FAMILY OWNERSHIP AND FIRM PERFORMANCE IN CANADA
by
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B. Comm. University of British Columbia, 1999

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Abstract

This paper analyzes the relationship between family firm ownership and the firm value, as measured by Tobin’s $q$, and firm profitability, as measured by return on assets, for a sample of 251 Canadian firms. The results indicate that family firm ownership does not have an effect on the firm’s value. The results also indicate that Canadian family firms are not more profitable than non-family owned firms. The results of this paper vary from those of similar U.S. family firms published by Anderson and Reeb (2003). Anderson and Reeb (2003) concluded that family firms are more profitable and are more valuable than non-family firms in the U.S.
Dedication

To my wife, for all the patience, support and understanding she’s shown. To my children for the patience they’ve shown, and for the sacrifice of their computer time.
Acknowledgements

I would like to thank Dr. Peter Klein for his support and encouragement for this topic and throughout this project.
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1. Introduction

Family business is known to be the cornerstone of the Canadian economy. Is it a wise investment decision to hold these companies in an investor's portfolio? Families such as the Molsons, the Demarais, and the Westons have built dynasties through their family firms. For every dynasty however, there are numerous family firm catastrophes. Notables failures in Canada include the likes of Eaton's and Woodward's. Canada has many similarities to its American cousin including a common language and its mainstream culture. With so many similarities, one would expect that publicly traded family firms in both countries to be similar in national economic significance, and as potential investment opportunities.

This paper applies the research methodology used in the paper "Founding Family Ownership & Firm Performance Evidence from the S&P 500" Anderson and Reeb (2003) to Canadian firms listed on the Toronto Stock Exchange. In this study, a sample of 251 companies will be analyzed. Banks, insurance companies, and utilities will be excluded from the sample due to the high degree of regulation, and the impact that may have on the company's financial results. Of the companies selected, it was determined that 86 of the 251 companies in the sample were considered family firms. Similar to the Anderson and Reeb (2003) paper, factors such as the founding family's ownership, presence on the board of directors, or in senior management will be considered in determining which firm are family firms. The study will measure the value of family firms using Tobin's \( q \). The values of family firms and non-family firms will be compared to determine, as in Anderson and Reeb (2003), whether family firms are more valuable than non-family
firms. Profitability will also be measured for family and non-family firms to determine whether family firms are more profitable, and whether family firms manage firm assets more effectively.

The outline of this paper is as follows. Section 2 will provide a review of the literature on the following areas: the importance of family business in Canada and in the United States, the issues that are unique to family firms, the empirical studies done on the issues that impact family firms and specific issues that impact family firms such as decision making, time horizon, the cost of financing, the presence of family CEOs, board composition, and agency conflict. At the end of section 2, the results of Anderson and Reeb (2003) will be shown as evidence that family firms are an attractive business structure and investment opportunity in the United States. Section 3 will provide a brief discussion of the focus of this study, while section 4 will discuss the sources of the data used. Section 4 also will describe the sample of businesses used and where the data was obtained. Sections 5 will provide a brief discussion of the control variables used in the analysis. Section 6 will then provide a description of the summary statistics compiled in this study. Section 7 will provide a comparison of this study's results with those of Anderson and Reeb (2003). And finally, section 8 will summarize the results and concludes on the findings of the paper.
2. Literature Survey

Family-owned businesses are significant to the country's economy contributing, more than 4.7 million full-time and 1.3 million part-time jobs, while total sales could be more than $1.3 trillion (Barnett et al., 1999). According to Stavrou and Swiercz, (1998) family-owned firms... constitute 80% of all Canadian businesses and generate $150 billion in sales. These firms account for about 50% of Canada's gross domestic product. In the US, as much as 60% of GDP is generated by family controlled businesses (Belle et al 1995). Much work has been done in Canada to understand the dynamics of founding family ownership and control of these organizations. The Canadian Association of Family Enterprises (CAFÉ) dedicates itself to the growth of Canadian family-owned businesses, focusing on supporting the success of the family firm, and facilitating the transfer of ownership within the family. In conjunction with CAFÉ, a number of leading Canadian business schools are developing programs to facilitate the success of this important sector of the Canadian economy.

