

Family Firm Succession: An Examination of the 2007 Survey of Business Owners

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ABSTRACT

Family business literature has thrived in the past decades, but research on the succession within family is scant and most studies examined large public firms. Family ownership, management control and succession may differently affect the performance measures of the firms in different sizes, and we analyze the Census Bureau's 2007 Survey of Business Owners with more than 500,000 businesses, which includes both large and small firms and suffers less survivorship bias. On average, family firms perform poorly in terms of receipts, employment, payroll, and labor productivity. However, family firms involving a second generation owner-manager show better performance in all measures, while those managed only by founder-owner show worse performance. These results from a very large sample of mostly small firms are unique and contrary to the previous large-firm study results. After restricting the sample to about 2,000 firms large enough to be listed on a US stock exchange, we find results consistent with the previous literature.

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Family businesses started from the very early age of trade, and some have lasted more than a millennium. An inn in Japan has been in the same family since 718, while a Japanese construction company has existed from 578 to 2006 (Wooldridge, 2015). Academic studies on the businesses controlled by founding family members have thrived in the past couple decades (Dyer, 2006; Gedajlovic, *et al.*, 2012), but still present mixed evidence on family firm performance. Early studies find that family firms perform better than non-family firms in terms of efficiency, Tobin's q or return on assets (ROA) for large firms like those listed in BusinessWeek CEO 1000 or S&P 500 (McConaughy, Matthews and Fialko, 2001; Anderson and Reeb, 2003a) while Mazzola, Sciascia and Kellermanns (2013) find that family ownership has an inverse-U relationship with ROA among small private firms in Italy.

More recently, performance by family successors has been examined. Villalonga and Amit (2006) and Perez-Gonzalez (2006) report negative performance among 2nd generation family leaders in terms of firm value or profitability for the US firms on the Fortune 500 list and COMPUSTAT database, respectively. Bennedsen, *et al.* (2007) and Miller, *et al.* (2007) also find negative profitability for family succession, and Chang and Shim (2015) find transition from family to professional CEOs is positively related to accounting performance among public Japanese firms. Such negative performance by next generation family leaders, however, has not been universal among recent studies (Luo and Chung, 2005; Yoo, Schenken and Kim, 2014; Minichilli, *et al.*, 2014).

Family firm performance in relation to intergenerational succession needs more examination. Past family firm studies have been mainly focused on large public companies with available data, or proprietary samples of small private firms, and difficult to generalize the findings to a different set of firms. We argue that sampling bias is widespread among family firm studies and especially a significant survivorship bias exists in the studies of large firms. In this study, we fill the gap in the literature by examining more than half million business establishments and their owner profile information from the US Census Bureau's 2007 Survey of Business Owners (SBO), which surveyed more than two million private and public businesses in a wide range of size.

We find that on average family firms generated lower receipts, less employment, less payroll and less labor productivity. We also find that family firms involving a 2nd generation owner-manager experience better performance in all measures, while family firms managed only by founder-owner show worse performance. These findings are different from the previous studies of large firms. To reconcile our results with the large-firm studies, we then limit the sample to the firms with at least \$100M receipts, which is the minimum requirement for a US exchange listing. For this subset of about 2,000 large firms, we find poor performance among the firms only managed by 2nd generation owners, consistent with the previous literature. We conclude that the family effects on firm performance are different between large and small firms.

Previous literature on family firm performance and succession will be reviewed in the next section, followed by the description of this study's sample and data. Then, we report the empirical results for the whole SBO sample and those for the subset of large firms. The final section of conclusions and discussions will conclude this study.

Family Business Succession and Performance

Agency-based studies suggest that managerial ownership is positively related to firm value due to reduced agency costs (Jensen and Meckling, 1976; Fama and Jensen, 1983, Anderson, Mansi and Reeb, 2003). Firms controlled by founding family also benefit from reduced agency costs. In addition, non-managing family members work as effective monitors in place in family firms (DeAngelo and DeAngelo, 1985; Combs, *et al.*, 2010). Family owned firms may be more valuable because owner managers can enter into handshake deals (Steier, 2001) or make timely strategic decisions (Gedajlovic, Lubatkin and Schulze, 2004) especially when information is incomplete or unavailable (Alvarez and Busenitz, 2001). McConaughy, *et al.* (1998) find among the firms on the *Business Week CEO 1000* list that founding family control is positively related to various performance measures like sales growth, R&D and P/E multiples. McConaughy, Matthews and Fialko (2001) find similar results for market to book ratio, profit margin and cash flow per employee. Anderson and Reeb (2003a) report that family firms among S&P 500 during 1992-1999 had better performance than non-family firms in terms of Tobin's q and return on assets (ROA).

Controlling families, however, may also have negative effects on firm performance. Families may be prone to extract private benefits through on the job consumption, suboptimal contracting against the other firms related by blood or marriage, etc. Family members are likely to allow ineffective family CEOs in office, often resulting in managerial entrenchment. Family member's favoritism towards kins may discourage non family manager's efforts (Lubatkin, Ling and Schulze, 2007). Gomez-Mejia, Nunez-Nickel and Gutierrez (2001) find among daily newspapers in Spain during the 1966-1993 period, that CEO tenure is related to performance for those without family ties, but not for those with family ties. Filatotchev, Lien and Piesse (2005)

find for 228 public firms in Taiwan that family ownership is not related to performance measures like ROA, market-to-book ratio or earnings. Recently, Mazzola, Sciascia and Kellermanns (2013) examine 294 small private firms in Italy, and find that family ownership has an inverse-U relationship with ROA. Luo and Chung (2005) also find among top 100 business groups in Taiwan that group ROA is increasing then decreasing on the percentage of family members in inner circle.¹

We argue that family ownership decreases firm value more among small firms. First, small firms are less likely to need professional managers and to benefit from reduced agency costs. Second, founding families of small firms are more likely to extract private benefits through on the job consumption and suboptimal contracting based on blood or marriage relationship. Third, family owners of small firms are more likely to allow ineffective family CEOs in office due to weak governance systems. We propose the following hypothesis:

H1: Family ownership is negatively related to the firm performance among small firms.

