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Unchain my Chain: The Impact of Founding Couples on Family Businesses*

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Abstract

We use unique data on the largest U.S. restaurant chains to investigate how familial ties among founders of restaurant chains affect the propensity of a chain to be sold to external investors and to expand internationally. We find that founding couples (i.e., a husband and wife) are more likely to maintain ownership for a longer time period and are less likely to sell the chain compared to other types of founders, such as single founders or chain founders with no family ties. We also show that restaurant chains whose founders kept control over the chain, and in particular founding couples, are less likely to expand internationally. Overall, our findings suggest that couples' ownership has clear implications for strategic decisions of firms.

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Keywords: Family Business; Restaurant Chains; Founders, International Expansion

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1 Introduction

"I do not want to sell the company. It's part of my life. I've inherited it from my father, your grandfather. I do not think I could live with the decision to sell."

— Hill, L. and K. C. Doughty 2000 "Francisco de Narvaez at Tia: Selling the Family Business." HBS Case 9-401-017.

Family-owned firms account for the majority of businesses in the world and their prevalence is not limited to small firms or to non-Western countries (La-Porta et al. (1999)). In the U.S., founding families own and control at least one-third of large publicly-held firms, and in France family firms account for about 2/3 of firms traded in the French stock market (Anderson and Reeb (2003a,b); Amit and Villalonga (2006); Sraer and Thesmar (2007)). Given the importance of family-owned businesses, researchers have acknowledged the need to better understand whether and how family characteristics affect firm decisions and what are the consequences of these decisions on performance (Bertrand and Schoar (2006)). However, despite the growing interest in understanding the differences between family and non-family firms and the implications of these differences, to date, results have been mixed (Corbetta et al. (2012)).

In this paper, we add to this literature by studying the relationship between the familial ties among founders and subsequent business decisions. More specifically, we use data on the largest U.S. restaurant chains to examine how different familial ties among founders (siblings, couples, non-family business partners) affect two fundamental business decisions: the decision to sell the business to external investors and the decision to expand internationally. Our approach – examining how decisions regarding business ownership and international expansion evolve as a function of founders' characteristics – complements previous studies that relied on the characteristics of family firms at a later stage of their life cycle. A particular advantage of our approach is that using information determined at the time of foundation is less susceptible to endogeneity concerns, which are likely to arise when examining strategic business decisions using business characteristics which are determined at later stage. As we show in this paper, ignoring founders' characteristics might lead to misleading conclusions.

The impact of family ownership on the sell-out decision is theoretically ambiguous. From a classical economic perspective (Berle and Means (1932)), firms should sell for the highest bid, and ownership type (e.g., family vs. non-family) should not be a relevant factor in determining whether to sell or the timing of the sale. If, however, founders of family firms foresee the difficulties associated with transgenerational succession, then we might expect that they will be more active in facilitating and fostering sell-out options compared to founders of comparable non-family firms. Under the assumption that couples (i.e., husband and wife) who founded a business care more about the transgenerational costs compared to other types of family founders (i.e., a father and

son) then we can expect that the tendency to sell the business should be more apparent among businesses that were founded by couples. Furthermore, if the owners of family firms are more risk-averse with regard to their businesses' prospects (Morck and Yeung (2003)) then we can expect that they will sell their company earlier than non-family firms. On the other hand, if family firms carry certain non-monetary benefits to the family, then we might expect that the founders of family-firms will be more reluctant to sell their business to external parties. Bertrand and Schoar (2006) propose that 'legacy considerations' are the non-monetary benefits of a family that owns the business. They conjecture that legacy considerations may instill the desire to ensure family control, and that this "may lead families to ... forgo profitable expansion strategies or mergers with other firms." To the best of our knowledge, these considerations and in particular the specific conjecture concerning the link between family ownership, sell-out and expansion decisions, have not been systematically addressed in the literature.

