Home-based family firms, spousal ownership and business exit: a transaction cost perspective

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Abstract:

In this study, we compare family and non-family firms with respect to their exit due to financial reasons. We suggest that the principal dimensions of Transaction Cost Theory (TCT) (i.e., asset specificity, risk aversion, opportunism, and trust) may underlie governance decisions such as family vs. non-family firm and home-based spousal ownership in family firms which can consequently impact firm success/failure. Given the wide variations in the goals and internal structures of family firms, we specifically suggest that home-based family firms with spousal ownership will be less prone to exit than other firms. Indeed, the findings show that family firms are less likely to exit than non-family firms, and the interaction effects of spousal ownership and home-based business further reduce the exit probability of family firms. We conclude by discussing future research implications.

Keywords: family business | family firms | transaction cost theory | trust | governance | business exit

Article:

Introduction

Governance decisions that determine efficient boundaries appear to be of particular importance to the performance and long-term survival or exit of small business enterprises, and particularly family firms. However, to our knowledge, no systematic examination has been undertaken of such decisions in family business literature (Memili et al. 2011a, b). On the one hand, Transaction Cost Theory (TCT) in family business research suggests family firms' advantages in developing, maintaining, and appropriating value from generic non-tradeable assets that are firm-specific but generic in application (e.g., social and reputational capital and tacit knowledge) through configurations with other types of assets and unique governance characteristics, such as parsimony, personalism, and particularism (Carney 2005; Gedajlovic and Carney 2010). This is in line with other studies suggesting the resilience (e.g., Campopiano et al. 2018) and competitive advantages of family firms over non-family firms through the non-economic goals (e.g., Chrisman et al. 2012), intra-family succession intentions, reciprocal altruism (Lubatkin et

al. 2007), and social capital (e.g., Hoffman et al. 2006; Pearson et al. 2008) that shape their governance systems and create advantages in relation to searching, identifying, and exploiting opportunities (Chrisman et al. 2011; De Massis et al. 2016a; Patel and Fiet 2011).

On the other hand, using the TCT lens, Verbeke and Kano (2010) draw attention to bounded rationality and bounded reliability issues in family firms that can affect their survival in the long run, calling for studies to investigate the types of family firms that may be more able to deal with such issues in different contexts. Verbeke and Kano (2012) highlight that through preventing bifurcation bias (i.e., an expression of bounded reliability through asymmetric treatment of family vs. non-family assets, especially human assets), family firms can grow and succeed in the long run.

However, we still know little about the types of family enterprises that may be more resilient than others in terms of dealing with the financial challenges that play an important role in firm survival. As Chrisman et al. (2011) state, resilience is important for any organization, and this is, even more, the case for family firms wishing to pass a successful enterprise to their offspring. Therefore, the distinctive factors that affect family firms' exit decisions due to financial issues deserve more research attention.

In an attempt to fill these gaps in literature, this study examines two important research questions regarding family firms' exit decisions: (1) Are firms with family governance more or less likely to exit than non-family firms due to financial issues? (2) How and under what condition(s) do family firms exit more (or less)? We use TCT (Williamson 1975, 1985) as our theoretical lens and the concepts of human asset specificity, opportunism vs. trust, and risk aversion to explain why firms with family governance might differ from non-family firms in terms of exit. We also examine the contingencies (i.e., home-based operations and spousal ownership) that are likely to influence family firms' exit using a sample of over 1,200,000 firms from the 2007 Survey of Business Owners (SBO) dataset.

This study contributes to family and small business literature in several ways. First, our use of TCT to understand the business exit issue helps illustrate that the distinctive features of family enterprises affect the governance structures, operations, and firm outcomes such as financial failure or success, and are likely to differ from those of non-family firms. Specifically, we examine the business failure tendency of family vs. non-family firms with different forms of governance. Second, our study explores some of the conditions that limit/elevate the probability of family firm exit. We highlight the resilience of an under-researched group of family businesses, namely, home-based family firms owned by spouses. This adds to our knowledge of the heterogeneity of family firms and emphasizes the utility of TCT applications. By identifying important contingencies, we contribute to a better understanding of the differences among family enterprises, their governance (i.e., family vs. non-family as well as home-based spousal ownership contingency) and operations that are likely to have a material impact on decision-making and performance.

In the remainder of our paper, we review TCT literature, apply it to the family business context, and develop our hypotheses. Thereafter, we present our methodology and results. In the final

section, we discuss our findings and their implications for theory and practice and outline some conclusions.

Theoretical framework and hypotheses

Transaction cost theory

Economizing on costs is central to Transaction Cost Theory (TCT) (Williamson 1975, 1985), and hence the importance of governance structures, particularly ownership configurations that minimize transaction costs (Leiblein and Miller 2003; Walker and Weber 1984). As Williamson (1985) argues, rational economic reasons underlie organizing transactions one way or another. An important economic concern in TCT is contracting costs. With respect to governance decisions, firms are unable to maximize utilities (Simon 1955) and "contracts are normally incomplete" (Lafontaine and Slade 2007: 649). These constraints inevitably lead to satisficing behavior (Simon 1959) in the governance of transactions to deter the potential but unpredictable opportunism (Williamson 1985) of economic actors. A fundamental premise of TCT is that high asset specificity (i.e., the extent to which resources can be redeployed to other uses) leaves a firm vulnerable to opportunism (Williamson 1981).