In a survey of top executives in 272 Canadian family firms, succession to the next generation is very common and the No. 1 concern for them (Chua, Chrisman and Sharma, 2003). Intrafamily conflict and ill-prepared family management may cause poor post-succession satisfaction and thus poor performance (Sharma, *et al.*, 2001; Sharma, Chrisman and Chua, 2003). Lack of breadth of information, knowledge and skills, and a negative signal to investors about weak corporate governance are also negative factors for non-professional family successors. Villalonga and Amit (2006) examine the inter-generational succession among Fortune 500 firms during 1994-2000, and conclude that 2nd generation family leaders destroy firm value. Perez-Gonzalez (2006) examine the U.S. firms in COMPUSTAT in 1994 and find that “firms where incoming CEOs are related to the departing CEO, to a founder, or to a large

¹ We calculated from their study that the threshold lies around 54% family members in inner circles.

shareholder by either blood or marriage, underperform in terms of operating profitability and market-to-book ratios, relative to firms that promote unrelated CEOs.” Chang and Shim (2015) find public Japanese family firms that transition from family to professional CEOs outperform (in ROA and operating ROA) those that maintain family leadership, especially when families maintain high ownership but leave no legacy.

More recent studies show mixed results depending on firm size or succession type. Bennedsen, *et al.* (2007) find for a sample of 5,334 successions during 1994-2002 in private and public firms in Denmark, that family succession has a large negative causal impact on operating profitability on assets, especially in larger firms. Miller, *et al.* (2007) also report that firms controlled by 2nd generations are less profitable than those controlled by founders for Fortune 1000 firms but not for a random sample of 100 smaller public firms. Yoo, Schenken and Kim (2014) find for Korean exchange-listed firms, that Tobin’s q is higher when the firm’s largest shareholder is the founder or a non-first son especially with outside block holding. Minichilli, *et al.* (2014) report for top 1000 private and public Italian family-controlled firms that industry-adjusted ROA is negatively related to CEO succession *per se*, but positively related to relay succession (by an heir apparent), horse race succession (among several internal candidates), and outside non-family succession. Relationships became negative for horse race and outside CEO variables when interacted with family board ratio. Anderson, Duru and Reeb (2009) find for 2000 large U.S. industrial firms from COMPUSTAT, positive relationships between Tobin’s q and ownership levels for both founders and heirs, but the relationships becomes negative when interacted with opacity level.

Bjuggren and Sund (2002) argue that family firms will be inherited rather than sold to outsiders when inheritance maximizes firm value due to knowledge idiosyncrasy. Valuation

discounts due to private nature of trade secret and liquidity constraint are higher among small firms, and family succession may lead to a higher firm value than outside succession among small firms. Sources of valuation gains also include intangible capabilities like superior reputation (Dyer, 2006), exclusive personal network (Lester and Cannella, 2006) and family-derived social capital (Arregle, *et al.*, 2007). Those intangible values further enhanced along the subsequent generations are stronger among small firms than large firms with formal organizational structures, and we propose the following hypothesis:

H2: Management by second generation founding family member is positively related to the firm performance among small firms.

Sample and Variables

The area of family succession and performance research still needs more examination. Past family firm studies have mainly focused on large companies with publicly available data, or proprietary samples of small private firms. Survivorship bias, however, exists among large public firms, and the results from a proprietary sample of private firms are difficult to generalize across firms of different size, stage and public/private status. We fill the gap in the literature by examining the relationship between family succession and firm performance for a wide spectrum of firms from the 2007 Survey of Business Owners (SBO).

SBO 2007 was conducted by the U.S. Census Bureau and has a very high response rate since Title 13 of the United States Code provides for mandatory response. SBO includes all nonfarm businesses filing IRS tax forms as sole proprietorships, partnerships or any type of corporation and with receipts of \$1,000 or more. While studies of a proprietary sample of private firms suffer from generalization problems, studies of the sample of only publicly listed firms suffer from survivorship bias since about one third of family firms survive the succession to the

second generation (Davis and Harveston, 1998; Handler, 1992). SBO database will suffer significantly less from survivorship bias and size bias than the data samples of large publicly traded companies, and have been used in the literature (Mora and Davila, 2014; Wang and Liu, 2015).

The Public Use Microdata Sample (PUMS) file created for the 2007 SBO includes information on business owner like age, education, race and indicators of having founded or inherited the business as well as on characteristics of business establishments like receipts, employment, year of establishment, and whether business is owned by a family. SBO excludes the following sectors: Crop and animal production (NAICS 111, 112), rail transportation (482), postal service (491), monetary authorities-central bank (521), funds, trusts, and other financial vehicles (525), religious, grant-making, civic, professional, and similar organizations (813), private households (814), and public administration (92).

2007 SBO has a record of 2,165,680 businesses, which is the largest database for U.S. businesses. The key survey questionnaire to identify the family ownership is Questionnaire 9 B; *“In 2007, did two or more members of the same family own the majority of this business? (Family refers to spouses, parents/guardians, children, siblings, or close relatives.)”*² In this study, any firm that answered “yes” to this question is categorized as a family firm. 1-owner firms might have answered “no” and could wrongly be categorized as non-family firms. Hence we exclude 1-owner firms in our study so that we can categorize the family business using the response to the above question. After the exclusion, the number of businesses with more than 1 owner and responded to the family business question is 634,296.³

² This is a very strict definition of family firm.

³ 70.7% of the businesses that responded to SBO 2007 were single owned.

SBO has the information on owner characteristics such as how each became the owner of the business and whether he manages the business, which are the key variables for this study. However, SBO has ownership information for only the 4 largest owners. For 5+ owner businesses, SBO doesn't have the characteristics on all the family owners. To study the effects of family owners on the firm, we exclude 5 or more owner firms. The resulting sample, consisting of 2, 3, and 4-owner firms, has 540,398 number of observations.