To address this gap in the literature, we collected data on the largest restaurant chains in the U.S. The restaurant chains industry offers an attractive setting to study the relationship between family ownership and expansion or sell our decisions for several reasons. First, there is a relatively large number of restaurant chains, and these chains exhibit considerable variation in the familial ties among their founders. Second, given that these large chains face relatively limited growth opportunities within the U.S., it makes sense to study what affects their decision to expand overseas or operate only in the U.S. The discrete nature of the decision to go international is also useful for data collection purposes. Restaurant chains that choose to operate overseas typically advertise this decision and the relevant information is often available online. Finally, unlike businesses in many other industries, the early stage of a business in the restaurant chain industry involves running one or two restaurants, without clear plans for becoming an international or a nationwide business. This feature implies that the identity of the founders and the familial ties among founders are unlikely to be affected by founders' prospects regarding the chain future success.

To explore the relationship between founders' familial ties and chains' strategic decisions, we collected the following information for each chain in our sample: its foundation year; the identity of its founders; the familial ties among the founders (e.g., siblings, business partners, individuals); and, if relevant, the year in which the chain began to operate internationally and to franchise. In addition, we collected information on whether the founders of the chain controlled the chain in 2013 (the year we assembled the data set), and if not, when the initial sell-out transaction took place. Overall, we have data on 86 of the largest U.S. restaurant chains, including chains such as McDonald's, Subway, Starbucks, Domino's Pizza and Burger King. The average annual sales of the chains in our sample is 3,082 million dollars and the average number of outlets is 2,844.

Our findings indicate that restaurant chains that were founded by married couples are approx-

imately 30% less likely to be sold to external investors compared to chains founded by individuals. The differences in the likelihood of sell-out decisions are also non-trivial when we compare chains that were founded by married couples with chains that were founded by other types of partnerships (e.g., business partners, siblings/brothers). For instance, Jack in the Box, a large hamburger chain was founded in 1952 by Robert Oscar Peterson. Sixteen years later, Peterson sold his control shares in the chain. Arby's, another large hamburger chain was established in 1964 by the Raffel Brothers who sold their shares 12 years after its foundation. In contrast, In-N-Out Burger, which was established in 1948 by Harry Snyder and his wife Esther is still controlled by the Snyder family. Likewise, Panda Express which was founded in 1983 by Andrew and Peggy Cherng is also still controlled and managed by the founders' family. Consistent with our initial finding regarding the likelihood of a sell-out, we find that founding couples maintained ownership over the chain for 12 years longer than chains that were founded by individuals. We obtain qualitatively similar results also when we restrict attention to restaurant chains that were sold at some point.

We also examine how founders' decisions to keep or forgo ownership are associated with expanding overseas, a primary strategic decision. Based on legacy considerations, chains that maintain founder ownership will be reluctant to expand overseas because this may weaken their control over the chain. Furthermore, these chains may have limited resources and capabilities to operate internationally compared to those that were purchased by other large restaurant chains or large investors. Indeed, we show that sell-out decisions are associated with overseas expansion decisions. Nearly 87% of chains whose founders lost control over the chain expanded their operations outside of U.S. territories. In contrast, only 40% of the chains that remained under the control of founders operate internationally. In the analysis, we obtain qualitatively similar results when we distinguish between expansion decisions that occurred before or after the sell-our decisions and also when we consider the sell-our decisions as endogenous and use founders' familial ties as an instrument. Finally, we stress that although our sample is not representative of the restaurant industry as a whole, we nevertheless think that our findings are important. First, understanding the underlying mechanisms driving the sell-out and expansion decisions by the largest restaurant chains is important in its own right. Second, we stress that focusing on the largest restaurant chains does not hinder our identification strategy because in the analysis we compare the impact of familial ties on strategic choices across large restaurant chains. We find further support to the generality of our findings in a recent study Belenzon et al. (2016) which also highlighted the impact of business ownership by married couples on firm performance using a large sample of private firms across Europe.