Family versus non-family firms through the lens of TCT

In examining the family firms' propensity to exit due to financial issues, we build upon the main tenets of TCT (i.e., asset specificity, trust vs. opportunism, and risk aversion) compared to non-family firms. In businesses with family governance, family bonds can align interests and reduce information asymmetries to lower governance costs (Lubatkin et al. 2005). "Ownership provides the right to use, modify and transform, and enjoy the returns from the asset creating scope to both reduce the costs as well as increase the benefits from an asset due to superior capabilities" (Madhok 1996: 581). Compared to non-family firms, human asset specificity is expected to be higher due to unified ownership and management and being family-based (Gedajlovic and Carney 2010; Gersick et al. 1997; Verbeke and Kano 2010, 2012), which allows greater control over firm-specific transactions in family firms (Carney 2005).

Close monitoring and control in firms with family governance can improve the quality of products or services, building trust, goodwill (Sako 1991), and reputation (Weigelt and Camerer 1988) with customers with whom the family firm engages in repeated exchanges (Poppo and Zenger 2002; Tagiuri and Davis 1996; Ward and Aronoff 1991). Since family firms tend to exhibit a longer-term orientation than non-family firms (Le Breton-Miller and Miller 2006), they are more likely to attempt to preserve their firm's reputation through a protective governance structure (cf., Williamson 1981) by keeping things in the family, which should help them stay in the business.

Trust serves as a governance mechanism and a source of competitive advantage, substantially lowering transaction costs in family firms (Dyer and Handler 1994; Sirmon and Hitt 2003; Steier 2001). Indeed, family firms can avoid agent opportunism problems by keeping things in the family. On the other hand, non-family firms may not be able to entirely eliminate moral hazard and hold-up problems, since highly specialized employees can also constitute a holdup or

moral hazard threat. Family members are more likely to place the firm's objectives above personal ones than managers of non-family firms (Corbetta and Salvato 2004; Zahra 2003). In addition, due to the dual role of family business owners, family goals and business strategies are less separable (Aronoff and Ward 1995; De Massis et al. 2016b; Habbershon and Williams 1999). A family business owner is more likely to socially identify with the firm and perceive the business' fate as his or her own, intensifying commitment to the existing family business structure, procedures, and values (Ashforth and Mael 1989; Sharma and Irving 2005).

Higher levels of ownership concentration have been associated with risk aversion in family firm literature (Schulze et al. 2002), where family business owners are shown to be more prone to risk aversion (Gómez-Mejía et al. 2001; Romano et al. 2001; Schulze et al. 2001) in strategic decision-making. Given this risk-taking propensity, family firms are more likely to be conservative in the strategic decisions that affect growth than non-family firms (Ward 1997). Family firms are also parsimonious when utilizing family wealth (Carney 2005). This may limit the scope of their activities and cause them to refrain from undertaking risky business ventures (Morck and Yeung 2003). Even though risky investments may lead to potential benefits and have professionalism implications in the eyes of stakeholders, family firms may be willing to accept lower profits to reduce the risk of loss, preserve the socio-emotional wealth embedded in family control, and satisfy affective needs (Kotlar et al. 2018; Gómez-Mejía et al. 2007). Furthermore, since family firms may be more frugal in their use of resources than non-family firms (Carney 2005; Habbershon and Williams 1999), they may also be less willing to risk their competencies even when there is potential for higher short-term profits.

All these factors shaping family firm governance can lower family firms' financial challenges and issues and elevate resilience in dealing with those, in turn decreasing the possibility of business failure compared to non-family firms. Hence, taken together, our discussion of asset specificity, trust (vs. opportunism), and risk aversion suggests that:

> Hypothesis 1: Family firms are less prone to exit due to financial issues than non-family firms.

Family firms with home-based operations and spousal ownership

Given that family enterprises are heterogeneous in their visions, goals, and discretion through the power of control, these affect their governance structure, organizational behaviors, and outcomes (Chua et al. 2012). For instance, a recent study by Belenzon et al. (2016) draws attention to the key role of marital ties in explaining differences in the family firm behavior and performance in small businesses in Europe. The authors show that when the owners are married, those family firms perform better than non-family firms, and they also exhibit higher survival rates. In line with this work, Amore et al. (2017) find that large established family firms led by married couples perform significantly better than other family firms in Italy. Using this recent research as a point of departure, we also expect that family firms with spousal ownership may vary in behavior and performance owing to contextual differences such as the locus of operations. Thus, we deem it important to take a closer look at home-based family firms with spousal ownership in the USA due to their prevalence, unique governance structure, operations, and scope. Home-based family firms with spousal ownership can further facilitate economizing on transaction

costs through effective monitoring and control over asset specificity, lower risk, and increased trust.