In addition to being a significant influence on both the Canadian and U.S. economies, family firms appear to be distinct from non-family firms. This distinction provides the family firm with a competitive advantage over its widely held peers. McConaughy and Mishra (1999) suggest that family controlled firms have a lower cost of capital. These firms differ in the areas of performance, value, capital structure and compensation (McConaughy, Mishra, Henderson, & Walker, 1998). The quality of the relationship
amongst family members and with their firms, known as the “family effect”, may influence the firm’s cost of capital, and ultimately the firm’s performance.

Cohesive families are committed to the firm, and enjoy firm values higher than those families that are divided and distrustful (Aronoff, DeVisser, and Ward, 1996). Firms that are run by a cohesive family who are committed to maximizing firm value, are normally considered to be less risky by capital providers a lower cost of capital to the firm. It has also been found that family values contribute to a family firm’s value. Likewise, litigious and divided families are more likely to run their firms in a poorer, more risky fashion, resulting in a higher cost of capital, and lower firm value (McConaughy 1999).

Trust, altruism, and paternalism can create a commitment to long-term value creation (Jenssen, Mishra, and Randoy, 2001). “The potential for expropriation and nepotism are held at bay by the need for the family to be successful”. Once this commitment is in place, the need for an outside board is diminished. Inside directors, who have an intimate knowledge of the firm and the market place, contribute to firm’s value. Furthermore, great family firms are not content to receive nothing on their investments (McConaughy, 1994). De Vries (1993) notes the benefits associated with family control include, a more clearly defined culture, reduced agency costs leading to increased firm value, a lower likelihood of explicit incentive compensation plans, and a longer term perspective compared to non family firms.
There have been numerous empirical studies on the issues unique to family firms. The strong performance of family controlled firms results in a higher market to book equity ratio than non-family controlled firms when matched by size, industry, and managerial ownership (McConaughy et al 2001). Tobin’s $q$ (estimated as the book value of liabilities plus the market value of common equity divided by the book value of assets) increases when the founding family holds one of the two top positions in the firm (Morck, Schleifer, & Vishny, 1988). Higher levels of inside ownership are found to be associated with higher excess returns (Osward & Jahera, 1991).

Other studies have analyzed the efficiency of decision making at family firms. For example, Osward et al. go on to describe that inside ownership results in improved decision making, contributing to higher earnings and dividends. Empirical evidence regarding corporate takeovers (Kaplan, 1989 and Smith, 1990) suggests that more concentrated management ownership leads to greater firm efficiency. This is consistent with the findings of Klein, Shapiro and Young (2004), where they fund that family firms appear to be penalized by having boards that are independent of management. Takeovers concentrate ownership and control among a small group and are generally followed by improvements in operating efficiency following the buy-out.

The benefits from increased operating and decision-making efficiency are compounded when adapted on a long-term basis. John A. Davis, senior lecturer and faculty chair of the family business executive education program at the Harvard Business School, suggests that, “Family firms have longer planning horizons, which can result in smarter investment decisions”. Other parties such as suppliers and lenders are more likely to be supportive of
a business with a long-term time horizon and solid reputation. Anderson and Reeb (2002) suggest this may translate to the firm enjoying a lower cost of debt financing. Debt levels in family controlled companies were found to be significantly lower (McConaughy & Mishra, 1999) as a result of the founding family's aversion to the risk of loss of control.

One of the key factors to the success of the family firm is the presence of the founding family in senior management, and particularly at the helm of the company. The Anderson and Reeb paper suggests that family firms with either a family member as CEO, or a hired CEO, exhibited superior performance relative to non-family firms. Specifically, they found that CEOs who are family members (founders, or founder descendents) exhibit a positive correlation to accounting profitability measures. Interestingly though, Anderson and Reeb also found that founder descendents serving as CEO have no effect on market performance of the firm's stock price.

