owner identity regressions for Common law legal family and continental European sub-sample, which includes German and French civil law countries, separately.

As in the previous part a 10% control threshold for ownership is used. For comparison I run also a regression with no control threshold for ownership. The results for Common law environment are presented in table 8. The regression results for Common law context are very similar to the results for the whole sample. The control variables behave mostly as expected. In line with the main regressions log assets and leverage are the only statistically significant control variables. Measured at 10% ownership threshold the coefficients of private equity and institutional investors are negative and significant at the 5% level. Family and corporate ownership variables are positive, but statistically not significant. If examined without ownership threshold and using institutional investors as a reference group family ownership is positive and significant at 10% level. Private equity ownership remains negative and statistically significant while corporate ownership is positive, but statistically insignificant. Thus, family firms seem to engage significantly more in unrelated diversification while private equity firms notably less than institutionally owned firms in Common law environment.

The results for continental European sample are presented in table 9. Of the control variables leverage and log assets behave as expected and are statistically significant at 1% level. Interestingly, the coefficient of leverage is slightly bigger and statistically clearly more significant than in the regressions conducted in Common law environment. This might indicate that in continental Europe leverage is a more powerful tool in mitigating agency problems than in Common law countries. On the other hand, diversified continental European companies might not be able to fully exploit the capacity of diversified firms to bear on more debt. Also capital expenditures to sales ratio (Capex)

Table 8 - Ordinary Least Squares Regression for the Owner Identity and Unrelated Corporate Diversification in Common Law Environment

The table presents the results for ordinary least squares (OLS) regression for unrelated corporate diversification, $DIVER_{1,}$ identity of the largest shareholder, firm-level control variables and two-digit SIC code dummies in Common law context. Unrelated corporate diversification, $DIVER_1$, measured by the sales-based Entropy index is the dependent variable and calculated as end of 2010. In regression 1 a 10% ownership threshold is used. The ownership categories are institutional, family/individual, corporation, bank, government and private equity. If the largest shareholder holds less than 10% of the shares the firm is categorized as widely held. In regression 2 companies are categorized solely according to the largest owner and institutional investor is used as the reference category. Firm-level control variables are natural logarithm of assets as of year-end 2010, return on assets (ROA), capital expenditures to sales -ratio, and debt-to-equity -ratio are all measured as 3-year (2008-2010) averages.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$			
Independent variable	**Expected sign**	**10% threshold**	**No threshold**
Intercept		-0.5472***	-0.6022***
		(-8.64)	(-9.41)
Family/Individual	-	0.0032	0.0301*
		(0.18)	(1.92)
Institutional	-	-0.0376**	0
		(-2.51)	
Corporation	-/+	0.0020	0.0131
		(0.07)	(0.5)
Bank	-	-	-
Government	-	-	-
Private equity	-	-0.0846**	-0.0725**
		(-2.15)	(-2.04)
Log assets	+	0.0346***	0.0366***
		(10.11)	(10.63)
Leverage	-	-0.0004*	-0.0005*
		(-1.87)	(-1.91)
Capex	+	-0.0000	-0.0000
		(-0.03)	(-0.06)
ROA	-	-0.0002	-0.0077
		(-0.05)	(-0.21)
SIC dummies		yes	yes
R-squared		0.165	0.164
N		1,934	1,934

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

is statistically significant at 5% level in the continental European context. However, the negative sign of the coefficient is somewhat surprising as the theory suggests that firms with higher capital expenditures to sales ratios would be more willing to pursue diversification.

The owner identities behave quite differently in the continental European environment than in the Common law context. Surprisingly, institutional investors seem to be most associated with unrelated corporate diversification when measured at the 10% ownership threshold. The coefficients of all owner identities except for institutional ownership are negative. However, the coefficient of institutional investor ownership is not statistically significant. The radical change in the behavior of institutional ownership might be explained by the differences within institutional investor ownership group. In the United Stated most of the institutional investors are large asset management firms that invest the funds of retail investors. Contrary, in continental European countries large insurance and pension companies are more prevalent. The investment strategies of insurance and pension companies are often regulated which might make them more risk averse than independent asset management companies. On the other hand, similar to banks, insurance and pension companies are often involved in business relationship with the companies they invest in. The fear of losing an important customer might make them reluctant to actively control and monitor the management. In line with this, Ramaswamy et al. (2002) find evidence that insurance company ownership is positively related with the level of unrelated diversification in India.