The term “copreneurship” is used in literature to refer to the specific situation of co-habiting couples who start a business together. The term arises from the family business field and was first introduced by Barnett and Barnett (1988) to indicate couples with a marital or pseudo-marital link who share ownership, commitment, and responsibility for a venture (Marshack 1993, 1994; de Bruin and Lewis 2004). In this study, we specifically focus on businesses with “spousal ownership” or “spousal businesses,” defined as those businesses jointly owned by a husband and a wife. In home-based family firms, governance with spousal ownership can further ensure trust by decreasing reliance on external agents leading to costly contracts and transactions. Indeed, married couples operating from home with or without employees tend to have the utmost discretion, which can enable them to be personalistic, particularistic, and parsimonious (Carney 2005) in business operations. Family firms can also apply such criteria in selecting their customers, suppliers, and trade partnerships. Spousal assets, including home, tied to the business may lead owners to take less risk and economize compared to other family and non-family businesses (Belenzon et al. 2016).

The high discretion concentrated in spouses can also facilitate adaptability and flexibility in business decisions, whereas in non-family firms and more professionalized larger family firms, all parties at different levels generally deliberate and agree on a business action (Scott 2002). When relational conflict (Kellermanns and Eddleston 2004) between family and/or non-family business members arises, this can result in costly inefficiencies, such as omitted contracting with customers (or suppliers) or investment opportunities. With only two family members involved in ownership in the case of spouses, dysfunctional conflict within the family (as well as with non-family business members, if any) can be lower. In case of spousal conflict, we expect that the spousal owners would have the incentive to resolve it effectively and hold business objectives above everything due to the family wealth at stake. When the employment of non-family business members is necessary, the use of the home for business operations requires sheer selectivity and diligence in hiring trustworthy individuals like family to prevent or minimize opportunistic tendencies.

Accordingly, minimized costs and risk increased trust from concentrated spousal ownership in governance, and close monitoring and control can lower opportunism and further enhance efficiencies in home-based family firms, leading to business success. Hence,

> Hypothesis 2: Home-based family firms owned by spouses are the least prone to exit among all types of firms.

Methodology

Sample and data

The sample of this study is based on the 2007 Survey of Business Owners (SBO) dataset. The inclusion criterion is being a non-agriculture business that recorded revenues of at least $1000 in 2007. This dataset was released to the public in August 2012 through the Public Use Microdata

Program (PUMS) of the US Census Bureau. The sampling in SBO 2007 is based on tax returns filed with the Internal Revenue Service (IRS). The forms include the 1040 Schedule C, Form 1065, Corporation Tax Form 1120, Form 941, or Form 944. Approximately 2,165,000 firms filled in the questionnaire, resulting in a 62% response rate. While some descriptive statistics are reported with the full dataset, our final analysis comprises around 1,300,000 firms due to missing data related to some questions about business characteristics.

Table 1. Variable descriptions

Variables	Question/statement	Coding
Exit	Is this business currently operating? (If no) Did the operations cease for any of the reasons listed below? (a) Inadequate cash flow or low sales (b) Lack of business loans/credit (c) Lack of personal loans/credit (d) All other reasons	0: Yes 1: No, if either (a), (b), or (c) Choice (d) is dropped from the main analysis
Family firm	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).	1: Yes 0: No
Home-based business	In 2007, did this business operate primarily from somebody's home?	1: Yes 0: No
Spousal business	In 2007, was this business jointly owned by a husband and wife?	1: Yes 0: No
Seasonal business	In 2007, did any of the following characteristics describe the activity of this business? Seasonal business (for example, firework sales or tax preparer)	1: Yes 0: No
Veteran ownership	Is owner 1, 2, 3, and/or 4 a veteran of any branch of the US military service including the Coast Guard?	1: Yes 0: No
Year established	In what year was this business originally established?	1: Before 1980 2: 1980 to 1989 3: 1990 to 1999 4: 2000 to 2002 5: 2003 6: 2004 7: 2005 8: 2006 9: 2007
Total amount of startup capital	For the owner(s) as of 31 December 2007, what was the total amount of capital used to start or acquire this business? Capital includes savings, other assets, and borrowed funds.	1: Less than $5000 2: $5000 to $9999 3: $10,000 to $24,999 4: $25,000 to $49,999 5: $50,000 to $99,999 6: $100,000 to $249,999 7: $250,000 to $999,999 8: $1000,000 or more

Source: US Census Bureau, 2007 Survey of Business Owners (SBO) Public Use Microdata Sample (PUMS) Data Users Guide

Variables

Table 1 shows the detailed description and coding of all measures. The dependent variable in this study is business exit (hereafter exit), a well-established firm outcome measure in small business and entrepreneurship literature (Balcaen et al. 2011). The binary nature of this variable (exit vs.

survival) provides a more definite answer than continuous variables such as profitability, sales growth, or labor productivity to our question: Who is in and who is out of business? We follow previous studies in entrepreneurship and small business, which measure firm exit as a dichotomous variable (Azoulay and Shane 2001; Harada 2007; Madanoglu, and Castrogiovanni 2018; Wennberg et al. 2010).