Although family CEOs are shown to outperform non-family CEOs, their remuneration is lower than their non-family counterparts. Research shows that in family controlled firms, family member and founder CEOs receive less pay and fewer pay based incentives than do non-family CEOs (McConaughy 2000). McConaughy hypothesized that founding family CEO's have the incentive to maximize the family firm's value. Family CEOs are found to receive $401,760 less in salary and bonus, and $133,200 less in other pay than non-family CEOs. Family firms are on average smaller so the lower compensation could be attributed to size. After adjusting for size however, the family firm CEO still received $565,100 less in total compensation. Despite this difference, family CEO's showed
excellent results for the compensation received. Family CEOs received $0.087 in the form of salary and bonus taken and $0.949 in the form of other compensation, per $1,000 increase in shareholder value. This compared to non-family CEO's who received $0.169 and $2.033 per $1,000 increase in shareholder wealth.

McConaughy claims that these results are consistent with his hypothesis that founding family CEOs have “superior incentives for maximizing firm value. Family firm CEOs compensation is often tied to both shareholder return and profitability, while CEOs from management-controlled firms is related only to firm size. Founding family CEOs also have a longer-term outlook for the firm that may derive non-pecuniary benefits for the family such as providing status in the community that unifies the family.

Another significant factor contributing to the performance of family firms is the composition of its board of directors. Family firms appear to be penalized by having boards independent of management (Klein, Shapiro, and Young, 2004). Boards of family firms made up of family members and/or management tend to run more efficiently, thus resulting in better business decisions. Family firms also tend to have fewer problems with agency conflict.

Concentrated families have greater incentives to minimize agency conflicts and maximize firm and family wealth Demsetz and Lehn (1985). Family management has an incentive to monitor managers particularly when its wealth is coupled with firm value. Fama and Jensen (1983) find that a family relationship between managers and owners may reduce
agency costs due to its inherent nature, thus allowing for improved monitoring of the
decision making agents. DeAngelo and DeAngelo (1985) found that the incentive to
monitor and discipline managers is high due to the close tie firm performance has to
family wealth. The reduction in inefficiencies due to agency conflicts appear to be one of
the primary reasons family-founder firms outperform non-family-founder firms.

Henderssen, McConaughy, Mishra and Walker (1998) argue that higher firm
performance related to family control is unrelated to management ownership levels. Their
results show that monitoring by the family provides incentives for good performance by
management. Henderssen et al. (1998) conclude that this is effective in reducing the
conflict between shareholders and managers. Chrisman et al. (1999) conclude that the
effect of family control on performance is not due to managerial ownership. Managerial
ownership does not explain firm characteristics such as investment and value.

The results from Anderson and Reeb (2003) provided compelling empirical support for
the family firm structure, and it was their findings that were the motivation for this paper.
In their study, Anderson & Reeb (2003) identified 141 family firms from the 403 non-
banks, non-utility members of the S&P 500 index. Companies were reported as those
with ownership stakes held by founding family members or companies that had founding
family members on the board. The average family share holding is reported to be 18%. In
their study, they found that the ROA increased from 15.05% to 16.05% for family firms
and that on average family firms were valued higher. Tobin's Q, the proxy Anderson and
Reeb (2003) used for firm value, was found to be 10% higher on average for family
firms. Anderson and Reeb (2003) also found that by employing instrumental variable regression, they were able to show that ownership influences performance. They were also able to show that family firms have an incentive to keep ambitious managers at bay and that family members are more likely to have better information about business operations.

To date, no empirical work has been done that attempts to determine whether family ownership makes a difference to the firm’s value, or profitability for Canadian companies.

Arguments Against Family Firm Ownership

A common belief is that family control of a publicly traded company is a less profitable and a less efficient structure than widely held ownership. Fama and Jensen (1983) found that concentrated control and ownership exchanges profits for private rents. The findings of the empirical work done by Burkart, Panunzi and Shleifer (2003) that firm resources are applied to projects and ventures that are not in the best interest of all shareholders, supports the claim that family firms are inefficient.

