Does Board Composition and Ownership Structure Affect Firm Growth? Evidence from Finnish SMEs.

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Abstract

Growth is one tool for measuring the success and performance of firms. Although firms do not always have growth as their main objective, the ability to grow is an important aspect for them. Storey (1994) suggests that there are three categories of factors that influence the growth of small firms. The first group of factors is that of the entrepreneurs' individual resources. These are factors that can be identified prior to the establishment of the business. The second group of factors is firm specific characteristics, such as the firm's size, age, and legal form, and the third group is formed by the strategic choices made by the entrepreneur or the owners of the firm.

This study investigates the impact that ownership structure and board composition have on growth in a sample of Finnish SMEs. Our study is one of the few that sheds light on how corporate governance and ownership structures affect the growth and performance of small firms. The data for the study was collected in Spring 2007, through a private survey. The sample consists of 600 firms. Observations include the years from 2000 to 2005.

We find that both ownership structure and board structure are significant determinants of firm growth in our sample of small and medium sized Finnish firms. More specifically, the overall results suggest that managerial ownership decreases growth; whereas ownership by venture capital funds increases growth. The results also suggest that growth rates decrease when the number of top managers or the number of outsiders on the board increases. When we split the data into firms with less than ten employees and firms with ten or more employees, we find that ownership structure and board composition are more important determinants of growth in the sub sample of smaller firms.

JEL classification codes: **G21, G23**
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1. Introduction

Small and medium sized enterprises (SMEs) are well recognized worldwide as vital and significant contributors to the economic development, job creation and the general health and welfare of economies, both nationally and internationally. The small business sector represents a statistically significant proportion of not only the world economy but also the national economy in many countries. Small businesses are regarded as the engine of economic growth, the incubator of innovation and the solution to how to solve the dilemma of unemployment. The policy interest in the small business sector arises out of its capacity to generate and increase employment at local levels.

Growth is one tool for measuring success and performance of firms. Although firms do not always have growth as their main objective, the ability to grow is an important aspect for them. Growth is a vital prerequisite for a firm to be able to reach its economic goals (Storey 1994). Storey (1994) suggests that there are three categories of factors that influence growth of small firms. The first group of factors is that of the entrepreneurs' individual resources. These are factors that can be identified prior to the establishment of the business. The second group of factors is firm specific characteristics - such as the firm's size, age, and legal form. The third group is formed by the strategic choices made by the entrepreneur or the owners of the firm.

The objective of this article is to investigate the impact of board composition and ownership structure on the growth of SMEs. This study focuses on the determinants of growth in small and medium sized firms in Eastern Finland. Most previous studies on the interaction of board composition, ownership structure and firm growth or other performance measures use data on large, listed firms. The performance of small firms has been overlooked partly because of the difficulty in obtaining reliable data. Furthermore, despite the increase in SME research during recent decades, little work has been done on the influence of board composition and ownership structure. The legal framework differs by country, which has an impact on corporate governance structures of firms, including those of SMEs. Therefore, it has been suggested that research on ownership structures should be based on country-specific research.

Our study is one of the few that sheds light on how corporate governance and ownership structures affect growth and performance of small firms. We find that both ownership structure and board structure are significant determinants of firm growth in our sample of small and medium sized Finnish firms. More specifically, the overall results suggest that managerial ownership decreases growth; whereas ownership by venture capital funds increases growth. The results also suggest that growth rates decrease when the number of top managers or the number of outsiders on the board increases. When we split the data into firms with fewer than ten employees and firms with ten or more employees, we find that ownership structure and board composition are more important determinants in the sub sample of smaller firms.

This paper proceeds as follows. Section 2 reviews the theories and evidence related to the impact of ownership structure and board composition on firm growth. Section 3 describes the data and variables used in this study. Section 4 presents empirical results on the relationship between ownership structure and growth as well as the relationship between board composition and growth. Section 5 concludes the paper.

2. Literature Review

The relationship between ownership structure and performance has been the subject of an important debate in corporate finance literature. The debate is based on Berle and Means (1932) who suggest that an inverse relationship should exist between the diffuseness of ownership and firm performance, i.e. ownership concentration should have a positive effect on firm value and performance. Demsetz and Villalonga (2001) offer an alternative view. According to them, ownership structures ought to be influenced by the profit-maximising interests of shareholders. As a consequence, there should be no systematic association between ownership structure and performance. However, empirical studies have found conflicting results.

A situation in which management does not bear a substantial portion of the wealth effects of their decisions will lead to an agency problem between management and owners. According to Jensen and Meckling (1976) and Prevost, Rao and Hossain (2002), the separation of ownership from control can result in potential agency conflicts stemming from the divergence between managerial and shareholder interests. Agency problems may be greater in small firms because of their closely held nature. The assumption is that the owner of a small business has more/better information about the performance of his/her firm than financiers or other stakeholders (Storey 1994).