Similar to Common law context private equity coefficient is negative and statistically significant at 1% level. Contrary, corporate ownership is negative and for the first time statistically significant at 10% level. This indicates that corporate ownership is less associated with unrelated diversification in continental European countries than in Common law countries. The coefficients of family/individual, government and bank ownership are negative, but none of them are statistically significant.

In the second regression companies are categorized solely according to the largest owner and institutional ownership is used as a reference category. All owner identity coefficients are negative which supports the assumption that in continental European context institutional investors engage most in unrelated diversification. Family, corporate and private equity ownerships are statistically significant at 10%, 5% and 1% level, respectively. The coefficients of the owner identity variables are slightly higher in the regression with no ownership threshold which suggests that owner identity might have more influence in corporate decision making than ownership share in continental European context.

Overall, the coefficients and t-statistics of owner identities are somewhat higher in continental European context than in Common law environment. This supports the assumption that ownership

Table 9 - Weighted Ordinary Least Squares Regression for the Owner Identity and Unrelated Corporate Diversification in Continental European Environment

The table presents the results for weighted ordinary least squares (WOLS) regression for unrelated corporate diversification, $DIVER_1$, identity of the largest shareholder, firm- level control variables and two-digit SIC code dummies in continental European context. Unrelated corporate diversification, $DIVER_1$, measured by the sales-based Entropy index is the dependent variable and calculated as end of 2010. In regression 1 a 10% ownership treshold is used. The ownership categories are institutional, family/individual, corporation, bank, government and private equity. If the largest shareholder holds less than 10% of the shares the firm is categorized as widely held. In regression 2 companies are categorized solely according to the largest owner and institutional ownership is used as the reference category. Firm-level control variables are natural logarithm of assets as of year-end 2010, return on assets (ROA), capital expenditures to sales -ratio, and debt-to-equity -ratio areall measured as 3-year (2008-2010) averages.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$			
Independent variable	**Expected sign**	**10% threshold**	**No threshold**
Intercept		-0.5312***	-0.5003***
		(-3.31)	(-3.11)
Family/Individual	-	-0.0439	-0.0635*
		(-1.17)	(-1.76)
Institutional	-	0.0190	0
		(0.31)	
Corporation	-/+	-0.0704*	-0.0859**
		(-1.72)	(-2.15)
Bank	-	-0.0273	-0.0605
		(-0.45)	(-0.76)
Government	-	-0.1079	-0.0433
		(-0.22)	(-0.34)
Private equity	-	-0.1913***	-0.1980***
		(-3.5)	(-3.83)
Log assets	+	0.0366***	0.0361***
		(4.88)	(4.74)
Leverage	-	-0.0045***	-0.0042**
		(-2.61)	(-2.43)
Capex	+	-0.0249**	-0.0259**
		(-2.16)	(-2.12)
ROA	-	0.0592	0.0583
		(0.49)	(0.48)
SIC dummies		yes	yes
R^2		0.201	0.202
N		810	810

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

structure plays more important role in countries characterized by weak investor protection (e.g. Thomsen and Pedersen, 2003; Blomqvist, 2008). It is worthwhile to notice that it is not only the magnitude but also the direction of the effect of owner identity on corporate diversification that differs between Common law and continental European environment. In Common law context only private equity and institutional investor ownership are less associated with unrelated corporate

diversification than widely held firms. Contrary, in continental Europe institutional investor is the only owner identity that seems to engage more in unrelated diversification than widely held firms. The results indicate that the agency problems between unmonitored managers and outside shareholders are more severe in continental European environment. It might be that weaker investor protection increases the availability of private benefits and in the absence of controlling shareholders managers extract these benefits. Overall, it seems that institutional background significantly affects the influence that owner identity has on corporate decision making.

6 ROBUSTNESS TESTS

In this section I run additional regressions to test the robustness of the results obtained in the main analysis. First, I run the owner identity regression in ordinary least squares (OLS) framework. Second, I conduct owner identity regression using different control thresholds for ownership.

6.1 OWNER IDENTITY AND UNRELATED DIVERSFICATION IN ORDINARY LEAST SQUARES FRAMEWORK

As a first robustness test I run the owner identity models in the ordinary least squares (OLS) framework. In the main analysis I use the weighted ordinary least squares method where each observation is weighted by the inverse of the number of companies from that country. The advantage of OLS relative to WOLS is that it reduces the bias related to countries with only few observations where individual companies might have too great influence on the results. On the other hand OLS overemphasizes large countries that are highly represented in the sample. In this case, the results might reflect the situation in United States rather than describing the worldwide situation. The results for the OLS regressions are presented in table 10.