The empirical work done by Hanlon, Kisheda, and Poza (2004) found that family firms are thought to be fraught with self-dealing, nepotism, entrenched management, and are guilty of self-utility maximization at the expense of minority shareholders. Family firms also often limit executive management positions to family members, suggesting a restricted labour pool from which to obtain qualified and capable talent potentially
leading to a competitive disadvantage for family firms Anderson & Reeb, (2003). Yammeesi & Lodh, (2004) found that it appears to be common practice that family firms will hire from within the family regardless of the ability the family member. Older generation family shareholders often resist in recruiting outsiders or professional managers capable of handling technological or economic changes Thomsen & Pederson (2000). This practice may hurt future earnings. Thomsen & Pederson also suggest that family ownership is related to a negative market to book value return on assets compared to the ownership of institutional investors.

Further to this Flamholtz (1986) found that family shareholders with substantial cash flow rights might have opportunities to take action that benefits their family members at the expense of firm performance.

3. Research Focus of this Study

The central question is the relation between family ownership and firm performance. Family influence factors may include family ownership, family control and influence, and family board participation. The impact of family influence on firm performance is an empirical issue measured in this paper, and broken down into two specific issues:

1. Are family firms more profitable or more valuable than non-family firms?
2. Does the level of family involvement or family members acting as CEO, or holding an executive position, (vice president and above), or holding a director’s position on the board of directors positively impact firm performance? It is
interesting to note that in Anderson and Reeb that the firm’s financial performance was better when the CEO was a founding family member compared to outside CEOs. This study differs from Anderson and Reeb in that it expands the measure of founding family participation from CEO to one that includes vice president positions and board of director seats. Anderson and Reeb (2003) included only family-firm CEO’s. This is a significant difference that is likely to affect the results of this study compared to those of Anderson and Reeb (2003).

4. The Sample

The final sample comprised of 251 firms listed on the TSX, and included in the S&P/TSX Composite Index. Banks and life insurance companies are excluded from our sampling due to the difficulty in calculating their Tobin’s q and the potential affect of government regulation on firm performance. The ownership information was obtained from the Globe and Mail governance index, which was based on the Inter-Corporate Ownership Directory, published quarterly by Statistics Canada, and from individual SEDAR filings. The final sample comprised of 165 widely held, non-family firms, and 86 family-held firms. Some company data used was compiled by the Globe and Mail, a Canadian newspaper, and published in its Report on Business (McFarland, 2002). Firm financial data used in this paper was obtained from company balance sheets and income statements, obtained from Globeinvestor.com, an online investment website affiliated with the Globe and Mail newspaper. The 5-year monthly stock-return volatility information was obtained from Yahoo Finance; a web-based service that publishes
historical financial information of publicly traded companies. Mergent Online was also used as a source of information for ownership and director information.

One challenge in collecting ownership data was determining what was qualified as a family firm. Family ownership was identified, measured, and tested with the following factors:

- Fractional equity ownership of the founding family, and/or the presence of family members on the board of directors.
- Dummy variable that equals one when the founding family holds shares in the firm, or when the founding family is present.

Non-family firms are those without family ownership or family presence on the board of directors. Family firms are those who continue to have equity ownership, or participate on the board of directors. Growth is estimated by taking the average growth rate of revenue over the past 5 years. Leverage is a long-term debt divided by total assets. Firm risk is estimated as a measure of the monthly stock return volatility over the previous 60 months. Firm size is measured as the natural log of the firm’s total assets. The firm’s age was also measured by taking the natural log of the years since the firm’s inception. Firm performance is a measure of ROA calculated by dividing net income by the book value of total assets. The proxy for firm value is Tobin’s q.
5. Control Variables

Several control variables were introduced into our analysis to control for firm characteristics. Firm size is the natural log of the book value of total assets. Firm growth is measured based as past revenue growth. Firm risk is estimated as the standard deviation of the monthly firm's stock returns for 60 months. Debt is controlled for in the capital structure by dividing long-term debt by total assets. Firm age is measured as the natural log of the number of years since the firm's inception.