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

Table 1 reports the distributions between family firms and non-family firms. 73.8 percent among 540,398 businesses are majority owned by two or more members of the same family. Such 398,880 businesses are marked 'family-owned' (*Family*=1) and the other 141,518 are not (*Family*=0) in this study. Industry sector distribution between family owned and non-family owned firms is also reported in Table 1. Largest number of businesses are in retail trades (NAICS 44; 14.4%), professional, scientific and technical services (NAICS 54; 12.6%), and construction (NAICS 23; 11.5%). Higher percentage of businesses are family owned in agriculture, forestry, fishing and hunting (NAICS 11; 87% family-owned), retail trade (NAICS 44; 82%), other services (NAICS 81; 81%), transportation and warehousing (NAICS 48; 80%), mining, quarrying, and oil and gas extraction (NAICS 21; 78%), and construction (NAICS 23; 78%) sectors, while family ownership is less noticeable in the following sectors: Professional, scientific and technical services (NAICS 54: 62%), health care and social assistance (NAICS 62: 65%), information (NAICS 51: 66%), and finance and insurance (NAICS 52: 66%).

***** Insert Tables 2 and 3 about here. *****

To measure the firm performance, we use 3 SBO variables: receipts (\$1,000), employment, and payroll (\$1,000). We create another performance measure, the labor productivity (*LaborProd*), by taking the ratio between receipts and employment. Receipts range from \$10,000 to \$5.9 billion and with a mean of \$409,560. Median employment is 8 while its mean is about 10 people because of right skewed distribution (e.g., max employment is 35,000). Average payroll is \$238,269 although it ranges from \$10,000 to \$1.5 billion. Labor productivity ranges from \$19 to \$138.2 million per employee, and its average is \$120,229. Because of the wide ranges and a few outliers in the performance variables we take the natural logs of these 4 performance variables; *ln Receipts*, *ln Employment*, *ln Payroll* and *ln LaborProd*. These 4 logged variables will be key performance measures for this study.

Table 2 lists the variables in this study and explains their measures, while Table 3 shows their descriptive statistics. SBO has not only information on business characteristics such as whether it is a family business but also has information on characteristics of the 4 largest owners.⁴ However, the survey doesn't explicitly ask whether each owner is a family member or not. But it has other information that we can use to infer whether the owner is a family member. The SBO variables that we use to identify family owners are;

Question 1: founded the business?

Question 2: inherited the business?

Question 3: received transfer or gift of business?

If an owner answered "yes" to any of these questions, we categorize him as a family member. Otherwise, he is classified as a non-family member.

In addition, SBO has another variable to identify whether the owner is involved in the firm management.

⁴ By restricting to 2-4 owner firms, we have information on all owners of the business.

Question 4: managed?

We use the responses to the above four questions from all the owners to identify whether the firm is managed by family founder and/or by family receiver. A business establishment is marked as '*Managed by Founder Only*' if the family business is managed by at least one owner who founded the business but not by any owner(s) who inherited or received the business. Specifically, there is at least one owner who responded to "yes" to both Questions 1 and 4 but there are no other owners who answered to "yes" to both Questions 2/3 and 4. Similarly, *Managed by 2nd Generation Only* variable takes the value of 1 if family business is managed by at least one owner who inherited or received transfer/gift of the business but not by any owner(s) who founded the business, and 0 otherwise. Lastly, *Managed by Founder and 2nd Generation* is 1 if family business is managed by at least one owner who founded the business AND by at least one other owner who inherited or received transfer/gift of the business, and 0 otherwise.

Those three family management variables are mutually exclusive and represent 34.3%, 5.9% and 2.1% of the sample businesses, respectively. The remaining 57.7% of the sample businesses were either non-family owned and/or managed by someone who purchased the business or managed by non-family managers.

Firm specific variables include *Year Established*, *Startup Capital* and *NumOwners*. *Year Established* is a categorical variable (1-9) that takes a higher value for more recently established businesses. A median business was established during the 1990-1999 period with the median years in business of 8-17. Since older firms have built product and process knowledge and know-hows for longer period, and have survived for longer period, we predict older firms will show better performance measures. *Startup Capital* is also a categorical variable (1-8) that corresponds to the total amount of startup capital. Median startup capital is \$25,000-\$49,999, small enough to

say a median business in our sample is a small business. *NumOwners* represents the number of business owners. Both *Startup Capital* and *NumOwners* proxy for scale and scope, and are expected to be positively related to performance measures. 19 industry indicator variables are controlled for in our study.

Other owner specific variables include *Age*, *BornUS*, *Education*, *PrmIncManage*, *Hispanic*, *White*, *Black*, *AmIndAlaska*, *Asian* and *Pacific*. *Age* is a categorical variable (1-6) that represents the age of the oldest owner among up to 4 owners reported in the SBO. A higher *Age* value means the owner is older. The oldest owner of a median business was between 55 and 64 years old in 2007. *BornUS* variable takes the value of 1 if any owner was born in the United States. 92 percent of the sample businesses in 2007 had an owner born in the U.S. *Education* is another categorical variable (1-7) and a higher value means the most educated owner among all owners is well educated. A median value is 6, representing at least one owner in a median business has a bachelor's degree. We expect *Education* improves performance through greater capability. *PrmIncManage* is an indicator variable that represents whether the business is the primary income source for any owner-manager. Only 57% of the sample businesses are the primary income source for at least one owner-manager. *PrmIncManage* is a proxy for owner-manager's motivation and we predict it to be positively related with performance measures. *Hispanic*, *White*, *Black*, *AmIndAlaska*, *Asian* and *Pacific* are also indicator variables that represent whether at least one owner of the business is Hispanic, White, Black, American Indian or Alaska native, Asian, and native Hawaiian or Pacific Islanders, respectively. 93% of the sample businesses had at least one White owner, while 6.8%, 6.6%, 2.8%, 1.1% and .2% of businesses had at least one Hispanic, Asian, Black, American Indian or Alaska native, and native Hawaiian or Pacific Islander owner, respectively.