For the most part the results are similar to the results obtained in the WOLS regressions. The behavior of the control variables follows the same pattern as in the main regressions expect that leverage is not statistically significant anymore. As the predictive power of leverage is somewhat weaker in the United States and OLS overemphasizes the observations from United States the effect of leverage deteriorates. Contrary, the coefficient and t-statistics of log assets are higher in OLS regressions. This result is also likely driven by United States where the association between firm size and the level of unrelated diversification is high.

Table 10 - Ordinary Least Squares Regression for the Identity of the Largest Owner at 10% threshold and Unrelated Corporate Diversification

The table presents the results for ordinary least squares (OLS) regressions for unrelated corporate diversification, $DIVER_1$, identity of the largest shareholder at 10% ownership treshold, firm- and country-level control variables and two-digit SIC code dummies (1). Regression (2) controls also for investor protection measured by anti-self-dealing index (ASD). Regression (3) includes legal family dummies, common law legal family being the reference group. Finally, regression (4) controls for country dummies. Unrelated corporate diversification, $DIVER_1$, measured by the sales-based Entropy index is the dependent variable and calculated as of the end of 2010. Identity of the firm's largest shareholder at 10% ownership threshold is the identity of the owner with the highest ownership share exceeding 10%. The ownership categories are institutional, family/individual, corporation, bank, government and private equity. If the largest shareholder holds less than 10% of the share the firm is categorized as widely held. Firm-level control variables are natural logarithm of assets as of year-end 2010, return on assets (ROA), capital expenditures to sales -ratio, and debt-to-equity -ratio, all measured as 3-year (2008-2010) averages. Country level control variables are GNP per capita for 2010 and country median of the firm-level earnings smoothing variable.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$					
Independent variable	Expected sign	(1)	(2)	(3)	(4)
Intercept		-0.3426***	-0.3701***	-0.7333***	-0.3873***
		(-4.42)	(-4.81)	(-7.06)	(-5.36)
Family/Individual	-	0.0058	-0.0016	-0.0017	-0.0012
		(0.38)	(-0.11)	(-0.11)	(-0.07)
Institutional	-	-0.0333**	-0.0271*	-0.0264*	-0.0268*
		(-2.29)	(-1.87)	(-1.83)	(-1.85)
Corporation	+/-	-0.0271	-0.0359*	-0.0362*	-0.0342*
		(-1.35)	(-1.8)	(-1.81)	(-1.7)
Bank	-	-0.0181	-0.0558	-0.0487	-0.0358
		(-0.27)	(-0.85)	(-0.74)	(-0.53)
Government	-	0.0297	0.0150	0.0133	0.0154
		(0.44)	(0.23)	(0.2)	(0.23)
Private Equity	-	-0.0951***	-0.0981***	-0.0966***	-0.0950***
		(-2.73)	(-2.83)	(-2.79)	(-2.74)
Log assets	+	0.0372***	0.0348***	0.0351***	0.0352***
		(12.7)	(11.91)	(11.87)	(11.82)
Leverage	-	-0.0003	-0.0003	-0.0003	-0.0003
		(-1.15)	(-1.12)	(-1.12)	(-1.13)
Capex	+	-0.0000	-0.0000	-0.0000	-0.0000
		(-0.06)	(-0.05)	(-0.05)	(-0.06)
ROA	-	-0.0108	0.0022	-0.003	-0.0018
		(-0.3)	(0.06)	(-0.09)	(-0.05)
GNP	-	-0.0000***	0.0000*	0.0000**	-0.0000***
		(-2.65)	(1.82)	(2.08)	(-3.52)
Earnings smoothing ($ES_{country}$)	-	-0.0991	-0.0703	0.0261	
		(-1.16)	(-0.83)	(0.27)	
Anti-selg-dealing index (ASD)	-		-0.3967***		
			(-6.69)		
German civil law dummy	+			0.1915***	
				(7.17)	
French civil law dummy	+			0.1181***	
				(3.99)	
Scandinavian law dummy	+			0.0894***	
				(3.47)	
SIC dummies		yes	yes	yes	yes
Country dummies		no	no	no	yes
R-squared		0.157	0.17	0.173	0.18
N		2,956	2,956	2,956	2,956