We acknowledge that the term exit is a fairly broad measure encompassing business failure due to financial issues, such as bankruptcy, low sales, and business or personal credit problems. However, some "anticipated" reasons for exit may include selling a business, closing the business due to divorce, illness, or retirement. To ensure that our exit measure is congruent with our conceptualization, we focus on business exit due to financial reasons. Exit is a binary variable measured in the two-step process outlined in Table 1. In essence, the binary variable consists of firms that continue operating (coded 0) and firms that ceased operating for financial reasons (coded 1). Firms exiting for non-financial reasons are excluded from the main analysis but included in the robustness checks, which we describe later.

The focal independent variable in this study is family vs. non-family firms. This is also a binary variable where family firms are those where two or more members belong to the same family, which is one of the most commonly adopted criteria to identify family firms (De Massis et al. 2012). Thus, family firms are coded 1 and 0 otherwise. The moderators in this study—home-based business and spousal ownership—are also binary variables. The presence of each condition (operating a business from home and joint husband and wife ownership) is coded 1 and 0 otherwise. These two variables serve as control variables in testing Hypothesis 1. Previous research shows that home-based businesses are more likely to survive (Headd 2003). Based on subjective and objective success measures, Fitzgerald and Muske (2002) report that copreneurs (i.e., couple-owners) underperform with respect to other businesses.

We controlled for several other factors that may influence exit. It is plausible that seasonality is positively related to exit since these businesses do not generate year-round revenues and are more likely to be cash-strapped and thus more likely to exit. Seasonal businesses in this study are coded 1 and 0 otherwise. Veteran owners are more prevalent players in the small business arena. Therefore, we controlled for veteran ownership. Firms with at least one veteran owner take the value 1 and 0 otherwise.

Firm age and firm size are two prominent factors that affect business exit and survival (Jovanovic 1982). SBO 2007 does not directly measure firm age. However, as Table 1 shows, the dataset reports a range of years or a single year to capture the time when a business was established. Therefore, we use dummy coding for the year when a business was established based on nine categories. As some firms have a low number of employees or no employees at all, we measure firm size based on the startup capital. We use the total amount of startup capital as a proxy for firm size. SBO 2007 reports startup capital in eight categories ranging from less than $5000 to $1000,000 or more. Thus, we created category dummies for firm size.

To account for inter-industry differences in firm exit rates, we also created dummies for 20 industries to control for industry effects. Last, some US States may offer more favorable business

conditions than others. Therefore, we created 47 category dummies for US States. To note is that SBO 2007 combines some of the smaller States to protect the confidentiality of firms.

Data analysis

We used logistic regression with robust standard errors to test our hypothesis. To ease the interpretation of how the predictor variables influence the outcome (i.e., financial exit) and to estimate the effect size, we used the odds ratios. These ratios demonstrate the probability that an outcome will occur in the presence of a given variable. For example, an odds ratio of 1.20 denotes that odds for a home-based business to exit due to financial reasons is 1.2 higher relative to a business based outside the home. A more detailed discussion of effect size is provided in the robustness tests section.

To test our hypotheses, we first ran a model that includes all control variables and the two moderators—home-owned business and spousal business (model 1). We then augmented model 1 by adding the family business variable to test the predictions of Hypothesis 1 (model 2). We tested Hypothesis 2 through model 3 by including all variables in model 2 along with the 3 two-way interactions (namely family × home-based business, family × spousal business, and home-based business × spousal business) and the single three-way interaction (family × home-based business × spousal business).

Robustness tests

We conducted several tests to ensure that the significant results are not solely due to having a large sample size. That is, as the sample size increases, the probability of finding significant results goes up as well. Indeed, Leamer (1978) developed a measure of sample size adjusted test for significance so that the level of significance should be more stringent when sample size increases considerably. We followed this recommendation and decided that in a large sample like ours with more than a million of observations, the significance level should be set at $p < 0.001$.

We also canvassed the extant literature to find some seminal studies that prescribe a cure for the problem of a large sample size particularly with dichotomous predictors and outcome variables. While it was not feasible to uncover a single study that provides step-by-step guidance for cases like ours, we have taken the following precautionary measures to ameliorate the issue of the large sample size. First, we adopted the following definition of effect size: "…quantitative reflection of the magnitude of some phenomenon that is used for the purpose of addressing a question of interest (Kelley and Preacher 2012, p.140)." It is worth noting that effect size is usually based on mean comparisons between the control group and the treatment group and thus it is better-suited for use with continuous variables. Even though our key predictors and the outcome variable are dichotomous, to demonstrate our efforts to address the issue of a large sample size, we conducted the traditional effect size analysis with confidence intervals by using the *esize* routine in *Stata.* In this study, we report the three most prominent measures of effect size such as Cohen's d (Cohen 1988), Hedges' g (Hedges 1981), and Glass's Delta (Smith and Glass 1977). For the last measure, we employed the Glass's Delta 2, which uses the standard deviation of the treatment group. We chose not to report the point-biserial correlation coefficient

(Pearson 1909) because tetrachoric correlations between binary variables cannot be interpreted in the same way as Pearson's correlations between continuous variables.