Empirical Results with the Whole Sample

Table 4 reports bi-variate correlation coefficients among variables. *ln Receipts* is very highly correlated with *ln Employment* ($\rho=.782$) and *ln Payroll* ($\rho=.887$) as they are simultaneously influenced by business size. Interestingly labor productivity (*ln LaborProd*) is also correlated with receipts ($\rho=.604$), probably due to the economies of scale among large businesses. Family ownership indicator variable (*Family*) is negatively correlated with each performance measure, suggesting a need to further analysis of their relationships. *Managed By Founder Only* is negatively correlated with performance measures, while *Managed By 2nd Generation Only* and *Managed By Founder and 2nd Generation* are positively correlated, also building up the need to analyze their relationships with performance measures. As expected, business age (*Year Established*), *Startup Capital* and number of owners (*NumOwners*) are also correlated with performance measures. As predicted, owner characteristics like *Age*, *BornUS*, *Education*, and *PrmIncManage* are correlated with performance measures, as race and ethnicity variables show various correlations with performance measures.

***** Insert Tables 4 and 5 about here. *****

Table 5 reports the performance and control variable means of different groups. Average receipts among family-owned businesses is \$3.281 million while that among non-family owned businesses is \$5.104 million. The difference is both statistically and economically significant. Family businesses employ 16.78 people on average, which is lower than 27.08 people among non-family businesses. Average payroll among family businesses is less than half of that among non-family businesses (\$564,200 vs \$1,076,390). Even the labor productivity shows a difference

\$67,120 per employee (\$239,600 vs \$306,720). These mean differences between family and non-family are all statistically significant.

On average family-owned firms were established earlier with less startup capital and had less number of owners in 2007. While there seems no owner age difference, less percentage of the owners of family firms were born in the US (by 2.2%) or well educated than non-family business' owners. Ethnic and racial differences among family business owners and non-family business owners are existent but not economically significant.

Table 5 also reports the variable means for 4 sub-groups of family firms: managed by founder only (1), managed by 2nd generation only (2), managed by founder and 2nd generation (3), and managed by outsider only (4). In all four performance measures, family firms managed by 2nd generation only (2) have significantly higher performance than family firms managed by founder only (1). When family firm is managed by 2nd generation only (2), on average, it has \$8.486 million more receipts, hires 28.5 more employees, \$1.169 higher payroll, and \$71,210 higher labor productivity than when managed by founder only (1). When a family firm is jointly managed by founder and 2nd generation (3), the performance measures are between those of managed by founder only (1) and managed by 2nd generation only (2).

***** Insert Table 6 about here. *****

To further examine the effects of family ownership, management and succession on the performance measure after controlling for firm-specific and owner-specific characteristics as well as industry differences, we perform cross section regression analyses and report the results in Table 6. The four performance measures are *ln Receipts*, *ln Employment*, *ln Payroll* and *ln LaborProd*.

First, we test the effects of family ownership on the performance. Coefficients for the family majority ownership indicator are negative for all performance measures (-0.557, -0.329, -0.576 and -0.207) and both statistically and economically significant. Having a majority ownership by two or more members of a family is related with more than 50% reduction in receipts and payroll, with 33% lower employment, and with 21% lower labor productivity. These results support Hypothesis 1.

Second, we test the effects of family management types on the performance. Coefficients for *Managed by Founder Only* are negative and significant across all four performance measures. Specifically, among the family-owned firms, when a firm is managed by founding members but not by other family members, receipts, employment, payroll and labor productivity are lower by 21%, 6.5%, 9.8% and 2.4%, respectively. On the other hand, coefficients for *Managed by 2nd Generation Only* are positive and significant. When a family-owned firm is managed by at least one owner-manager who inherited or received the business but not managed by its founder, the receipts, employment and payroll are higher by 22.5%, 20%, and 25%, respectively. Labor productivity also increases by 1.2% in similar situations. Coefficients for *Managed by Founder and 2nd Generation* are also positive and significant. When a family-owned firm is jointly managed by at least one founder-owner and one 2nd generation owner, receipts, employment and payroll are higher by 15%, 14% and 19%, respectively. Labor productivity increases by 6% in this situation. These empirical results support Hypothesis 2.

Third, control variables have predicted effects. Firms established earlier, with higher startup capital, and more owners experience higher performance measures. Owner's age is positively related with receipts, employment and payroll, but negatively related with labor productivity. As expected, education level of owners and whether business is the primary source

of income to at least one owner-manager are positively related with all four performance measures. There exist some ethnicity and race influence on performance measures.

Empirical Results with Large Firms

Our findings in the previous section may seem opposite to the studies based on large public firms, which find family firms have higher performance than non-family firms (Anderson and Reeb, 2003) and 2nd generation management lowers performance (Villalonga and Amit, 2006). To reconcile the results with large firm studies, we analyze a sub-sample with only the large firms. Studies based on large U.S. firms relied on the samples of only publicly traded firms. To be listed in New York Stock Exchange or NASDAQ, a firm has to have total revenues greater than \$90 million or \$110 million among several listing requirements. We select the business from the SBO with receipts greater than \$100 million to form a sample of large-firms eligible for public listing.

***** Insert Table 7 about here. *****

Table 7 reports the descriptive statistics of the large-firm sample. Among more than 2,000 businesses with receipts higher than \$100 million in 2007 and with 2-4 owners, average and median receipts are \$187 million and \$160 million, respectively, while its maximum value is \$5.9 billion. Mean and median numbers of employees are 210 and 230, respectively. Mean and median payrolls are \$10.9 million and \$12 million, respectively. Interestingly, large firms' labor productivity is much higher than that of the whole sample. Mean and median labor productivity measures are \$891,068 and \$750,000 compared to \$120,229 and \$117,647 for the whole sample,

respectively. Authors argue higher productivity of large firms is the result of severe survivorship bias present in the sample of large firms.