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

The behavior of owner identities is quite similar than in the WOLS regressions. Private equity and institutional ownership coefficients are again negative and statistically significant throughout the models. In line with the main analysis, family/individual and government ownership coefficients are positive, yet statistically insignificant. However, the coefficient and t-statistics of corporate ownership are higher in OLS framework than in WOLS regressions. The coefficient of corporate ownership even becomes statistically significant in models 1-3 in OLS framework. This might reflect the less emphasis put on small outlier countries in OLS framework; unrelated diversification is very high in corporate owned firms in Denmark and Switzerland that have very few observations. In addition, the coefficient of bank ownership receives a negative sign contrary to the positive sign in WOLS regressions. However, the results for bank ownership are not statistically significant.

Overall, it seems that the results are congruent with the main analysis. Only the behavior of corporate ownership seems to be significantly different in OLS framework.

6.2 OWNER IDENTITY AT DIFFERENT CONTROL THRESHOLDS

In the main analysis I use a 10% control threshold for ownership. As a robustness check I will perform the same regressions using a 20% ownership threshold and no ownership threshold at all. Besides the 10% ownership threshold the 20% ownership threshold has been widely used in ownership studies. Therefore, it is interesting to see whether there is a great difference between the results obtained by using 10% and 20% ownership threshold. The reason for classifying the firms only according to their largest owner is to investigate if owner identity has more predictive power over ownership share in corporate decision making.

The results of the two regressions are documented in table 11. As the behavior of the variables is basically identical through models 1 to 4, I present only the results for the model 1 which does not include ASD, legal family dummies or country dummies. Surprisingly, the results for the 20% ownership threshold differ quite a lot from the results for 10% threshold in regard with owner identities. When measured at the 20% ownership threshold institutional investor coefficient is positive, which indicates that institutionally owned firms engage more in unrelated diversification than widely held firms. The results might reflect the small number of observations from Common law environment as very few institutional owners in the United States control over 20% share of the companies they invest in. The number of institutional investors seven-folds in Common law legal family while the number only two- or three-folds in other legal families when the threshold is lowered to 10%. On the other hand asset management firms, which in particular have been shown to be associated with low levels of unrelated diversification, rarely own over 20% share of the firms

Table 11 - Weighted Ordinary Least Squares Regression for the Identity of the Largest Owner and Unrelated Corporate Diversification

The table presents the results for weighted ordinary least squares (WOLS) regressions for unrelated corporate diversification, $DIVER_1$, identity of the largest shareholder, firm- and country-level control variables and two-digit SIC code dummies. Unrelated corporate diversification, $DIVER_1$, measured by the sales-based Entropy index is the dependent variable and calculated as of the end of 2010. In the first regression the identity of the firm's largest shareholder is the identity of the owner with the highest ownership share exceeding 20%. The ownership categories are institutional, family/individual, corporation, bank, government and private equity. If the largest shareholder holds less than 20% of the share the firm is categorized as widely held. In the second regression the firms are classified according to the largest owner without giving any thought to the ownership share and insitutional investors is the ommited ownership cateogry. Firm-level control variables are natural logarithm of assets as of year-end 2010, return on assets (ROA), capital expenditures to sales -ratio, and debt-to-equity -ratio are all measured as 3-year (2008-2010) averages. Country level control variables are GNP per capita for 2010 and country median of the firm-level earnings smoothing variable.

Dependent variable: Unrelated corporate diversification proxy $DIVER_1$			
Independent variable	Expected sign	20% threshold	No threshold
Intercept		-0.1786*	-0.2037*
		(-1.72)	(-1.91)
Family/Individual	-	0.0302*	0.0281**
		(1.85)	(2.04)
Institutional	-	0.0088	0
		(0.35)	
Corporation	+/-	0.0136	0.0095
		(0.48)	(0.41)
Bank	-	0.1257	0.1273
		(0.59)	(1.15)
Government	-	0.0572	0.0482
		(0.59)	(0.57)
Private Equity	-	-0.0788**	-0.0780***
		(-2.08)	(-3.17)
Log assets	+	0.0369***	0.0378***
		(10.98)	(10.87)
Financial leverage	-	-0.0002**	-0.0002**
		(-2.54)	(-2.52)
Capex	+	0.0000	0.0000
		(0.31)	(0.32)
ROA	-	-0.0136	-0.0155
		(-0.52)	(-0.59)
GNP	-	-0.000	-0.000
		(-0.33)	(-0.55)
Earnings smoothing ($ES_{country}$)	-	-0.4301***	-0.4061***
		(-3.42)	(-3.17)
SIC dummies		yes	yes
R-squared		0.142	0.144
N		2,956	2,956