Effect size estimates were obtained for the three key predictors: family business, spousal ownership, and home-based business. We supplemented this analysis by using the guidelines of Chinn (2000) who recommend dividing the odds ratio by 1.81 to obtain the effect size. We use the odds ratio from our main analysis to obtain the effect size measure of Chinn (2000). This simplified effect size estimation is particularly important for our study because it can handle binary outcome variables. Next, we repeated the effect size estimation with confidence intervals by using bootstrapping with 200 replications. Based on the suggestions of MacCallum et al. (2002), we refrain from categorizing the effect size values as small, moderate, or large and evaluate the effect size in the context of this study (Kelley and Preacher 2012).

Other than effect size analysis, we employed bootstrap resampling with 100 replications to demonstrate that our results hold with random sampling. Along with normal-based confidence intervals reported in the bootstrap routine in Stata, we obtained percentile and bias-corrected confidence intervals. It is worth noting that this routine employed observed logit coefficients in lieu of odds ratios.

We conducted several additional analyses to test the robustness of our results. First, more than 60% of businesses in SBO 2007 have no employees. While some of these firms may be new startups, others are likely a means of self-employment. Therefore, we dropped firms that have no employees and repeated analyses for Hypothesis 1 and Hypothesis 2 only with firms that have employees as their staff. Second, while the focus of this study is on financial reasons for the business exit, we used a broader measure for business exit by including exits for non-financial reasons (about 140,000 firms) to test our hypotheses. The results of these additional analyses are reported at the end of the findings section.

Results

Among more than 1,300,000 firms, the prevalence of exit due to financial reasons is approximately 5% (see Table 2). With regard to business characteristics, seasonal businesses account for 3.6% of all businesses and 17% have veteran ownership. The results also reveal that 34.3% of firms in the sample are family firms. To be noted is that home-based businesses account for more than 36% of the total sample. Finally, the descriptive statistics indicate that more than a quarter of all businesses are owned by spouses.

Table 2. Tetrachoric correlations and descriptives

	1	**2**	**3**	**4**	**5**	**Mean**	**SD**	**VIF**
1.Exit	1					0.049	0.217	1.05
2. Seasonal business	0.088*	1				0.036	0.188	1.01
3. Veteran ownership	− 0.050*	− 0.015*	1			0.170	0.375	1.01
4. Family firm	− 0.098*	− 0.003	0.199*	1		0.343	0.474	1.73
5. Home-based business	0.282*	0.293*	− 0.086*	− 0.64*	1	0.365	0.481	1.05
6. Spousal business	0.011*	0.061*	0.105*	0.866*	0.154*	0.265	0.441	1.73

Note: * $p < 0.05$

The results of the logit analysis indicate that in model 1 all dichotomous control variables are significantly related to firm exit at the 0.001 level (Table 3). Model 1 has a pseudo R-squared of 12.5%. The findings show that seasonal businesses and firms with veteran ownership are more likely to exit relative to their counterparts (1.194, $p < 0.001$ and 1.178, $p < 0.001$ respectively). Being a home-based business increases the likelihood of financial exit by approximately 1.6 times (odds ratio = 1.601, $p < 0.001$), whereas spousal ownership reduces the probability of exit by approximately 3% (odds ratio = 0.973, $p < 0.001$).

Table 3. The influence of family firms, spousal ownership, and home-based businesses on financial exit

Variable	Ratio	Model 1 Odds ratio	Model 2 Odds ratio	Model 3 Odds
Seasonal business		1.194*	1.197*	1.197*
Veteran owner		1.178*	1.195*	1.199*
Family firm			0.747*	0.680*
Home-based business		1.601*	1.597*	1.645*
Spousal business		0.973*	1.198*	1.146*
Family × home-based business				1.170*
Family × spousal business				1.277*
Home-based business × spousal business				0.997
Family × home-based × spousal business				0.723*
Firm age dummy		Yes	Yes	Yes
Firm size dummy		Yes	Yes	Yes
Industry dummy		Yes	Yes	Yes
US State dummy		Yes	Yes	Yes
Constant		0.062*	0.064*	0.063*
Log pseudolikelihood		− 172,500.50	− 169,599.68	− 169,548.49
Pseudo R^2		0.125	0.126	0.126
Wald chi2		36,506.41	36,444.26	36,408.71
Probability > chi2		0.000	0.000	0.000
N		942,813	935,512	935,512

"Yes" denotes inclusion of multiple categories
*$p < 0.001$

The results of model 2 reveal that all control variables except spousal ownership retain their directional probability (i.e., increasing or decreasing the probability of exit) and levels of significance (see Table 3). The inclusion of the family firm variable changes the effect of spousal ownership on financial exit from negative to positive (1.198, $p < 0.001$). More importantly, the findings reveal that being a family firm decreases the probability of financial exit by more than 33% (odds ratio = 0.747, $p < 0.001$), which lends support to Hypothesis 1.

Model 3 shows that the three-way interaction of family × home-based business × spousal business reduces the likelihood to experience financial exit by approximately 38% (odds ratio = 0.723, $p < 0.001$). To further delve into this relationship, we analyzed the interaction plot (see Fig. 1), which reveals that compared to other types of firms, home-based family businesses with spousal ownership are less likely to exit, consistent with Hypothesis 2.