64% of large firms are family firms, consistent with previous studies.⁵ Family succession is more progressed among large firms as 15%, 17%, and 3% of such firms are managed by only founders, only receivers, and both, respectively, compared to 34%, 6%, and 2% for the whole sample. Large firms were established much earlier with more startup capital and more owners. Owner characteristics, however, don't seem to be significantly different in economic sense.

***** Insert Table 8 about here. *****

Table 8 reports the means for sub-groups of large firm sample. Mean receipts and mean employment are not statistically different between family owned and other firms. Both payroll and labor productivity among family firms are significantly lower on average than non-family firms, which is opposite to the findings in the whole sample but consistent with the large firm literature. We also find similar results to the literature when comparing founder versus 2nd generation management. When family firms are managed by 2nd generation only (2), they hire less employees, have lower payroll and also lower labor productivity. In particular, the labor productivity of family firms managed by 2nd generation only (2) is \$2.041 million and significantly lower than that of family firms managed by founder only (1). Large family firms are still a little older and use less startup capital than large non-family firms. Race and ethnicity differences seem to be less prominent among large family firms. In sum, when only large firms are analyzed, the performance differences between family and non-family firms are lessened and

⁵ Anderson and Reeb (2003) reported that in 182 out of 403 S&P500 firms in 1992 or 45% of such firms, family have an equity ownership stake or board seat.

become opposite to the whole sample results. These results becomes stronger, when we control for firm-specific and owner-specific characteristics.

***** Insert Table 9 about here. *****

We analyze the effects of family firm and family management type using the same models in Table 6 but restricting the sample to large firms only. The results are presented in Table 9. For the sample of large firms, first, family ownership indicator no longer have significant effects on receipts and payroll. On the other hand, it increases the employment by 17.3%, opposite to the all sample result.⁶ In sum, these results for large firms are different from those for all sample in Table 6 and are consistent with the previous literature that analyzed only the large publicly traded firms such as Anderson and Reeb (2003). We argue that the negative effects of family firms on the performance for all sample are mostly profound in small firms. For large firms, family firms start to have positive effects on the performance, especially on the employment.

Second, for the family succession effects, we also find the opposite and smaller effects in the large firm sample. The strong negative effects of founder managed firms for all sample disappear for large firms. In addition, the strong positive effects of firms managed by both founder and receiver also disappear in large firms. On the other hand, the positive effects of receiver only managed firms in all sample now have the opposite and negative effects on employment and payroll for large firms. This negative effect of firms managed by 2nd generation only, when analyzing large firms only, is consistent with previous studies such as Villalonga and Amit (2006) which also studied large firms.

⁶ The effect on labor productivity is negative and expected, given no effect on the receipts but positive effect on the employment.

Conclusions

By examining SBO records, mostly consisting of small size businesses, we find the family ownership has negative effects but management by 2nd generation owner has positive effects on the performance measure. These results of all firms may seem different from the previous literature analyzing large firms only. When we limit the sample to only the firms large enough to be listed in a U.S. stock exchange, however, become consistent with the literature that analyzed large publicly traded firms (McConaughy, Matthews and Fialko, 2001; Anderson and Reeb, 2003a; Villalonga and Amit, 2006; Perez-Gonzalez, 2006). By analyzing a sample that includes not only large firms but also small firms, we argue that our findings can show the true family effects on the performance more in detail.

Our study showed that it is important to acknowledge that family ownership, management control and succession to next generation differently affect the businesses of different sizes and stages, and generalization of large-firm studies may be misleading without careful examination of their sample characteristics.

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Table 1. Sector Distribution of the Sample

NAICS	Description	Obs.	% of Total	Family	% of Sector	Non Family	% of Sector
11	Agriculture, Forestry, Fishing and Hunting	4,343	0.8%	3,784	87.1%	559	12.9%
21	Mining, Quarrying, and Oil and Gas Extraction	4,594	0.9%	3,586	78.1%	1,008	21.9%
22	Utilities	1,007	0.2%	748	74.3%	259	25.7%
23	Construction	62,093	11.5%	48,497	78.1%	13,596	21.9%
31	Manufacturing	38,349	7.1%	29,416	76.7%	8,933	23.3%
42	Wholesale Trade	37,112	6.9%	26,861	72.4%	10,251	27.6%
44	Retail Trade	77,970	14.4%	63,757	81.8%	14,213	18.2%
48	Transportation and Warehousing	22,805	4.2%	18,166	79.7%	4,639	20.3%
51	Information	10,821	2.0%	7,128	65.9%	3,693	34.1%
52	Finance and Insurance	22,872	4.2%	15,154	66.3%	7,718	33.7%
53	Real Estate and Rental and Leasing	51,768	9.6%	35,891	69.3%	15,877	30.7%
54	Professional, Scientific, and Technical Services	68,019	12.6%	42,193	62.0%	25,826	38.0%
55	Mgt of Companies and Enterprises	3,970	0.7%	2,675	67.4%	1,295	32.6%
56	Admin and Support and Waste Management and Remediation Services	28,421	5.3%	21,392	75.3%	7,029	24.7%
61	Educational Services	6,440	1.2%	4,928	76.5%	1,512	23.5%
62	Health Care and Social Assistance	25,661	4.7%	16,772	65.4%	8,889	34.6%
71	Arts, Entertainment, and Recreation	13,352	2.5%	10,136	75.9%	3,216	24.1%
72	Accommodation and Food Services	26,238	4.9%	19,683	75.0%	6,555	25.0%
81	Other Services (except Public Administration)	34,437	6.4%	28,020	81.4%	6,417	18.6%
99	Unknown	126	0.0%	93	73.8%	33	26.2%
Total		540,398	100.0%	398,880	73.8%	141,518	26.2%