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

they invest in. It might be that institutional investors who own over 20% of the shares are mostly either hedge funds or insurance/pension companies. Accordingly, Ramaswamy et al. (2002)

demonstrate that insurance company ownership is positively related with the level of unrelated diversification in India. Hedge funds, on the other hand, might seek to own diversified companies that they plan to break down into pieces and divest later on.

The positive association between family ownership and unrelated corporate diversification seems to be robust across different ownership thresholds. However, the relation is strongest and statistically most significant at the 20% ownership threshold. This indicates that higher ownership share enables families to better influence corporate decision making and push through their own agendas. On the other hand, the coefficient of private equity ownership is again negative and statistically significant at the 5% level. The smaller coefficient and weaker statistical significance are probably due to the reduced number of observations relative to the case with 10% ownership threshold. Corporate, government and bank ownership yield again statistically insignificant results even though the signs are similar to the results obtained with 10% control threshold.

The results for the regressions where no ownership threshold is used are similar to the main model. As expected, family ownership is more associated with unrelated corporate diversification than institutional investors and the coefficient is statistically significant at 5% level. Also bank, government and corporate ownership indicate higher level of unrelated corporate diversification even though the results are not statistically significant. Private equity ownership suggests again lower level of unrelated diversification and is statistically significant at 1% level. Overall, the results seem to be equally robust with the regressions where ownership threshold is used. This supports the assumption that there are differences between owner identities and owner identity clearly affects the level of unrelated diversification. It might be even that in some cases owner identity plays a bigger role in the corporate decision making than the ownership share.

7 CONCLUSIONS

Most of the previous papers investigating the relationship between ownership structure and corporate diversification neglect the importance of owner identities and treat owners as a homogenous group. Thus, the objective of this paper was to demonstrate how the differences in the motivations, monitoring capabilities and control structures of different owner identities affect the corporate diversification decision. In addition, the aim was to provide further evidence on the association between unrelated corporate diversification and investor protection and demonstrate that the effect of owner identity on corporate decision making is dependent on the institutional environment where the company operates.

The research was based on analyzing a sample consisting of 2,956 firms from 14 countries and four different institutional environments - Common law, German civil law, French civil law and Scandinavian law. In the regression analysis unrelated corporate diversification, calculated using the sales-based Entropy index, was used as dependent variable. Investor protection was measured by the legal origin of the country and two investor protection indices: anti-self-dealing index (ASD) and anti-director rights index (ADR). To capture the effect of different owner identities, companies were categorized into family/individually, institutionally, corporate, bank, government and private equity owned companies. All companies where the largest shareholder holds less than 10% of the shares were classified as widely held.

7.1 SUMMARY OF THE RESULTS

The results show that the owner identity is an important factor in corporate decision making (see summary of the results in table 12). In line with hypothesis, I find significant differences in how owner identities behave in respect to corporate diversification decisions. Of all owner identities, unrelated corporate diversification is least common among private equity owners. Furthermore, the coefficient for private equity is statistically highly significant and robust through different models and ownership thresholds. I also observe a negative relationship between institutionally owned firms and unrelated corporate diversification, especially in Common law environment which further supports previous findings of for example (Ramaswamy et al., 2002; Hautz et al. 2011).

The results for other owner identities - family/individual, bank and government- are not statistically significant, but offer interesting implications. In line with hypothesis these owner identities seem to be associated with unrelated corporate diversification more than institutional, private equity and corporate owners. However, contradicting the previous findings (e.g. Amihud and Lev, 1981; Denis et al., 1997) - which argue that the presence of controlling shareholder reduces the level of corporate diversification – I find that family/individual, bank and government owned firms appear to engage in unrelated diversification more than widely held firms. The positive signs of family, bank and government ownership coefficients imply that the presence of a controlling shareholder reduces the level of unrelated diversification only in the case of certain owner identities whereas some owner identities seem to drive unrelated diversification more than unmonitored managers.