6. Summary Statistics

Table I provides means, medians, standard deviations, and maximum and minimum values for the key variables in the sample. Table II illustrates the results of differences of mean tests between family and non-family firms. Table III provides a simple correlation matrix for the variables in the sample.

Family firms represent just over 34% of the sample. The means tests are based on time-series averages for each firm in the sample. It was found that 52.33% of family-firms have either the founder or a descendant from the founder's family at the helm of the firm. Family firms carry more long-term debt than non-family firms proportionate to the firm's total assets. The level of debt a firm carries maybe a factor in assessing the risk inherent in a company although family firms appear to be less inherently risky. The phenomenon is supported by the "family effect" (McConaughy 1994), where older, more established family businesses have a lower cost of capital because they are perceived to be more
stable and "in it for the long haul". Stock return volatility is used as a measure of firm risk. The findings of this paper show that stock return volatility is substantially lower for family firms than those that are widely held.

According to the findings of this study family firms are larger than non-family firms. Although, not a significant difference, the research indicates that family firms are older than non-family firms. This is consistent with larger size and higher long-term debt levels; return on assets is used to measure the firm's profitability and. It appears that the family's long-term perspective translates into a more efficient utilization of the firm's assets.

Consistent with the findings of Klein, Shapiro, and Young (2004), Tobin's q is not higher for family-owned firms, than it is for non-family owned firms and therefore we cannot say that family-owned firms are more valuable than non-family owned firms.

Table IV-A and IV- B reports the results of regressing firm performance on family ownership. Tobin's q is the market value of assets divided by the replacement cost of assets. Family firm is family ownership of the firm's founding family, and is represented as a binary variable that equals one when the founding family is present in the firm. Return on Assets is net income divided by total assets. Family firm is binary t-values are in parentheses.
The relationship between firm value and firm size was found to be significant and inverse with larger firms having a lower Tobin’s $q$. The relationship between firm leverage (assets/debt) and Tobin’s $q$ is significant, and inverse. A positive but statistically insignificant relationship exists between the family presence and the return on assets. Surprisingly, no statistical relationship appears to exist between the participation of the founding family in management and either ROA or Tobin’s $q$ while firm size has a significant effect on ROA, but it does not make a significant contribution towards firm value.

7. Comparing the results with the results from Anderson and Reeb as illustrated in Table V.

In the Anderson and Reeb study, when ROA was calculated based on net income, the relationship was significant and positive for family firms. The findings for Canadian family firms were positive, but not significant. Tobin’s $q$ is a proxy for firm value. Anderson and Reeb reported a positive and significant difference for family firms. The findings for the sample of Canadian firms differed from those of the Anderson & Reeb study. For Canadian firms there is no significant relationship between Tobin’s $q$, or firm value and the presence of the founding family.

Stock return variability was used as a proxy for investment risk in family firms. This measure was found to be positive but insignificant compared to non-family owned firms in the Anderson and Reeb study. Stock return volatility for Canadian family firms
however was found to be positive and significant which implies that Canadian family firms are less risky than non-family firms.

In the Anderson and Reeb study, the performance of family firms with the presence of a CEO who is a descendant from the founder family is positive and significant. For Canadian firms this is not the case. The difference is positive, but not statistically significant.

8. Discussion of the Comparison of the paper’s results with Anderson and Reeb’s results

There are a number of factors that may contribute to the differences between family firms in Canada, and those south of the border. These factors may relate to the different attitudes about what the family business means to families in their respective country, as well as the perceived complexity of the business succession and ownership transfer process.

In the United States for example the family firm is perceived as a legacy to be passed on to the next generation. U.S. founding families consider the family firm to be an extension of the family. This may contribute to the success of family firms found by Anderson and Reeb (2003). Specifically Mark Cassen and Ralph Chami suggest that founding families views their firms as an asset to pass to family members or their descendants, rather than wealth to consume during their lifetime. In the US, entrepreneurial families feel that the family’s name is tied to the firm value and the family therefore has the incentive to
protect its' name by creating safeguards to diminish agency conflict and maximize firm value (Anderson and Reeb, 2003).