Table 2. Variable Description

Variable	Description
<i>ln Receipts</i>	Natural log of business establishment receipts
<i>ln Employment</i>	Natural log of business establishment employment
<i>ln Payroll</i>	Natural log of business establishment payroll
<i>ln LaborProd</i>	Natural log of (business establishment receipts divided by employment)
Family	1 if two or more members of the same family own the majority of the business in 2007; 0 otherwise. Family refers to spouses, parents / guardians, children, siblings, or close relatives.
Managed by Founder Only	1 if family business is managed by at least one owner who founded the business; 0 otherwise
Managed by 2nd Gen. Only	1 if family business is managed by at least one owner who inherited or received transfer/gift of the business; 0 otherwise
Managed by Founder and 2nd Gen	1 if family business is managed by at least one owner who founded the business AND by at least one owner who inherited or received transfer/gift of the business; 0 otherwise
Year Established	1 if business was established before 1980; 2 if 1980-1989; 3 if 1990-1999; 4 if 2000-2002; 5 if 2003; 6 if 2004; 7 if 2005; 8 if 2006; 9 if 2007
Startup Capital	1 if total amount of startup capital amount is less than \$5,000; 2 if \$5,000-\$9,999; 3 if \$10,000-\$24,999; 4 if \$25,000-\$49,999; 5 if \$50,000-\$99,999; 6 if \$100,000-\$249,999; 7 if \$250,000-\$999,999; 8 if \$1,000,000 or more
NumOwners	Number of business owners
Age	1 if age of the oldest owner among 4 owners is under 25; 2 if 25-34; 3 if 35-44; 4 if 45-54; 5 if 55-64; 6 if 65 or over
BornUS	1 if any owner was born in the United States; 0 otherwise
Education	1 if the highest level of education among 4 owners is less than high school; 2 if high school; 3 if technical school; 4 if some college; 5 if associate's degree; 6 if bachelor's degree; 7 if master's degree or higher
PrmIncManage	1 if business is the primary income source for any owner-manager; 0 otherwise
Hispanic	1 if any owner self-classified as Hispanic or Latino; 0 otherwise. A Hispanic may be of any race.
White	1 if any owner self-classified as White; 0 otherwise
Black	1 if any owner self-classified as Black; 0 otherwise
AmIndAlaska	1 if any owner self-classified as American Indian or Alaska native; 0 otherwise
Asian	1 if any owner self-classified as Asian; 0 otherwise
Pacific	1 if any owner self-classified as native Hawaiian or other Pacific Islander; 0 otherwise

Table 3. Descriptive Statistics for the whole sample

	N	Min	Med	Max	Mean	S. D.
<i>ln Receipts</i>	503,763	2.30	5.99	15.59	6.0151	2.1903
<i>ln Employment</i>	324,428	0.00	2.08	10.46	2.2789	1.4471
<i>ln Payroll</i>	346,030	2.30	5.44	14.22	5.4734	1.7671
<i>ln LaborProd</i>	319,775	-3.97	4.77	11.84	4.7894	1.1319
Family	540,398	0	1.00	1	.7381	.4397
Managed By Founder Only	540,398	0	0.00	1	.3432	.4748
Managed By 2nd Gen. Only	540,398	0	0.00	1	.0588	.2353
Managed By Founder And 2nd Gen	540,398	0	0.00	1	.0211	.1437
Year Established	519,716	1	3.00	9	3.53	2.37
Startup Capital	366,110	1	4.00	8	3.91	2.25
NumOwners	540,398	2	2.00	4	2.29	0.60
Age	490,314	1	5.00	6	4.52	1.09
BornUS	489,022	0	1.00	1	0.92	0.27
Education	488,487	1	6.00	7	5.26	1.70
PrmIncManage	517,126	0	1.00	1	0.57	0.50
Hispanic	540,398	0	0.00	1	0.0677	0.25
White	540,398	0	1.00	1	0.9346	0.25
Black	540,398	0	0.00	1	0.0276	0.16
AmIndAlaska	540,398	0	0.00	1	0.0107	0.10
Asian	540,398	0	0.00	1	0.0660	0.25
Pacific	540,398	0	0.00	1	0.0024	0.05
<i>Valid N (listwise)</i>	<i>209,354</i>					

See Table 2 for variable descriptions.

Table 4. Correlations for the Whole Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 ln Receipts	1																			
2 ln Employment	.782**	1																		
3 ln Payroll	.887**	.866**	1																	
4 ln LaborProd	.604**	-.025**	.285**	1																
5 Family	-.151**	-.113**	-.181**	-.078**	1															
6 Managed By Founder Only	-.122**	-.162**	-.177**	-.052**	.431**	1														
7 Managed By 2nd Generation Only	.158**	.122**	.133**	.065**	.149**	-.181**	1													
8 Managed By Founder & 2nd G	.053**	.026**	.035**	.025**	.087**	-.106**	-.037**	1												
9 Year Established	-.359**	-.274**	-.312**	-.139**	-.071**	.087**	-.207**	-.074**	1											
10 Startup Capital	.319**	.262**	.236**	.095**	-.132**	-.197**	.023**	-.036**	-.028**	1										
11 NumOwners	.231**	.219**	.253**	.101**	-.160**	-.156**	.165**	.074**	-.092**	.190**	1									
12 Age	.150**	.151**	.169**	.055**	.002	-.083**	.125**	.051**	-.380**	.061**	.197**	1								
13 BornUS	.064**	.077**	.114**	.012**	-.035**	-.022**	.052**	.018**	-.115**	-.032**	.053**	.091**	1							
14 Education	.096**	.111**	.166**	.055**	-.166**	-.075**	.013**	-.003*	.027**	.120**	.163**	.050**	.056**	1						
15 PrmIncManage	.335**	.111**	.165**	.136**	.002	.222**	.156**	.105**	-.221**	.076**	.043**	-.032**	.015**	-.042**	1					
16 Hispanic	-.068**	-.037**	-.049**	-.031**	.009**	.021**	-.036**	-.004**	.102**	-.044**	-.021**	-.094**	-.182**	-.060**	-.010**	1				
17 White	.087**	.073**	.113**	.047**	-.042**	-.015**	.035**	.010**	-.105**	-.018**	.040**	.081**	.522**	-.008**	.024**	.015**	1			
18 Black	-.065**	-.023**	-.037**	-.054**	-.015**	.002	-.025**	-.008**	.073**	-.039**	-.016**	-.035**	-.031**	.019**	-.030**	.019**	-.399**	1		
19 AmInAlaska	-.038**	-.025**	-.029**	-.012**	.024**	.017**	-.012**	.001	.021**	-.025**	-.016**	-.018**	.017**	-.027**	-.007**	.024**	-.059**	-.008**	1	
20 Asian	-.053**	-.058**	-.080**	-.019**	-.002	.001	-.040**	-.011**	.093**	.044**	-.006**	-.076**	-.483**	.048**	-.010**	-.015**	-.626**	-.022**	-.018**	1
21 Pacific	-.019**	-.008**	-.010**	-.006**	.006**	.006**	-.006**	.000	.018**	-.011**	-.009**	-.014**	-.004**	-.008**	-.006**	.012**	-.038**	-.002	.001	.008**