Agency problems and agency costs arise whenever managers have incentives to pursue their own interests at the shareholders´ expense (Agrawal and Knoeber 1996). Agency problems can be reduced by several mechanisms and one of the obvious ones is with managerial or insider shareholdings (Abrawal and Knoeber 1996). Other mechanisms to mitigate agency problems between managers and shareholders are debt financing, use of outsiders on the board, labour market for managers, market for corporate control, and monitoring by the firm´s own large shareholders (Agrawal and Knoeber 1996). Prevost et al. (2002) suggests that board composition and inside equity ownership are substitute mechanisms in controlling agency problems. Therefore, it can be argued that if management owns a large fraction of the shares there will be less demand for agency problem mechanisms such as outside board members. It can also be argued that the magnitude of agency costs is limited by how well the owners or financiers monitor the actions of outside managers (Ang, Cole and Lin 2000).

2.1 Ownership Structure

Ownership structure of a firm can be investigated from a number of alternative dimensions. Most commonly ownership structure refers either to ownership concentration or to ownership by different groups of blockholders. According to Kang and Sorensen (1999), results on the relationship between ownership concentration and performance are mixed. When a firm is owned wholly by an individual, the benefits and costs of shirking are borne by the sole owner. The more concentrated the ownership, the greater the benefits and costs are borne by the same owner (Demsetz and Lehn 1985). In firms with diffused ownership, benefits and costs are widely spread among the shareholders. According to Storey (1994), closely held firms, i.e. when the number of owners is small, would be expected to reflect the interests of their owners. It can also be argued that ownership concentration among the top management of the firm can lead to risk aversion and lack of willingness to engage in strategic changes.

One important form of insider ownership in small firms is managerial ownership. Morck, Shleifer and Vishny (1988) find that management ownership between 0-5 % increases firm

performance, insider ownership between 5 % and 25 % decreases performance, but that insider ownership above 25 % again increases performance. Hermalin and Weissbach (1991) argue that a firm performs better at low levels of management holdings, and firm performance improves with increases in ownership at low levels. Ownership by management can increase their motivation to work in order to raise the value of the firm´s stock (Hermalin and Weissbach 1991). Agrawal and Knoeber (1996) find a positive statistically significant relationship between firm performance and insider ownership, while firm performance and the increasing number of outsiders on the board are negatively associated. On the other hand, Ben-Amar and André (2006) and Lasfer (2006), report that such an outside ownership governance mechanism has a positive influence on firm performance. Research on venture capital suggests that this form of concentrated holdings may lead to increased performance (Kang and Sorensen 1999). Furthermore, Yermack (1996) reports that board stock ownership has a positive association with firm value. Roper (1999) finds a negative relationship between owner-managers´ ownership rate and firm growth.

Another important type of insider ownership in small firms is that by families. Large family shareholdings can have a negative impact on firm value and it may be even more negative if family members hold executive positions such as CEO in the firm (Ben-Amar and André 2006). When family member serves as CEO, it can be expected to have a negative impact if the CEO is not competent enough to run the business. A "Family CEO" will not have as much to lose as professional managers who have to ensure their reputation in the executive labour market (Ben-Amar and André 2006). Anderson and Reeb (2003) investigate the relationship between founding-family ownership and firm performance with data from large listed companies. They find family firms performing significantly better than non-family firms, and that firm performance is better in firms with "family CEO" than in firms with outside CEO. Barontini and Caprio (2006) find that family control is positive for European firms. Brundin, Samuelsson and Melin (2007) suggest that ownership in a family business context represents a logic which differs from the shareholder value logic. Family ownership logic consists of multiple goals, not only economic ones.

2.2. Board Composition

As suggested above, board composition can be seen as an alternative mechanism to solve agency problems. Board composition refers to the size and structure of the board, i.e. the number of board members and the type of board members (Pearce and Zahra 1992). The board is seen as a key link between the management and shareholders (Adjaoud, Zeghal and Andaleeb 2007, Brunninge, Nordqvist and Wiklund 2007). Boards become a major instrument of control as firms become larger. Board members with different expertise, education and interests are likely to serve on committees that reflect and benefit from these characteristics (Kesner 1988). It has been suggested that high quality boards could enhance the firm to outperform the firms with lower quality boards.

Board size has also been suggested to have an impact on firm performance. Bozec (2005) reports that the size of the board is positively associated with firm size, i.e. larger firms have larger boards. It can also be argued that when board size increases too large, agency problems increase (Bozec 2005). It has been suggested that firms with large boards appear to use assets less efficiently. Boards with more than seven or eight members are less likely to function effectively, and such boards are easier for the CEO to control (Jensen 1993). Yermack (1996) and Eisenberg, Sundgren and Wells (1998) report a negative relationship between firm value and board size. Dehaene et al. (2001) find that board size will not enhance returns. Pearce and Zahra

(1992) report that larger board size and higher proportions of outside directors on the board are positively associated with higher performance.