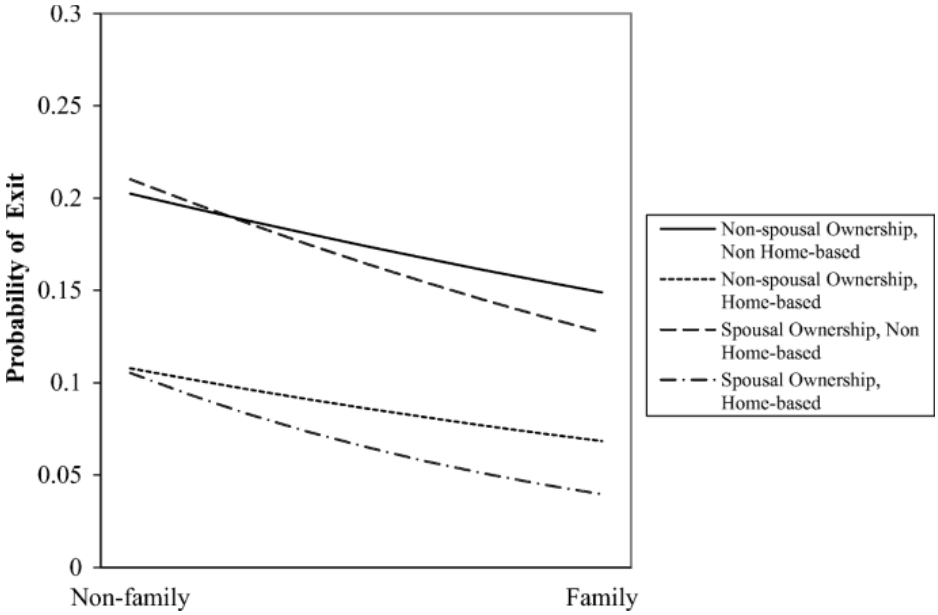

Fig. 1. The three-way interaction of family firms, spousal ownership, and home-based businesses

Table 4. Effect size estimates of the influence of family firms, spousal ownership, and home-based businesses on financial exit

Variable	Effect size based on mean comparisons	
	Estimate	**95% CI**
Family firm		
Cohen's d	0.160	0.152 0.169
Hedges' g	0.160	0.152 0.169
Glass's Delta 2	0.172	0.163 0.181
Odds ratio/1.81 (Chinn 2000)	0.350	
Home-based business		
Cohen's d	− 0.509	− 0.516–0.501
Hedges' g	− 0.509	− 0.516–0.501
Glass's Delta 2	− 0.497	− 0.504–0.488
Odds ratio/1.81 (Chinn 2000)	0.879	
Spousal business		
Cohen's d	− 0.020	− 0.029–0.011
Hedges' g	− 0.020	− 0.029–0.011
Glass's Delta 2	− 0.020	− 0.028–0.011
Odds ratio/1.81 (Chinn 2000)	0.653	
	Bootstrap resampling of effect size	
	Estimate	**Bootstrap SE**	**95% CI**
Family firm	0.160*	0.0039982	0.152 0.168
Home-based business	− 0.508*	0.0039796	− 0.516–0.501
Spousal business	− 0.020*	0.0042269	− 0.028–0.012

Bootstrap SE, bootstrap standard error; $p < 0.001$

Our first set of robustness tests in Table 4 shows that the Cohen's d, Hedge's g, and Glass's Delta 2 values for all three predictors (family firm, home-based business, and spousal business) are significant based on the 95% confidence interval. Chinn's (2000) effect size estimate ranged

between 0.350 for the family firm variable and 0.879 for the home-based business variable. The bootstrap resampling effect size produced similar results where all three variables retained their effect size values and statistical significance (See Table 4).

We repeated the logistic regression analysis with bootstrap resampling to ensure that our findings are not a product of the large sample. Results of model 2 in Table 5 show that family firms are less likely to make a financial exit relative to non-family firms (− 0.291; 95% CI − 0.332–0.248), which offers support for Hypothesis 1. Likewise, findings of model 3 demonstrate that the three-way interaction term is negatively related to financial exit (− 0.323; 95% CI − 0.466–0.181), which is consistent with the predictions of H3. Our results remained unchanged with percentile and bias-corrected confidence intervals. These intervals are not reported due to space limitations.

Table 5. Bootstrap resampling of the influence of family firms, spousal ownership, and home-based businesses on financial exit

	Model 2		Model 3	
Variable	**Coef**	**95% CI**	**Coeff**	**95% CI**
Seasonal business	0.180*	0.138 0.221	0.179*	0.142 0.217
Veteran owner	0.178*	0.162 0.195	0.182*	0.158 0.204
Family firm	− 0.290*	− 0.332–0.248	− 0.385*	− 0.456–0.314
Home-based business	0.468*	0.446 0.489	0.498*	0.475 0.521
Spousal business	0.181*	0.151 0.121	0.136*	0.087 0.185
Family × home-based business			0.157*	0.079 0.235
Family × spousal business			0.244*	0.131 0.357
Home-based business × spousal business			−0.002	−0.075 0.071
Family × home-based × spousal business			−0.323***	−0.466–0.181
Firm age dummy	Yes		Yes	
Firm size dummy	Yes		Yes	
Industry dummy	Yes		Yes	
US State dummy	Yes		Yes	
Constant	− 2.752*		− 2.764*	
Log pseudolikelihood	− 142,144		− 142,109	
Pseudo R^2	0.126		0.126	
N	935,512		935,512	