See Table 2 for variable descriptions. * and ** denote that correlation is significant at the 5% and 1% level (2-tailed), respectively.

Table 5. Test of Mean Difference for the Whole Sample

	Whole sample	Non-family Firms	Family Firms	<i>Family Firms Managed by</i>			
				Founder only (1)	2 nd gen. only (2)	Founder & 2 nd Gen (3)	Outsider only (4)
Receipts	3,758.59	5,104.11	3,281.22	2,116.15	10,602.42	5,036.06	3,708.98
Employment	19.48	27.08	16.78	12.30	40.81	26.49	18.99
Payroll	698.33	1,076.39	564.20	408.41	1,578.27	917.85	610.79
LaborProd	259.55	306.72	239.60	233.12	304.32	275.18	232.12
Year Established	3.53	3.81	3.42	3.72	1.47	3.27	3.11
Startup Capital	3.91	4.43	3.74	3.28	4.54	3.94	4.24
NumOwners	2.29	2.45	2.23	2.10	2.65	2.81	2.22
Age	4.52	4.51	4.52	4.29	4.88	5.39	4.53
BornUS	0.92	0.93	0.91	0.91	0.98	0.94	0.90
Education	5.26	5.74	5.09	5.07	5.34	5.33	5.03
PrmIncManage	0.57	0.57	0.57	0.73	0.87	0.76	0.35
Hispanic	0.07	0.06	0.07	0.08	0.03	0.06	0.06
White	0.93	0.95	0.93	0.93	0.97	0.94	0.92
Black	0.03	0.03	0.03	0.03	0.01	0.02	0.02
AmIndian	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Asian	0.07	0.07	0.07	0.07	0.02	0.05	0.07
PacIsle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No. observations	540,398	141,518	398,880	172,592	23,183	32,871	135,981

All performance averages are different at 1% significance level based on the t-tests for family vs non family, founder (1) vs 2nd Gen (2), and founder (1) vs founder & 2nd Gen (3).

Table 6. Regression Results for the Whole Sample

	<i>ln Receipts</i>	<i>ln Employment</i>	<i>ln Payroll</i>	<i>ln LaborProd</i>
(Constant)	3.747*** 124.7	0.648*** 22.218	3.164 *** 95.598	4.035 *** 175.1
Family	-0.557*** -67.02	-0.329*** -42.81	-0.576 *** -65.56	-0.207 *** -33.94
Managed By Founder Only	-0.211*** -27.5	-0.065*** -8.657	-0.098 *** -11.45	-0.024 *** -4.013
Managed by 2nd Generation Only	0.225*** 14.26	0.201*** 15.02	0.25 *** 16.19	0.012 1.129
Managed by Founder & 2nd Generation	0.152*** 7.61	0.137*** 7.896	0.185 *** 9.304	0.06 *** 4.395
Year Established	-0.219*** -155.4	-0.162*** -109.8	-0.208 *** -128	-0.04 *** -34.5
Startup Capital	0.238*** 173.1	0.137*** 104.88	0.164 *** 110.42	0.047 *** 45.62
NumOwners	0.386*** 74.67	0.288*** 63.276	0.385 *** 73.515	0.077 *** 21.5
Age	0.011*** 3.66	0.039*** 13.55	0.047 *** 14.708	-0.013 *** -5.81
BornUS	-0.016 -1.25	0.142*** 11.087	0.155 *** 10.803	-0.145 *** -14.4
Education	0.069*** 36.84	0.046*** 25.846	0.081 *** 40.113	0.031 *** 22.19
PrmIncManage	0.955*** 145.2	0.272*** 41.713	0.479 *** 64.817	0.205 *** 39.9
Hispanic	-0.126*** -10.78	0.012 1.004	-0.034 *** -2.598	-0.058 *** -6.35
White	0.141*** 7.48	0.107*** 5.701	0.255 *** 11.988	0.073 *** 4.9
Black	-0.237*** -11.23	0.01 0.499	-0.081 *** -3.426	-0.175 *** -10.62
AmIndAlaska	-0.37*** -13.31	-0.166*** -5.669	-0.245 *** -7.382	-0.069 *** -2.98
Asian	-0.191*** -11.89	-0.142*** -8.975	-0.103 *** -5.747	0.039 *** 3.15
Pacific	-0.233*** -4.08	-0.042*** -0.688	-0.016 -0.23	-0.012 -0.25
18 Industry dummies	YES	YES	YES	YES
N	335,517	216,061	231,833	213,376
Adj. R2	0.382	0.230	0.276	0.251
F	5928.9	1844.6	2526.9	2042.8
p-value	0	0	0	0

t-stats are below coefficients. See Table 2 for variable descriptions. *, ** and *** denote statistical significance at the 10%, 5% and 1% level, respectively.