Previous research has provided evidence that the board´s ability to perform their service, strategy, and control role depends largely on board composition (Zahra and Pearce 1989). In family firms owner-family members often play multiple roles in managing and governing the firm. The separation of ownership from control occurs in family firms when the ownership is more dispersed and the family members´ participation in the business declines (Mustakallio et al. 2002). In firms with separated ownership and management the board´s role to monitor and control is important to safeguard the shareholders` investments. In closely held firms the role of the board is different because the risk of management´s opportunistic behaviour is lower (Brunninge et al. 2007). But, CEO power and firm´s objectives are significant determinants of board composition in family firms (Voordeckers, Van Gils and Van den Heuvel 2007). Barontini and Caprio (2006) report that family control is positive for firms.

CEO duality has been studied by several researchers. Duality refers to a board leadership structure in which the same person undertakes both the roles of chief executive officer and chairman of the board (Bozec 2005). In many SMEs, top management consists of one person, the CEO, who is often also the firm founder and owner (Brunninge et al. 2007). The preference for separate board leadership, i.e., the position of CEO and board chair being separated, is largely based on agency theory. Rechner and Dalton (1991) suggest that firms with separate leadership structure outperform firms with CEO duality when measured by return on equity, return on investment and profit margin. Most empirical studies support the theorem that firm performance is enhanced when CEO and board chair positions are separated (Dehaene et al. 2001). Andersson and Reeb (2003) suggest that in family firms founder CEOs have a positive effect on firm performance.

Agency theory also suggests the need for board independence. Outside board members are believed to be independent from the management, enabling them to provide superior performance benefits to the firm (Fama 1980, Dalton et al. 1998). Outsiders on the board are often thought to play a monitoring role inside the board (Bozec 2005). Previous studies on the effect of board characteristics to firm performance have shown mixed results. Some studies suggest that effective boards should be comprised of greater proportions of outside directors (Pearce and Zahra 1992). Bozec (2005) finds that the number of outsiders on the board is inversely correlated with CEO duality - i.e. the more outsiders the more independent the board is. According to Ezzamel and Watson (1993), outside board members are positively associated with performance, while Kesner (1987) finds that inside representation is associated with greater profitability. Prevost et al. (2002) report that growth and firm size are negatively related to outside representation and that firm profitability is positively related.

3. Data and Variables

3.1 Data

The data for the study was collected in Spring 2007, through a private survey. The sample consists of 600 companies operating in Eastern Finland. The firms represent all industries, excluding primary production. Company form is a limited liability company and the number of employees being at least two. The firms were asked to provide the following information on their ownership structure: number of owners, family ownership rate, CEO ownership rate, top management

ownership rate, bank ownership rate, venture capitalist ownership rate and other owners´ ownership rate. Furthermore, the firms were asked to provide the following information on their board composition: CEO duality, board size and the number of representatives on the board from top management, employees, family, financier and other.

Of the 3,262 questionnaires sent, a total of 621 valid responses were usable, which resulted in an effective response rate of 19 %. The financial data was collected from the Voitto+ register. This register has data available on firm age, employment, line of business and the complete financial statements. The observations include the years from 2000 to 2005. The total number of observations is 3,519. The number of observations varies in regressions because of missing observations on some variables.

3.2 Variables

Dependent variable

Growth. Our measure of firm growth is the annual natural logarithmic growth rate of sales. An approach that uses sales growth has previously been adopted by, e.g., Roper (1999), while most studies in the field investigate growth in employment. We chose our measure because firms rarely select employment growth as their goal per se. It could also be argued that our sample of Finnish firms justifies this choice even more due to the excessively high labor cost imposed on the local employers. These costs are often stated to be a main barrier for small firms to increase the number of employees.

Independent variables

Ownership. Previous literature suggests that business ownership may have an impact on firm growth. Closely held firms, i.e., when the number of owners in the firm is small, would be expected to reflect the interests of their owners (Storey 1994). Important reasons for a firm to discontinue growth after reaching the minimum efficient size are the fear of having too much administration and of creating problems of control, and the fact that owners feel that it is risky (Storey 1994, Almus and Nerlinger 1999). Almus and Nerlinger (1999) find that firms founded by a team achieve higher growth rates than firms established by a single person.

Managerial ownership in particular has raised a lot of attention in the literature. Previous literature (e.g., Morck, Schleifer and Vishny 1988 and McConnell and Servaes 1990) indicates that management ownership tends to affect shareholder wealth positively at low levels of ownership and negatively at high levels of ownership. This implies that management is willing to take risks and aim at high growth rates at low levels of ownership and change their attitude towards risk taking when ownership grows to levels where their wealth becomes undiversified. The same arguments can be extended to the family ownership in small firms. Becchetti and Trovato (2002) use the amount of ownership held by the shareholders controlling the firm, and find no significant impact on firm growth. Research on venture capital suggests that this form of concentrated holdings may lead to increased performance (Kang and Sorensen 1999).