According to a survey of Canadian family business owners done by Deloitte and Touche, and The University of Waterloo, family business owners view their businesses as a source of generating wealth. When Canadian family business owners were asked to indicate their primary role for their business, a source of income was chosen as a primary role by 78% with a source of retirement and a source of family wealth tied for second at 46%. Only 22% of Canadian family business owners surveyed responded that their business has a role of family pride, and only 14% included it as a legacy to succeeding generations. Clearly a greater priority is placed on the family firm's value in the US than in Canada. This may contribute to explaining the difference in Tobin's $q$ for Canadian family businesses vs. U.S. family firms.
9. Summary and Conclusion

In Canada, no significant evidence exists supporting the hypothesis that family-owned firms are more profitable than non-family owned firms. While family firm return on assets is higher than that of all firms in the sample, the difference is not statistically significant. This result is inconsistent with Anderson & Reeb 2003, which found that family firms with a higher return on assets that were statistically significant.

Tobin’s q for family firms is not higher that this measure for non-family firms. Since Tobin’s q is the proxy used for firm value, there is no support for the claim that family firm’s are worth more than non-family firms. Family business owners in the U.S. clearly place a greater priority on creating family firm value than business owners in Canada. This could explain the difference in Tobin’s q for Canadian family businesses vs. family businesses.

In Canada, it does not appear that family firms are neither more valuable nor more profitable than non-family owned firms. Although these firms continue to make a significant contribution to the Canadian economy in terms of output and job creation, based on the results of this study, they do not appear to be a superior investment choice.
10. References


### Summary Statistics (Table I)

<table>
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<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Max.</th>
<th>Min.</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Term Debt/Total Assets</td>
<td>8.93%</td>
<td>4.39%</td>
<td>74.85%</td>
<td>0.25%</td>
<td>13.08%</td>
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<tr>
<td>Stock Return Volatility (monthly)</td>
<td>1.13%</td>
<td>9.66%</td>
<td>31.19%</td>
<td>1.42x10-3%</td>
<td>6.96%</td>
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<tr>
<td>Ln (Total Assets) ($000,000)</td>
<td>21.20</td>
<td>20.68</td>
<td>N/A</td>
<td>N/A</td>
<td>1.47</td>
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<td>Firm age (natural log of years)</td>
<td>2.61</td>
<td>2.77</td>
<td>4.30</td>
<td>0.69</td>
<td>0.92</td>
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<td>0.87%</td>
<td>0.54%</td>
<td>9.51%</td>
<td>0.41%</td>
<td>1.26%</td>
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<td>Return on Assets</td>
<td>15.53%</td>
<td>4.21%</td>
<td>300.81%</td>
<td>-34.33%</td>
<td>65.90%</td>
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<td>Return on Equity</td>
<td>43.52%</td>
<td>11.14%</td>
<td>1614.74%</td>
<td>-747.20%</td>
<td>176.74%</td>
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<td><strong>Non Family Firms:</strong></td>
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<td>Long Term Debt/Total Assets</td>
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<td>1.15%</td>
<td>0.58%</td>
<td>15.62%</td>
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<tr>
<td>Return on Assets</td>
<td>4.17%</td>
<td>3.10%</td>
<td>174.67%</td>
<td>-139.77%</td>
<td>29.96%</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>0.97%</td>
<td>7.17%</td>
<td>446.96%</td>
<td>-630.10%</td>
<td>66.81%</td>
</tr>
</tbody>
</table>

(A) The stock return volatility is a measure of the change in monthly stock price over a 60-month period ending October 31, 2004. The monthly change in the S&PTSX index was used as a proxy for non family firms. The difference in the volatility measures may be the result of less trading and lower liquidity of family owned firms.
**Difference of Means Test (Table II)**