Existing research on family firms predominantly address two important questions pertaining to family businesses. One strand examines the impact of CEO succession on performance in

family and non-family businesses. Bennedsen et al. (2007) studies the impact of CEO succession in Danish family firms, exploiting variation in gender of a departing CEO's firstborn child. They convincingly show that family succession has a negative impact on firm performance (other studies that addressed this topic include Perez-Gonzalez (2006); Amit and Villalonga (2006); Bertrand et al. (2008); Caselli and Gennaioli (2013); Calabrò et al. (2017)). Another strand of the research uses publicly available cross-sectional data to compare various performance measures across family and non-family businesses. For instance, Anderson and Reeb (2003a) use S&P 500 data, and Sraer and Thesmar (2007) use French data and find that publicly-held family firms perform better than non-family firms. In contrast, Morck et al. (2000) who used data for Canada, and Cronqvist and Nilsson (2003) for Sweden had opposite results. The S&P 500 data source, like other data sources on publicly-traded firms, offers a wealth of information. However, the sample of firms available in those sources is also potentially subject to selection bias concerning the decision to go public or concerning firms' tendency to retain ownership over the chain (Demsetz and Lehn (1985)). The studies most closely related to our paper examine how family ownership is associated with divestiture decisions that are driven by non-classical economics motivations. Manikutty and Sharma (2005) lay out a theoretical framework that captures the relationship between family structure and divestment decisions. Praet (2013) provides evidence that Belgian family firms are less likely to engage in divestment decisions when there are higher ownership level of families. Amit et al. (2014) reached the same conclusion, adding that when they do divest – the value of the divesting family firm significantly increases. These studies rely on data on publicly traded firms, and thus do not examine whether familial relationships among founders has an explanatory power over firms' strategic decisions. Finally, as mentioned above, Belenzon et al. (2016) use a large sample of private European firms and examine the performance of family firms while distinguishing between different types of familial ties among owners. They find that businesses owned by couples have higher profit margins and higher survival rates but also that these firms invest and grow more slowly. Our paper complements Belenzon et al. (2016) in two respects. First, our findings offer direct evidence on the survival and expansion strategic choices of firms founded by couples. Second, our analysis regarding chains' overseas expansion focuses on the impact of changes in ownership on subsequent expansion decisions. We can therefore argue that there is a causal link between familial ties among business founders and firms' strategic choices.

It should be noted that thus far, there is no consensus in the literature on the exact definition of a family firm. Various definitions have been proposed which are often based on the available data. Cannella et al. (2007) in their literature review on family firms propose to distinguish between businesses in which a founding family (i.e., more than one family member) or only a founding individual owns a fraction of the firm. We follow Cannella et al. (2007) and consider family-

founded firms as businesses in which more than one family member is the founder. We further distinguish between firms founded by a married couple and those founded by other same family-members founders (e.g., siblings). This approach enables us to examine how the strength of the familial relationship might explain sell-out and international expansion decisions. The remainder of this paper is as follows. In the next section we describe our data. In section 3 we present the empirical analysis and the results. Section 4 concludes.

2 Data

We use a listing entitled *200 Franchise Systems*, published by the *Franchise Times* magazine in 2008 to identify restaurant chains with sales larger than 200 million dollars. The 200 Franchise Systems includes information on a chain's worldwide sales, the number of total units, U.S. units, share of franchised outlets out of total units and the current owner of the chain. We also used the 2008 QSR 50 magazine listing, which provides annual information on the 50 largest U.S. restaurant chains and includes information on a chain's U.S. sales, the number of U.S units, and the share of franchised outlets out of total U.S. units. We use the QSR listing to identify restaurant chains which do not franchise outlets and with sales larger than 200 million dollars. Overall, we have information on 86 chains, 11 of which were reported only for the QSR data.[1] For each chain we collected the following information: the foundation year; the year began franchising; the year it began operating internationally and the year in which the founders sold control of the chain to external parties. We also collected information on the number of founders and the familial relationship among founders. We classify the type of founders into four groups: individuals (27 chains), business partners (28 chains), married couples (15 chains) and 'other family' types (e.g., siblings, 16 chains). Last, we collected the following information regarding the dominant founder: age, marital status, business experience at the time of foundation (i.e., was the newly founded chain their first business) and education. The sources for the data are typically the chains' websites as well as the popular press, and myriad open sources. Unfortunately, not all the variables are available for all the chains in our sample.