We include four ownership variables in our model. Our measures in this context include the number of owners, family ownership rate, managerial ownership rate, and venture capitalist's ownership rate. *Number of owners* means the number of the owners in the firm. We expect that the number of owners and growth are positively related. *Family ownership* indicates the percentage of shares controlled by the family. Our expectation is that family ownership and growth are negatively related. *Management ownership* refers to the percentage of shares

controlled by the firm's management. We expect a negative association between management ownership and growth. *Venture Capital Fund* indicates the percentage of shares controlled by the venture capital funds. Our expectation on that variable is that Venture Capital Fund and growth are positively related.

Board Structure. Previous literature suggests that effective boards should be comprised of greater proportions of outside directors (Zahra and Pearce 1989, Dalton et al. 1998). CEO duality, i.e. the fact that the CEO also holds the position of board chair, has been studied by several researchers. Rechner & Dalton (1991) suggest that firms with separate leadership structure outperform those firms with CEO duality. Neither the joint nor separate board leadership structure has been strongly supported (Dalton et al. 1998). We include three measures of board structure into our models. *CEO duality* is a variable with a value of 1 if the roles of chair and CEO are held by the same person, otherwise it has a value of 0. We expect a negative association between CEO duality and growth. *Top Management* indicates the number of board members who represent the firm´s top management. Our expectation is that top management and growth are negatively related. *Outside members* refers to the number of board members who are not stakeholders of the firm. We expect either a positive or negative effect on growth. In addition to the variables measuring firm ownership and board structure, we also use a number of control variables measuring firm age, size, performance, and industry.

Firm age. Firm age and size are the two most commonly investigated independent variables suggested to affect firm growth. The impact of both variables has been verified in the empirical literature. Both the age of the firm and the age of the entrepreneur have been found to explain firm growth (Cabral and Mata 2003). The general pattern between firm age and growth seems to be that young firms are more likely to grow faster. Almus and Nerlinger (1999), Davidsson, Kirchhoff, Hatemi-J and Gustavsson (2002) and Glancey (1998) find an inverse relationship between firm age and growth suggesting that older firms grow less rapidly than younger firms. Our measure of firm age is the natural log of (1+age), because it can be argued that the impact of one extra year diminishes as the firm gets older. Our expectation on that variable is that age and growth are negatively related.

Firm size. Gibrat's Law, also called the "law of proportionate effect", implies that the expected growth rate is the same across all size classes of firms (Sutton 1997). Most empirical studies on the determinants of firm growth find that there is an inverse relationship between firm age and growth. These findings are consistent with Jovanovic (1982) whose theory of firm growth states that firms uncover their true efficiencies over time. The results of empirical studies on the relationship between firm growth and firm size are not unanimous. In most studies on small firms, e.g., Caves (1998), Harhoff et al. (1998) and Almus and Nerlinger (2000), Gibrat's law is rejected. Other studies, e.g., Evans (1987) and Hall (1987), suggest that deviations from the law become smaller when data on larger firms are used and finally Hall (1987) cannot reject the law for larger firms. Our measure of firm size is the natural log of the firms' total assets. We expect that firm size and growth are negatively associated.

Profitability and liquidity. A number of surveys suggest that small firms in particular are willing to finance their growth internally. In fact, in a recent survey by the Finnish Bankers' Association, 75 percent of small firms (10-49 employees) and 70 percent of micro firms (1-9

employees) stated that they intended to finance future investments internally. These findings are in line with Myers (1984), who claims that capital structure is driven by the firms' desire to finance new investments first internally, then with low risk debt, and finally with outside equity only as a last resort. Carpenter and Petersen (2002) investigate a sample of small firms and find that the growth of small firms is constrained by internal finance. Our proxies for the firms' internal funding resources are the return on assets and the current ratio. Our expectation is that profitability is positively related to growth.

Financial structure. Financial constraints have been suggested to be one of the most important barriers to growth (Storey 1994). It has also been suggested that especially small firms face difficulties in obtaining outside funding. Becchetti and Trovato (2002) find that firms that have been credit rationed by their financial institutions are likely to have lower growth rates. According to Hall, Hutchinson and Michaelas (2000), firm growth is positively associated with short-term debt. Our measure for the financial structure is the firms' debt-to-assets ratio. We expect a positive relation between leverage and growth.

Industry. It is usually accepted that firms in different industries exhibit different growth rates. Davidsson et al. (2002) report that industry effects are important determinants of growth rates. Almus and Nerlinger (1999) split their sample into firms that operate in high-tech, medium-tech and low-tech industries. Dunne and Hughes (1994) include 19 industry dummies in their investigation and Harhoff et al. (1998) use a sample of firms in the manufacturing, construction, trade and service industries. We add six different industry dummies to our models to control industry specific differences in growth rates.

4. Empirical Results

4.1 Descriptive Statistics

Table 1 lists descriptive statistics for the key variables. The results show that the average firm age is 14.80 years. Total assets are 1,793,810 €, on average, and sales are 1,865,740 €, on average. The average number of employees is 16.30 employees. The average ratios regarding leverage, liquidity and profitability are as follows: leverage 62.03 %, current ratio 2.35 and return on assets 16.55 %. The average growth rate of sales is 29.29 %. The average family ownership is 52.34 % and managerial ownership 48.71 %. CEOs are also board chair in almost half of the firms. The average board size is 2.61. The average number of family members on the board is 1.10 while corresponding number of employees is 0.28. The average number of outside members on the board is 0.52.