<table>
<thead>
<tr>
<th></th>
<th>Family Firms</th>
<th>Non-Family Firms</th>
<th>t-statistic</th>
<th>Significant at 5% level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Firms</td>
<td>86</td>
<td>165</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO's of Founder family %</td>
<td>52.33%</td>
<td>0</td>
<td>10.21</td>
<td></td>
</tr>
<tr>
<td>Outside CEO's %</td>
<td>47.67%</td>
<td>100.00%</td>
<td>-10.21</td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>0.8711%</td>
<td>1.1506%</td>
<td>-0.02</td>
<td></td>
</tr>
<tr>
<td>Long term debt/Total Assets</td>
<td>12.290%</td>
<td>5.150%</td>
<td>1.96</td>
<td></td>
</tr>
<tr>
<td>Stock Return Volatility (monthly)</td>
<td>1.1256%</td>
<td>4.828%</td>
<td>4.93</td>
<td></td>
</tr>
<tr>
<td>Total Assets (Ln)</td>
<td>21.349</td>
<td>20.435</td>
<td>5.16</td>
<td></td>
</tr>
<tr>
<td>Firm Age (Ln)</td>
<td>2.6122</td>
<td>2.2827</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Return on Assets (3 year average)</td>
<td>15.5315%</td>
<td>4.167%</td>
<td>1.59</td>
<td></td>
</tr>
<tr>
<td>Tobin's q</td>
<td>1.4693</td>
<td>1.7069</td>
<td>-1.65</td>
<td></td>
</tr>
</tbody>
</table>

Provides difference of means tests between family and non-family firms, and indicates a 5% level of significance.
### Correlation Data (Table III)

<table>
<thead>
<tr>
<th></th>
<th>Family Firm</th>
<th>ROA</th>
<th>Tobin’s q</th>
<th>Founding Family CEO</th>
<th>Size</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Firm</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0.1915</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobin’s q</td>
<td>-0.1439</td>
<td>-0.0338</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founding Family CEO</td>
<td>0.6595</td>
<td>0.1141</td>
<td>-0.0940</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.2573</td>
<td>0.1450</td>
<td>-0.3523</td>
<td>0.0587</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.1450</td>
<td>0.1303</td>
<td>-0.0959</td>
<td>-0.1261</td>
<td>0.4364</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

**Variable Definitions:**

- **Tobin’s q**: (Book value of liabilities plus market value of common equity), divided by the book value of assets.
- **ROA**: Return on assets calculated as Net Income divided by the book value of assets.
- **Founding family CEO**: The presence of the founding family in the firm’s senior management at the executive level (i.e. VP and above), or holds a director position on the board of directors.
- **Size**: The natural log of total assets of the firm.
- **Age**: The natural log of the age of the firm in years.
### ROA Regressed on Family Ownership (Table IV-A)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-62.1614</td>
<td>(-2.5270)</td>
</tr>
<tr>
<td>Family Firm</td>
<td>14.0427</td>
<td>(2.9584)</td>
</tr>
<tr>
<td>Founder's Family Management Participation</td>
<td>3.3646</td>
<td>(0.5986)</td>
</tr>
<tr>
<td>Firm age (Ln of Years)</td>
<td>3.4962</td>
<td>(1.8919)</td>
</tr>
<tr>
<td>Firm Size (Ln of Total Assets)</td>
<td>2.5057</td>
<td>(2.0419)</td>
</tr>
<tr>
<td>Leverage (Assets/Debt)</td>
<td>-13.9406</td>
<td>(-0.8450)</td>
</tr>
<tr>
<td>Tobin's q</td>
<td>0.8369</td>
<td>(0.4953)</td>
</tr>
<tr>
<td>Growth (Gross Revenue)</td>
<td>0.0012</td>
<td>(0.0253)</td>
</tr>
<tr>
<td>Adjusted R squared</td>
<td>0.0450</td>
<td></td>
</tr>
</tbody>
</table>