Table 7. Descriptive Statistics for the Large-Firm Sample (Receipts > \$100M)

	N	Min	Med	Max	Mean	S. D.
<i>ln</i> Receipts	2,064	12	11.98	16	12.1405	0.5532
<i>ln</i> Employment	2,063	1	5.44	10	5.3478	1.3946
<i>ln</i> Payroll	2,064	3	9.39	14	9.2966	1.2221
<i>ln</i> LaborProd	2,063	2	6.62	12	6.7924	1.3907
Family	2,064	0	1.00	1	0.6410	0.4798
Managed By Founder Only	2,064	0	0.00	1	0.1516	0.3588
Managed by 2nd Gen. Only	2,064	0	0.00	1	0.1783	0.3829
Managed by Founder and 2nd Gen.	2,064	0	0.00	1	0.0329	0.1785
Year Established	2,025	1	1.00	9	1.7956	1.1765
Startup Capital	1,008	1	7.00	8	5.6468	2.4742
NumOwners	2,064	2	3.00	4	2.7204	0.7943
Age	2,019	2	5.00	6	5.0664	0.8835
BornUS	2,016	0	1.00	1	0.9479	0.2223
Education	1,998	1	6.00	7	5.8048	1.3094
PrmIncManage	2,037	0	1.00	1	0.740	0.440
Hispanic	2,064	0	0.00	1	0.0392	0.1942
White	2,064	0	1.00	1	0.9758	0.1538
Black	2,064	0	0.00	1	0.0092	0.0955
AmIndAlaska	2,064	0	0.00	1	0.0005	0.0220
Asian	2,064	0	0.00	1	0.0378	0.1907
Pacific	2,064	0	0.00	0	0.0000	0.0000
<i>Valid N (listwise)</i>	989					

See Table 2 for variable descriptions.

Table 8. Test of Mean Difference for the Large-Firm Sample (Receipts > \$100M)

	Whole sample	Non-family Firms	Family Firms	<i>Family Firms Managed by</i>			
				Founder only (1)	2 nd gen. only (2)	Founder & 2 nd Gen (3)	Outsider only (4)
Receipts	232,630	229,379	234,452	227,021	252,417	234,909	228,800
Employment	550.47	624.30	509.12	546.91	448.72	620.69	491.09
Payroll	23,070	27,291*	20,706*	22,463	19,420	23,948	19,658
LaborProd	3,002.6	3,545.3	2,698.4	4,112.9 [#]	2,041.1 [#]	3,052.0	2,236.8
Year Established	1.80	2.17	1.59	2.09	1.10	1.67	1.57
Startup Capital	5.65	5.85	5.52	4.90	5.25	4.77	6.28
NumOwners	2.72	2.64	2.76	2.61	2.98	3.13	2.62
Age	5.07	4.97	5.12	4.84	5.10	5.71	5.10
BornUS	.95	.95	.95	.86	.99	.95	.97
Education	5.80	5.99	5.70	5.69	5.90	5.72	5.59
PrmIncManage	.74	.74	.74	.92	.95	.91	.49
Hispanic	.04	.04	.04	.11	.02	.02	.02
White	.98	.98	.97	.94	1.00	.98	.98
Black	.01	.02	.00	.00	.00	.00	.00
AmIndian	.00	.00	.00	.00	.00	.00	.00
Asian	.04	.05	.03	.08	.00	.03	.02
PacIsle	.00	.00	.00	.00	.00	.00	.00
No. observations	2,064	741	1,323	282	302	165	550

* and # denote significant differences between pairs at 5% and 1% levels, respectively. All other performance measures are not significantly different from each other.

Table 9. Regression Results for the Large-Firm Sample (Receipts > \$100M)

	<i>ln Receipts</i>	<i>ln Employment</i>	<i>ln Payroll</i>	<i>ln LaborProd</i>
(Constant)	11.852 **	7.583***	10.661 **	4.269 ***
	28.128	8.422	13.030	4.977
Family	-.012	.173*	.097	-.186 **
	-.281	1.847	1.138	-2.077
Managed By Founder Only	-.002	-.147	-.115	.146
	-.035	-1.302	-1.112	1.349
Managed by 2nd Gen. Only	-.015	-.233*	-.288 *	.218 *
	-.258	-1.878	-2.552	1.845
Managed by Founder and 2nd Gen.	.066	.009	.009	.057
	.725	.046	.051	.308
Year Established	-.023	-.139***	-.116 **	.116 ***
	-1.604	-4.555	-4.185	3.994
Startup Capital	-.002	.008	.013	-.009
	-.258	.500	.982	-.651
NumOwners	.026	.095**	.045	-.069
	1.254	2.133	1.113	-1.623
Age	.039 *	.055	.036	-.016
	1.994	1.317	.955	
BornUS	-.097	.200	.224	-.297 *
	-1.199	1.150	1.422	
Education	-.001	-.020	.026	.019
	-.078	-.726	1.045	
PrmIncManage	.063	.038	.079	.025
	1.456	.412	.942	
Hispanic	-.102	.153	.046	-.255
	-1.208	.851	.282	-1.487
White	-.065	.015	.411	-.080
	-.446	.047	1.451	-.268
Black	.116	-.042	-.043	.158
	.659	-.112	-.125	.441
Asian	.074	.050	.287	.024
	.671	.214	1.338	.106
18 Industry dummies	YES	YES	YES	YES
N	990	990	990	990
Adj. R2	.019	.431	0.405	0.473
F	1.597	24.436	22.073	28.789
p-value	0.020	0.000	0.000	.000

t-stats are below coefficients. See Table 2 for variable descriptions. *, ** and *** denote statistical significance at the 10%, 5% and 1% level, respectively.