Table 1 presents descriptive statistics on the sample firms. Column I presents the variables. Column II presents the number of observations. Column III presents the average values of the variables and column IV the standard deviations.

Table 1. Descriptive Statistics

	Number of Observations	Mean	Standard Deviation
Firm age	2434	14.80	13.87
Total Assets	2434	1 793.81	9 977
Sales	2388	1 865.74	5 784
Number of Employees	2345	16.30	42.13
Leverage	2369	62.03	53.19
Current Ratio	2366	2.35	3.70
Return on Assets	2369	16.55	24.27
Change in Sales	2434	29.29	322.66
Number of Owners	3427	5.57	31.474
Family Ownership (%)	3224	52.34	47.262
Managerial Ownership (%)	3226	48.71	42.272
CEO Duality (%)	3349	49	0.503
Number of Board Members	3345	2.61	1.366
Family Members on Board	3315	0.86	1.116
Top Management on Board	3315	1.10	0.966
Employees on Board	3309	0.28	0.671
Outside Board Members	3225	0.52	1.331

Source: Authors' analysis

Table 2. Ownership and Board Structure by Firm Size

	Employees ≥ 10, n = 433	Employees < 10, n = 622	Probability of difference
Number of Owners	11.60	2.70	0.000
Family Ownership	52.25 %	48.82 %	0.076
Managerial Ownership	44.04 %	42.25 %	0.702
Bank Ownership	1.01 %	1.16 %	0.678
Venture Capitalist Ownership	1.76 %	2.15 %	0.243
Other Owner's Ownership	17.89 %	14.63 %	0.000
CEO Duality	40 %	53 %	0.000
Number of Board Members	3.47	2.52	0.000
Top Management on Board	1.13	1.09	0.003
Employees on Board	0.33	0.27	0.001
Family Members on Board	1.05	0.80	0.000
Outside Board Members	0.96	0.52	0.000

Source: Authors' analysis

We investigate the variables on ownership and board structure in more detail in Table 2, where we divide the data into firms with fewer than 10 employees and to those with 10 or more employees. We use a T-test for independent samples to compare the means by considering

whether our ownership and board structure variables differ by firm size. The larger firms have more owners on average and they also have a higher level of family ownership. Other owners´ ownership rate in larger firms exceeds the ownership rate in smaller firms. As far as board structure is concerned, the results in Table 2 show that the number of board members varies by firm size. The average number of board members is 3.47 in the firms with 10 or more employees as opposed to 2.52 in the smaller firms. The results also show that CEO duality is more common in the smaller firms. The number of family members, top management as well as employees on the board is higher in larger firms. Also the number of outside board members is higher in larger firms.

This table presents descriptive statistics for the variables on ownership and board structure, when the data has been divided into two sub samples by firm size. Column I presents the results for the firms with 10 or more employees and column II for firms with fewer than 10 employees. Column III presents the p-values on t-test for the equality of means between the two sub samples.

We further divide the data into two groups by CEO duality in Table 3. We use a T-test for independent samples to compare the means by considering whether ownership and board structure vary by CEO duality. Firms with CEO duality have fewer owners. Managerial ownership is slightly higher in firms with separate leadership. Banks have small stakes only in firms with separate leadership. Venture capitalists´ ownership is lower in firms with CEO duality. Other owners´ ownership is much higher on average in firms with separate leadership structure.

Board size is much lower in firms with CEO duality, although the average board size is small in both sub samples. Top management´s presence on the board is higher in firms with separate leadership whereas employees and family members on the board are more common in firms with CEO duality. Presence of venture capitalists and outside board members on the board is higher in firms with separate leadership.

Table 3. Ownership and Board Structure by CEO Duality

	CEO acts as Chairman of Board (n=1618)	CEO does not act as Chairman of Board (n=1725)	Probability of difference
Number of Owners	2.18	8.90	0.000
Family Ownership	60.89	44.76	0.215
Managerial Ownership	48.10	49.67	0.000
Bank Ownership	0.00	1.52	0.000
Venture Capitalist Ownership	0.51	1.37	0.000
Other Owner's Ownership	7.06	16.03	0.000
Number of Board Members	2.06	3.13	0.000
Top Management on Board	0.89	1.29	0.000
Employees on Board	0.30	0.25	0.000
Family Members on Board	0.93	0.80	0.006
Venture Capitalists on Board	0.02	0.07	0.000
Outside Board Members	0.12	0.91	0.000

Source: Authors' analysis

This table presents the descriptive statistics for the variables on ownership and board structure, when the data has been divided into two sub samples by CEO duality. Column I presents the results for the firms with 10 or more employees and column II for firms with fewer than 10 employees. Column III presents the p-values on t-test for the equality of means between the two sub samples.