*<small>t-stat significant at the 5% level</small>*

**Variable Definitions:**

- **Family firm** is a binary variable that equals one when the founding family is present in the firm.
- **Founder Family Management Participation** is a binary variable that equals one when the founding family is present in management at the executive level (i.e. VP and above), or holds a director position on the board of directors.
- **Firm age** is the natural log of the age of the firm.
- **Firm size** is the natural log of the total assets of the firm.
- **Leverage** is the ratio of total assets over total debt of the firm.
- **Growth** is the monthly growth of the firm's gross revenue.
Family Ownership Regressed On Tobin's Q (Table IV-B)

<table>
<thead>
<tr>
<th></th>
<th>Tobin's q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.5974</td>
</tr>
<tr>
<td></td>
<td>(11.3354)</td>
</tr>
<tr>
<td>Family Firm</td>
<td>-0.0261</td>
</tr>
<tr>
<td></td>
<td>(-0.2529)</td>
</tr>
<tr>
<td>Founder's Family</td>
<td>-0.1558</td>
</tr>
<tr>
<td>Management Participation</td>
<td>(-1.2818)</td>
</tr>
<tr>
<td>Firm age (Ln of Years)</td>
<td>0.0499</td>
</tr>
<tr>
<td></td>
<td>(1.2466)</td>
</tr>
<tr>
<td>Firm Size (Ln of Total Assets)</td>
<td>-0.1909</td>
</tr>
<tr>
<td></td>
<td>(-7.4303)</td>
</tr>
<tr>
<td>Leverage (Assets/Debt)</td>
<td>-1.8984</td>
</tr>
<tr>
<td></td>
<td>(-5.419)</td>
</tr>
<tr>
<td>Growth (Gross Revenue)</td>
<td>0.0008</td>
</tr>
<tr>
<td></td>
<td>(-0.7507)</td>
</tr>
<tr>
<td>Adjusted R squared</td>
<td>0.1594</td>
</tr>
</tbody>
</table>

_t-stat_ significant at the 5% level.

**Variable Definitions:**

**Family firm** is a binary variable that equals one when the founding family is present in the firm.

**Founder Family Management Participation** is a binary variable that equals one when the founding family is present in management at the executive level (ie. VP and above), or holds a director position on the board of directors.

**Firm age** is the natural log of the age of the firm.

**Firm size** is the natural log of the total assets of the firm.

**Leverage** is the ratio of total assets over total debt of the firm.

**Growth** is the monthly growth of the firm's gross revenue.
### Comparison of Results (Table V)

<table>
<thead>
<tr>
<th></th>
<th>Anderson &amp; Reeb 2003</th>
<th></th>
<th>Current Study</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Firms</td>
<td>Non-family Firms</td>
<td>t-stat</td>
<td>Family Firms</td>
</tr>
<tr>
<td>Number of Firms</td>
<td>141</td>
<td>262</td>
<td></td>
<td>86</td>
</tr>
<tr>
<td>Tobins’s q</td>
<td>1.59</td>
<td>1.32</td>
<td><strong>3.14</strong></td>
<td>1.4693</td>
</tr>
<tr>
<td>ROA (Ni)</td>
<td>6.07%</td>
<td>4.70%</td>
<td><strong>2.81</strong></td>
<td>15.53%</td>
</tr>
<tr>
<td>Long term Debt to Assets</td>
<td>18.54%</td>
<td>19.18%</td>
<td>-0.44</td>
<td>12.29%</td>
</tr>
<tr>
<td>Growth</td>
<td>2.10%</td>
<td>2.12%</td>
<td>-0.07</td>
<td>0.87%</td>
</tr>
<tr>
<td>Stock Return Volatility</td>
<td>0.283</td>
<td>0.279</td>
<td>0.48</td>
<td>1.13%</td>
</tr>
<tr>
<td>Total Assets</td>
<td>22.99</td>
<td>23.431</td>
<td><strong>3.73</strong></td>
<td>21.349</td>
</tr>
<tr>
<td>Firm Age</td>
<td>4.33</td>
<td>4.48</td>
<td><strong>3.13</strong></td>
<td>2.6122</td>
</tr>
</tbody>
</table>

_t-statistic_ significant at the 5% level.