"Yes" denotes inclusion of multiple categories
*$p < 0.001$

We conducted several alternative analyses and robustness checks to increase the reliability of our results. Because over half of the firms in the sample have no employees, we ran an alternative analysis considering only firms that have employees. The findings indicate that family business was negative and significant at the 0.001 level. Likewise, the three-way interaction term in model 3 remained negative and significant at the 0.001 level. Thus, both Hypothesis 1 and Hypothesis 2 were once again supported, and we conclude that our results are not affected by the potential high prevalence of self-employment. We expanded our outcome variable by including a broad measure of exit that includes non-financial reasons for business closure, such as retirement and business sale. Results in Table 6 indicate that being a family firm reduces the probability of exit (0.799, $p < 0.001$). Likewise, the three-way interaction of family × home-based business × spousal business is negatively related to exit by decreasing the probability of exit by

approximately 25% (0.803, $p < 0.001$). Thus, we conclude that both Hypothesis 1 and Hypothesis 2 again received support, thus increasing our confidence in the models.

Table 6. The influence of family firms, spousal ownership, and home-based businesses on exit

Variable	Ratio	Model 1 Odds ratio	Model 2 Odds ratio	Model 3 Odds
Seasonal business		1.288*	1.288*	1.288*
Veteran owner		1.251*	1.273*	1.276*
Family firm			0.700*	0.634*
Home-based business		1.579*	1.569*	1.592*
Spousal business		0.934*	1.202*	1.182*
Family × home-based business				1.204*
Family × spousal business				1.193*
Home-based business × spousal business				0.939
Family × home-based × spousal business				0.803*
Firm age dummy		Yes	Yes	Yes
Firm size dummy		Yes	Yes	Yes
Industry dummy		Yes	Yes	Yes
US State dummy		Yes	Yes	Yes
Constant		0.253*	0. 256*	0.063*
Log pseudolikelihood		− 276,302.69	− 272,766.63	− 272,718.65
Pseudo R^2		0.092	0.094	0.094
Wald chi2		53,891.38	53,834.22	53,834.22
Probability > chi2		0.000	0.000	0.000
N		994,164	986,210	986,210

"Yes" denotes inclusion of multiple categories
*$p < 0.001$

Discussion and conclusion

Family business studies that draw on Transaction Cost Theory (TCT) are relatively scarce (with the exception of Gedajlovic and Carney 2010; Memili et al. 2011a, b; Verbeke and Kano 2010, 2012, 2017). This paper suggests that family business literature will be further advanced by investigating the heterogeneity of family business owners shaping governance decisions and their firms in terms of business failure due to financial issues using the TCT lens.

In this paper, we attempt to provide some initial answers to two important research questions: (1) Are firms with family governance more or less likely to exit than non-family firms due to financial issues? (2) How and under what condition(s) do family firms exit more (or less)? We suggest that human asset specificity, trust (vs. opportunism), and risk aversion will make family firms less likely to exit due to financial issues by shaping family firm governance and diminishing family firms' financial challenges and issues and increasing strength in dealing with such hardships. Consequently, the propensity to exit is mitigated in family firms compared to non-family firms. Furthermore, we suggest that home-based family enterprises with spousal ownership are the least likely to exit compared to non-family firms and other family firms. This is because spousal owners in home-based family firms can attain efficiencies through effective economizing due to parsimonious tendencies and risk aversion due to family assets, including home tied to the business. Moreover, trust serves as a governance mechanism which can replace

costly comprehensive contracts. Trust originating from spousal owners can be extended to family and non-family employees (if any) selectively hired to work within the home-based business context. Hence, our paper provides evidence for the potential resilience advantages of family firms over non-family firms and superiority of home-based family firms owned by spouses in terms of resilience despite resource limitations such as office/business space and financial capital. We thus contribute to literature in a number of ways. First, this paper is one of the few attempts to use TCT to explain some of the differences in the governance structures and operations of family firms versus non-family firms (except for Gedajlovic and Carney 2010; Memili et al. 2011a, b; Verbeke and Kano 2010, 2012), whereas there has been a prominent stream of research on the governance and economic performance of family vs. non-family firms within the domain of agency theory. Behavioral uncertainty, bounded rationality, information asymmetries (or information bias/groupthink), and associated costs are common concerns in both TCT and agency theory as these can result in inefficiencies and consequently, financial underperformance. However, unlike agency theory's focus on preventing or mitigating such problems via monitoring and control, TCT is concerned with how such problems may affect governance decisions (e.g., family governance with or without spousal ownership) and efficient boundaries (e.g., home-based) of firms and economizing on costs (Madhok 1997; Teece 1986; Williamson 1985). TCT's main tenets such as trust, risk aversion, and human asset specificity can help explain the resilience of family firms that are driven by both economic and non-economic goals. Additionally, TCT's emphasis on economizing on costs and efficient boundaries is relevant to families' personalistic, particularistic, and parsimonious tendencies (Carney 2005) by keeping things in the family (e.g., spousal ownership) with even home-based operations, as we illustrate in our paper. Despite this relevance, family business studies applying TCT are scarce. Therefore, in our paper, we have drawn upon TCT (unlike studies predominantly applying agency theory) to explain firm exit due to financial issues. We examine exit due to business failure for financial issues in our sample of firms. Not only does this add to our understanding of family firm governance and provides avenues for future research, but it also suggests the value of a TCT perspective in family business studies. Second, our paper puts forward some of the contingencies (i.e., home-based and spousal ownership) that might cause different forms of family firms to succeed (or fail). Thus, we show that the nature of family businesses and their governance might influence the enterprises' scale and scope, consequently affecting financial failure/success without assuming that the decisions and actions of family firms are uniform.