4.2 Determinants of Firm Growth

Tables 5 and 6 report the results from regressing firm growth on ownership structure and board composition. Our measure of firm growth is the annual logarithmic growth rate of sales. We employ OLS regressions to investigate the effect of ownership structure and board composition on firm performance. Table 4 presents the model and variables used in the regression models.

Table 4 presents the model and variables used in the regression models in Table 5 and 6.

Table 4. Definition and summary of variables

$LnChSales_{it}$	$\beta_{0+}\ \beta_1 NumberofOwners_{it} + \beta_3 FamilyOwnership_{it} + \beta_4 TopManagementOwnership_{it} + \beta_5 VentureCapitalFund_{it} + \beta_8 CEOduality_{it} + \beta_9 FamilyBoard_{it} + \beta_{12} OutsidersBoard_{it} + \beta_{13} FirmAge_{it} + \beta_{14} FirmSize_{it} + \beta_{15} ROA_{it} + \beta_{16} Leverage_{it} + \beta_{17} CurrentRatio_{it} + \beta_{18} Industry_{it} + \beta_{it}$

LnChSales	Annual logarithmic growth rate of sales is the measure of growth.
NumberofOwners	Number of the owners in the firm
FamilyOwnership	Percentage of shares controlled by the family
ManagementOwnership	Percentage of shares controlled by the firm management
VentureCapitalFund	Percentage of shares controlled by the venture capital fund
CEODuality	A dichotomous variable used indicating CEO duality. Variable with a value of 1 if the roles of board chair and CEO are held by the same person, otherwise a value of 0.
TopManagementBoard	Number of members on the board representing top management.
OutsidersBoard	Number of members on the board representing other owners such as other firms or other stakeholders.
FirmAge	Firm age is measured by using the natural log of (1+ firm age).
FirmSize	Firm size is measured by using the natural log of total assets.
ROA	ROA is the return on assets. Firm profitability is measured by ROA.
Leverage	Leverage is debt to total assets ratio.
CurrentRatio	Current ratio is the current assets to short-term debts ratio.
Industry	Dummy variables that capture industry effects. Industry classification includes 6 industries.

Source: Authors' analysis

The results in Column 1 of Table 5 indicate that managerial ownership and ownership by Venture Capital Funds are important determinants of firm growth. More specifically, the results show that growth rates decrease as managerial ownership increases, and results are as expected. This finding is partly consistent with the findings of Morck et al. (1988), McConnell and Servaes (1990), Hermalin and Weissbach (1991), consistent with Roper (1999) and Lasfer (2006), but

inconsistent with Agrawal and Knoeber (1996). Our findings suggest that managers become more risk averse as their ownership stake increases. The effect of ownership by venture capital funds is positive, and expected. Our findings are consistent with those by Kang and Sorensen (1999), and suggest that venture capitalists invest in firms with high growth potential.

Table 5: The determinants of firm growth

	Column I, total sample		Column II, total sample		Column III, total sample	
	Coefficient	*p*	Coefficient	*p*	Coefficient	*p*
Constant	1.798	0.000	2.295	0.000	1.942	0.000
Firm characteristics						
Ln (Total assets)	0.027	0.595	-0.044	0.376	0.040	0.511
Ln (1+ firm age)	-0.034	0.606	0.013	0.842	-0.040	0.576
Return on Assets	0.009	0.001	0.005	0.044	0.008	0.002
Current Ratio	0.039	0.323	0.089	0.033	0.051	0.216
Debt to total assets	0.010	0.000	0.009	0.000	0.010	0.000
Ownership						
Number of Owners	-0.019	0.233	0.000	0.853	-0.011	0.667
Family ownership	0.001	0.686			0.000	0.830
Management ownership	-0.006	0.000			-0.006	0.000
Venture Capital Fund	0.012	0.056			0.011	0.080
Board Structure						
CEO Duality			-0.195	0.139	-0.174	0.189
Top Management			-0.132	0.060	-0.041	0.627
Outside Members			-0.099	0.029	-0.076	0.145
Industries						
Manufacturing	-0.053	0.799	-0.108	0.633	-0.054	0.822
Construction	0.282	0.217	0.119	0.627	0.277	0.271
Trade	-0.045	0.833	-0.217	0.347	-0.011	0.962
Hotels and Restaurants	-0.859	0.089	-0.595	0.228	-1.180	0.067
Transportation	0.083	0.723	-0.070	0.778	0.132	0.619
KIBS	0.331	0.113	0.054	0.800	0.337	0.138
Adjusted R^2	0.069		0.035		0.072	
Number of observations	553		523		526	
F-test statistics	3.732	0.000	2.379	0.002	3.259	0.000

Source: Authors' analysis

Column 2 of Table 5 shows that the presence of top management and outsider board members are important determinants of firm growth. The results indicate that growth rates decrease as the presence of top management increases, and the results are expected. This finding is inconsistent with the findings of Kesner (1987) and in line with those of Pearce and Zahra (1992). These results suggest that the presence of top management on the board may cause

ineffectiveness of the board by being an obstacle to an effective governance system and causing agency costs. Therefore, it may lead to lower performance. The results also indicate that growth rates decrease as the number of outside board members increases. Our expectations were ambiguous. Our findings are in line with those in Prevost et al. (2002) and Agrawal and Knoeber (1996), but contradict with Pearce and Zahra (1992), Ezzamel and Watson (1993) and Dalton et al. (1998).