With regards to the impact of investor protection on the prevalence of unrelated corporate diversification, my results are in line with previous findings (see e.g. Fauver et al., 2003; Del Brio et al, 2011). I find that unrelated corporate diversification is most common in German and French civil law countries, which are characterized by weak shareholder protection, and least prevalent in

Common law environment known for high level of investor protection. In line with this, investor protection measures ASD and ADR are negatively associated with the level of unrelated corporate diversification. Of the two measures ASD seems to better explain unrelated corporate diversification. This supports the agency cost explanation that corporate diversification is mainly driven by private benefits of diversification (Aggarwal and Samwick, 2003) as ASD focuses on the self-dealing by corporate insiders. However, it seems that neither ASD nor ADR has predictive power over the legal origin of a country as they turn statistically insignificant in regressions that include legal family dummies. This supports the argument made by La Porta et al. (1998) that there is something more to legal families, other than the legal rules and regulations that affects corporate decision making.

Finally, I tested the hypothesis concerning the role of institutional background in determining the effect of owner identity on corporate diversification decision by running the owner identity regressions in Common law and continental European environment (French and German civil law countries). As expected, the results indicate significant differences in the behavior of owner identities between the two sub-samples. Overall, the coefficients and t-statistics of owner identity variables are somewhat larger in the continental European sub-sample than in the Common law regressions. This is line with previous studies (e.g. Thomsen and Pedersen, 2003; Blomqvist, 2008) suggesting that owner identity plays a bigger role in countries characterized with weak shareholder protection.

However, not only the magnitude of the effect but also the direction of the effect differs between Common law and continental European samples. In Common law environment institutional investors engage significantly less in corporate diversification than widely held firms while in continental Europe, institutional investors is the only ownership category that is associated with unrelated diversification more than widely held firms. One possible explanation for the surprising discovery is the differences within the institutional owner identity category between the sub-samples. In the United States majority of the institutional investors are large asset management firms while in continental Europe insurance and pension companies are more prevalent. In their study Ramaswamy et al. (2002) demonstrate a negative association between unrelated diversification and mutual fund/asset management firm ownership whereas their results indicate a positive relationship between insurance company ownership and unrelated diversification. In addition, the results suggest that agency problems between managers and outside shareholders are more severe in continental European environment. Contrary to Common law context, all owner identities except for institutional investors are associated less with unrelated diversification than

widely held firms in continental European countries. This provides further support on the theory that ownership concentration acts as a substitute for legal investor protection in countries characterized by weak shareholder protection.

Table 12 - Summary of Key Findings

		Key findings	
Hypothesis	**Description of the hypothesis**	Whole sample	Different institutional environments
H1	Family ownership is associated with higher level of unrelated corporate diversification	**Moderate support**. Positive and significant relationship when compared to institutional investors. Significant positive association at the 10% treshold, but insignificant at the 20% threshold when compared to widely held firms.	**Mixed support.** Positive and statistically significant association in Common law environment. Contrary, negative and statistically significant relationship in German and French civil law countries.
H2	Institutional ownership is associated with lower level of unrelated corporate diversification	**Strong support.** Negative and statistically significant effect on unrelated diversfication, even after controlling for investor protection, legal families and countries.	**Mixed Support**. Negative and statistically significant association in Common law environment. Positive, yet statistically insignificant relationship in continental European countries.
H3	Bank ownership is associated with higher level of unrelated corporate diversification	**Weak support.** Consistently positive, but insiginificant throughout models and different ownerhip tresholds. The low statistical significance might be a result of a small sample size.	**Mixed support.** A negative, but statistically insignifacant relationship in continental European countries contrary to the results for whole sample.
H4	Corporate ownership is not related with the level of unrelated diversification	**Strong support.** Negative and statistically insginificant association at 20% while positive association at 10% threshold compared to widely held firms. Negative and insignificant association compared to institutional investors.	**Mixed support.** Negative and statistically significant effect on unrelated corporate diversfication in French and German civil law countries. Contrary, positive but insignificant effect in Common law environment.
H5	Government ownership is associated with higher level of unrelated corporate diversification	**Weak support**. Consistently positive, but insiginificant throughout models and different ownerhip tresholds. As with bank ownership, low statistical significance might be a result of a small sample size.	**Mixed support.** Contrary to the results for whole sample, negative yet insignificant association with unrelated diversifcation in continental European countries.
H6	Private equity ownership is associated with significantly lower level of unrelated corporate diversification	**Strong support**. Highly statistically significant negative association with unrelated diversfication through different models and ownerhip thresholds.	**Strong support.** Negative and highly significant effect on unrelated diversfication both in Common law and continental European countries.
H7	Higher level of investor protection is associated with lower level of unrelated corporate diversification	**Strong/Moderate support.** Both investor protection measures, anti-self-dealing index (ASD) and anti-director rights index (ADR), has negative and significant effect on the level of unrelated diversfication when model does not include legal family dummies. However, both measures loose their prediction power when legal family dummies are included.	
H8	The impact of owner identity on the level of unrelated corporate diversification is higher in countries where investor protection is weak	**Moderate suppport.** Measured at the 10% threshold corporate ownership has significant and private equity ownership highly significant effect on unrelated diversfication in continental Europe. Using no threshold at all family, corporate and private equity ownership have significant influence on unrelated corporate diversfication. Further, owner identity coefficients are larger than in the regressions conducted in Common law environment.	
H9	The impact of owner identity on the level of unrelated corporate diversification is weaker in countries where investor protection is good	**Moderate support.** At the 10% threshold both institutional and private equity ownership have significant effect on diverwsfication decisions. If no threshold is used, family/individual coefficient is barely significant and private equity coefficient significant. Thus, owner identity seems to matter also in Common law envrionmnet. However, the effect is notably weaker.	