The theoretical arguments above are tested with a sound empirical analysis that includes some steps to tackle the large sample size fallacy that is common in datasets sponsored by government organizations. In this study, we employ a battery of effect size measures that help us conclude that the three key predictors in this study have both statistical and practical significance. For example, being a family firm reduces the odds of experiencing financial exit by more than 30%. This difference in odds is further supported by the simplified effect size of Chinn (2000) of 0.350 for the family firm variable. For family firms with spousal ownership and home-based operations, the likelihood is reduced even further, which empirically supports the amalgamation of theoretical underpinnings discussed above. More importantly, these findings stand the test of rigorous bootstrap effect size and bootstrap resampling that should help allay any concerns that results are driven primarily by the large sample size of more than 2 million observations.

Even with all the good news presented thus far, we acknowledge that our study has some limitations. While we focus on family firms, the 2007 SBO dataset does not include other family business dynamics, such as intra-family succession intentions, which are likely to affect family firm behavior (e.g., De Massis et al. 2016c). Therefore, we are not able to provide a fine-grained explanation of why family firms are less likely to exit, nor can we distinguish the behaviors of family firms with varying degrees of family succession intention. We recommend that future studies consider family business dynamics and the willingness of owning families to pursue distinctive goals (e.g., De Massis et al. 2014) to offer a more contextualized investigation on the topic, ideally adopting a microfoundational approach (De Massis and Foss 2018).

Future research could also take into account other possible reasons for business exit (e.g., selling a business, closing the business due to divorce, illness, or retirement) and shed light on potential varying effects when different types of exit are considered. We believe that sale, closure, and failure should be theoretically distinguished, and future studies that help us to better understand their different implications are particularly welcome.

Moreover, entrepreneurship literature contends that some individuals are serial or habitual entrepreneurs engaging in repeated entrepreneurship after business exit (Wright et al. 1997; Zhang 2011). It is plausible that some business exits may be followed by the formation of a new business venture (e.g., Parker 2013; Ucbasaran et al. 2006). Our data precludes us from considering this possibility. We are hopeful that future studies will combine these two distinct research streams—family entrepreneurship and serial entrepreneurship—to shed more light on business exit and business re-entry issues.

Furthermore, it is conceivable that a business exit may be driven by fierce competition and some operational challenges. As it was not viable to directly consider these issues in our study, we suggest that future studies should include market-related factors in their models such as agglomeration and business clusters to provide a more comprehensive picture of business exit for family and non-family firms.

Aside from the factors we have singled out in this paper, there may be likely other contingencies that affect the relative desirability of different governance structures and operations in family firms, in turn influencing firm exit. The type of culture, socio-psychological dynamics such as family harmony vs. conflict, organizational psychological capital, and the extent to which the family business applies a professional management structure are just some other possibilities (Chua, Chrisman, and Bergiel 2009; Dyer 1988; Kellermanns and Eddleston 2004; Memili, Welsh and Luthans 2013).

Moreover, there might be some industry effects. For instance, the proportion of copreneurs is likely to be more prominent in some industries than in others because some occupations (such as farming, accommodations, house cleaning services, event planning, and restaurants) require spouses to be active in their partner's vocation. As such, we welcome studies showing how industrial sectors may shape the phenomenon under investigation (De Massis et al. 2018).

Furthermore, the impact of transaction cost factors might vary in the family business depending on the lifecycle stages of the enterprise, or the imminence of succession. All these factors

suggest additional applications of TCT to the study of a family business. Furthermore, longitudinal studies would be helpful to capture temporal changes in family firms, such as generation in charge or business lifecycle (Eddleston et al. 2013; Sonfield and Lussier 2004), in terms of their financial resilience.

In conclusion, the conceptual framework presented in this paper and our data provide a transaction cost perspective on family business, governance, firm operation, and exit due to financial issues. The main tenets of TCT (i.e., human asset specificity, trust vs. opportunism, and risk aversion) help us explain the factors underlying the stronger resilience of family firms over non-family firms in terms of dealing with financial matters and exit, and enrich our understanding of family firms' resilience. We believe that future family business studies within the TCT framework will lead to a better understanding of the formulation of family business strategic decisions in many other areas that have not been dealt with in this paper.

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