We add our ownership variables and board structure variables into one model in column 3. The results indicate that growth decreases as management ownership increases. This finding is partly consistent with the finding of Morck et al. (1988). Consistently with the results in column I, firm growth rates increase as Venture Capital Fund ownership increases. The fact that our ownership variables maintain their significance, while none of the variables on board structure are significant in column 3, suggests that ownership structure is a more important determinant of growth than board composition.

The dependent variable is the annual logarithmic growth rate of sales (LnChSales). The columns present the results for the total sample. OLS regressions are employed to investigate the relationship that ownership structure and board composition have on firm growth. Column I presents the results on regressing ownership on LnChSales. Column II presents the results on regressing board structure and the number of owners on LnChSales. Column III presents the results on regressing ownership structure and board composition on LnChsales.

As far as our control variables are concerned, the results indicate that an increase in profitability increases growth rates, and are expected. This is in line with the arguments that firms are willing to finance their growth internally. The results also show that firms with higher debt to assets ratios grow faster and the results are expected. This result suggests that firms with easy to access to outside funding grow faster. The other potential explanation would be that firms finance their growth by increasing debts.

We investigate further the possibility that the impact of ownership and board composition on growth rates may vary by firm size in Table 6, where we divide the data into firms with fewer than 10 employees and those with 10 or more employees. Overall, ownership structure and board composition seem to be more important determinants of firm growth in the smaller firms of our sample. In the firms with fewer than 10 employees, growth increases as the number of owners increases. Increase in management ownership decreases growth in both sub samples, but increase in family ownership decreases growth rates only in the smaller firms. Our findings are in line with Morck et al. (1988), McConnell and Servaes (1990) and Hermalin and Weissbach (1991), and contradict with Agrawal and Knoeber (1996). In our sub sample of smaller firms, this could indicate that if families are undiversified investors, their willingness to take risks is lower. It seems that when the number of owners increases, the risk is shared with more owners, and willingness to take risks increases. Therefore, growth rates increase. As far as board structure is concerned, the impact of the outside members on the board in firms with fewer than 10 employees is negative. This finding is consistent with the findings of Prevost et al. (2002), and Agrawal and Knoeber (1996) but contradicts with Pearce and Zahra (1992) and with Ezzamel and Watson (1993). The results also show that the impact of top management as board members differs by firm size. We obtain a statistically significant and negative coefficient in the sample of the smaller firms, and a statistically significant and positive coefficient in the sample of the larger firms. Our finding on the negative effect of top management is in line with those in Prevost et al. (2002) and Agrawal and Knoeber (1996), but contradicts with Pearce and Zahra (1992). The finding regarding the positive impact of top management on the board is in line with Kesner (1987).

The results on our control variables also deviate to some extent from those in Table 5. The results for the firms with fewer than 10 employees indicate that growth rates increase as firm size increases. This contradicts with our expectations. Based on these results, Gibrat's Law is rejected for the smaller firms in our sample. The results also show that increases in profitability increase growth rates only in smaller firms. This could imply that the smaller firms are more likely to finance their growth internally, and that the larger firms in our sample are less dependent on the internal funding resources.