7.2 SUGGESTIONS FOR FUTURE RESEARCH

Even though the study reveals intriguing and novel findings on the link between owner identity and corporate decision making, it brings up several pitfalls that should be reconsidered in the future

research. As mentioned in the section 1.3. the main limitations of the study relates to the definition of ownership structure and unrelated corporate diversification. Therefore, the main focus in the future research should be in identifying more effective measures of ownership structure and corporate diversification.

First, alternative methods for approximating the ownership structure should be considered. The identity of the largest owner is a widely used proxy in the literature even though it is a quite rough estimator of the ownership structure. First, it disregards possible additional ownership of the largest owner through other mediums. Second, it does not account for the power of largest owner relative to the next largest owners. It would be worthwhile to examine the five or ten largest owners of the company and construct a framework that would better capture different dimensions of the ownership structure. Further, using the control rights instead of the cash-flow rights of the owners might generate more reliable results as applying the shareholding of the largest owner might not in some cases capture the true influence that the owner has on corporate decision making.

Second, it would be worthwhile to use even more fine grained division of the owner identities as there seems to be differences in the objectives and monitoring capabilities within the defined owner categories. Especially institutional ownership includes very heterogeneous owner identities. Therefore, institutional investor category could be further divided into asset management firms/mutual funds, insurance/pension companies and hedge funds. Accordingly, private equity investors could be divided into venture capitalists, private equity funds and business angels as Bruton et al. (2010) demonstrate significant differences in the objectives and behavior of the different private equity investors. Overall, a more fine grained division of owner identities would help to better identify the specific characteristics that drive unrelated corporate diversification.

Third, there has been a lot of criticism towards SIC-codes that are used to calculate unrelated diversification indices. As the specificity of SIC-codes in dividing business segments into unrelated and related has been questioned another method to perform the industry classification should be considered. One possible option could be using the Fama-French industry classification where the business segments classified according to SIC-codes are grouped under redefined industry portfolios. Using the redefined industry portfolio classification might enable more accurate division of operations into related and unrelated business segments.

Fourth, this study is effectively a cross-section of the fiscal year end in 2010. It would fruitful to examine the effect of different owner identities on unrelated corporate diversification over time. Certain owner identities seek to actively affect corporate decision making and develop the company

into a desired direction. Thus, it would be interesting to follow how the effect evolves over time and how possible changes in ownership share or owner identity affect corporate decision making.

Finally, the study demonstrates that there are significant differences in the effect of owner identity on unrelated corporate diversification between Common law and continental European countries. It would be interesting to further investigate which factors cause the differences in the influence of owner identity on corporate diversification between different institutional environments. It should be examined whether it is the owner identity groups that differ across countries or if there is something more to legal families besides the laws and regulations, as La Porta et al. (1998) suggest, that affects the diversification behavior. In addition, it would be intriguing to expand the sample to include countries from Asia, Africa and Southern America. Currently, the study covers only developed countries located either in Europe or United States. Including developing economies would bring more depth into the analysis of the role of legal families in corporate diversification decisions as the results for developed and developing economies belonging to the same legal family could be compared.

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