Table 6. The determinants of firm growth by Firm Size

	Column I Number of Employees		Column II Number of Employees		Column III Number of Employees	
	<10 Coeff. (p-value)	≥10 Coeff. (p-value)	<10 Coeff. (p-value)	≥10 Coeff. (p-value)	<10 Coeff. (p-value)	≥10 Coeff. (p-value)
Constant	1.110 (0.114)	1.949 (0.078)	0.929 (0.143)	1.384 (0.157)	0.997 (0.146)	2.166 (0.019)
Firm characteristics						
Ln (Total assets)	0.248 (0.034)	-0.082 (0.531)	0.167 (0.114)	0.052 (0.566)	0.263 (0.011)	-0.045 (0.610)
Ln (1+ firm age)	-0.060 (0.607)	-0.065 (0.573)	-0.034 (0.745)	-0.061 (0.592)	-0.014 (0.902)	0.002 (0.985)
Return on Assets	0.009 (0.006)	0.011 (0.174)	0.011 (0.001)	0.015 (0.041)	0.006 (0.038)	0.009 (0.208)
Current Ratio	0.004 (0.937)	0.033 (0.722)	-0.021 (0.678)	0.007 (0.942)	0.011 (0.842)	0.048 (0.580)
Debt to total assets	0.010 (0.001)	0.077 (0.094)	0.011 (0.000)	0.009 (0.034)	0.011 (0.000)	0.006 (0.160)
Ownership						
Number of Owners	0.121 (0.038)	-0.030 (0.322)	0.113 (0.033)	-0.031 (0.117)	0.113 (0.046)	-0.001 (0.631)
Family ownership	-0.001 (0.546)	0.005 (0.087)	0.001 (0.527)	0.002 (0.377)		
Management ownership	-0.005 (0.031)	-0.007 (0.005)	-0.005 (0.014)	-0.005 (0.025)		
Venture Capital Fund	0.013 (0.171)	0.015 (0.138)	0.016 (0.103)	0.013 (0.190)		
Board Structure						
CEO Duality	-0.128 (0.561)	-0.214 (0.311)			-0.212 (0.326)	-0.162 (0.434)
Top Management	-0.220 (0.093)	0.298 (0.034)			-0.317 (0.005)	0.106 (0.318)
Outside Members	-0.208 (0.023)	0.073 (0.350)			-0.202 (0.017)	-0.038 (0.512)
Industries						
Manufacturing	-0.057 (0.873)	0.294 (0.513)	-0.021 (0.949)	0.125 (0.718)	-0.160 (0.647)	-0.038 (0.921)
Construction	0.068 (0.846)	0.773 (0.125)	0.138 (0.674)	0.571 (0.163)	-0.038 (0.913)	0.219 (0.616)
Trade	-0.431 (0.185)	0.426 (0.417)	-0.366 (0.212)	0.121 (0.778)	-0.658 (0.035)	0.011 (0.981)
Hotels and Restaurants	-1.170 (0.185)	-1.734 (0.106)	-0.746 (0.242)	-0.997 (0.317)	-0.964 (0.272)	-1.310 (0.108)
Transportation	-0.094 (0.808)	0.497 (0.300)	-0.082 (0.814)	0.290 (0.445)	-0.324 (0.391)	0.015 (0.970)
KIBS	-0.028 (0.930)	0.688 (0.135)	-0.035 (0.096)	0.631 (0.104)	-0.188 (0.537)	0.150 (0.697)
Adjusted R^2	0.107	0.037	0.090	0.041	0.085	-0.006
# of observations	265	195	282	202	269	221
F-test statistics	2.771 (0.000)	1.416 (0.128)	2.867 (0.000)	1.572 (0.085)	2.662 (0.001)	0.919 (0.544)

Source: Authors' analysis

The dependent variable is the annual logarithmic growth rate of sales. The columns split the data into firms with fewer than 10 and 10 or more employees. Column I presents the results on regressing ownership structure and board composition on LnChSales. Column II presents the results on the effect of ownership structure. Column III presents the results on the effect of board composition and number of owners.

5. Conclusions

The aim of this article was to investigate the impact of ownership structure and board composition on the growth of SMEs. Most previous studies on the interaction between board composition, ownership structure and firm growth or other performance measures use data on large, listed firms. Our study is one of the few that shed light on how corporate governance and ownership structures affect the growth and performance of small firms.

We find that both ownership structure and board structure are significant determinants of firm growth in our sample of small and medium sized Finnish firms. More specifically, the overall results suggest that an increase in managerial ownership decreases growth, and an increase in ownership by venture capital fund increases growth. The effect of increased managerial ownership could imply that undiversified owner-managers become more risk averse as their ownership increases. Our findings could also indicate that controlling owners are more concerned with other issues such as retaining profits rather than growth. The influence of venture capital funds may stem from a notion that venture capitalists are more interested in firms with high growth potential.

The results also suggest that growth rates decrease when the number of top managers or the number of outsiders on the board increases. One potential explanation could be that outsiders are appointed as board members of poorly performing firms. An alternative explanation could be that financiers may have requirements on having a seat on the board in firms that they have financed.

When we split the data into firms with fewer than 10 employees and firms with ten or more employees, we find that ownership structure and board composition are more important determinants in the sub sample of smaller firms. We also find that growth rates increase when the number of owners increases in smaller firms. This could imply that when the risk is shared willingness to grow increases.

Our results also suggest that access to internal funding and debt increase growth rates in our sample of SMEs. When we divide our data into two sub samples by firm size, the results for the firms with fewer than 10 employees indicate that growth rates increase as firm size increases. These results suggest that Gibrat's Law is rejected for the smaller firms in our sample. The results also show that increase in profitability increases growth rates only in smaller firms. This could indicate that these smaller firms are more likely to finance their growth internally, and that larger firms in our sample are less dependent on internal funding resources.

Our findings add to the understanding of the importance of ownership structure and board composition in small and medium sized firms. While the firms with fewer than 10 employees usually have very few owners, our results suggest that increasing the numbers of owners would benefit the firms in terms of increased growth rates. Our results on the impact of ownership structure and board composition on firm growth may be of interest to providers of finance such as banks and venture capitalists.

This study raises several questions that might be addressed in future research. Further research is needed to investigate the effect of ownership structure and board composition on other performance measures such as profitability. Furthermore, research conducted based on data on SMEs from other countries would shed light on how ownership structures and corporate governance affect firm performance internationally.

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