Table 1 presents basic information for the top 20 restaurant chains in terms of U.S. sales in 2012. Table 2 presents descriptive statistics on the founders and on the 86 chains in our sample. Based on the table, for 30% of the founders, the restaurant chain was their first business. The mean age of founders was nearly 33 years. More than half did not attend college. 71 chains were sold by the founders and, on average these chains remained under the ownership of the founders

[1] Both the Top 200 Franchise and QSR data sources are published annually (Top 200 franchise since 1999 and QSR since 2003). Unfortunately, the panel structure of these data is not useful for our purposes because in most cases, founders' sell-out transactions took place before the new millennium (i.e., before the starting year of the panel data).

for 18.4 years. Figure 1 shows the sell-out years and international expansion years starting in 1961 on a bi-yearly basis. As can be seen, the sell-out and international decisions are dispersed over the entire time period and are not concentrated in a certain time period.

3 Estimation and Results

3.1 Sell-out Decisions

To examine the relationship between the sell-out decision and founders' type (individual, business partners, spouse and other-family partners), we estimate a proportional hazard Cox model in which the likelihood of selling out at time t (conditional on not selling out before that time), denoted $h(t)$, is given by -

$$h_i(t) = h_0(t) * exp(\beta_1 Founder\_type_i + \beta_2 Chain\_age_i + \beta_3 Founder\_age_i + \beta_4 Business\_exper_i + \beta_5 Franchised_i) \quad (1)$$

The unit of observation is firm i. $h_0(t)$ is the baseline hazard. The "*Founder_type*" variable, being the main variable of interest, is essentially a vector of dummy variables, capturing the four types of founders mentioned above. The omitted group is the individual founder group. Other control variables include the foundation year; a dummy variable indicating whether the chain franchises units seven years after its foundation;[2] the age of the dominant founder at foundation year, his or her business experience at the time of foundation, and finally in some specifications the founder's education.

The exponent coefficients are presented in Table 3. An exponent coefficient below (above) 1 refers to a lower (higher) hazard rate. Since the relevant comparison of the exponent coefficient is a comparison to the value 1, the table also includes the 95% confidence intervals instead of the standard errors. According to our estimates, chains founded by couples were 60% less likely to be sold compared to chains founded by individuals (the omitted category). We also find a negative association between the sell-out decision and the business partners and 'other family' types of founders. Yet, in most specifications the association between sell-out and these types of founders is statistically insignificant (i.e., the value 1 is located within their 95% confidence interval). In addition, the table contains the p-value of tests for equality of the spouse and the other family coefficients and the spouse and business coefficients. These p-values demonstrate that as more covariates are added to the analysis, there is a greater confidence that the coefficient on the spouse

[2] Lafontaine and Shaw (2005) show that seven years after they were founded, chains reach their preferred mix of franchised vs. corporate outlets.

variable differs from the coefficients on the brother/child and the business variables. With regard to the other control variables, chains that began franchising within 7 years since foundation are more likely to be sold to external investors, and founders without prior business experience are less likely to sell. We do not find a statistically significant relationship between the foundation year or the education variables and the decision to sell.[3]

We complement the analysis on the likelihood of sell-out, with an analysis examining how the number of years to sell-out is affected by the founders' type. For this we estimate the following linear regression -

$$\begin{aligned} \#Years\_to\_sell\_out_i = & Founder\_type_i + Chain\_age_i + \\ & Founder\_age_i + Business\_exper_i + Franchised_i + \epsilon_i \end{aligned} \tag{2}$$

Where the $\#Years\_to\_sell\_out$ is defined as the difference between the foundation year and the sell-out year and is capped by the age of the firm for those firms that were not sold by 2013, the year we assembled the data set.

The estimation results are presented in Table 5. We find that chains founded by couples remained under the founders' ownership 12 years more than chains founded by individuals. This estimate remains large and significant as we add control variables. In column 4, in which we add information on the education of the primary founder, the estimate increases to 23 years although the number of observations in this specification is considerably smaller. We also find that chains that began franchising relatively early were also sold several years before "similar" non-franchising chains. Having prior business experience is positively associated with a longer ownership period, and chains that were founded early are more likely to maintain ownership over a longer time period. In Table 6, we repeat the analysis but we do not cap the age of chains that were not sold to external parties at their age in 2013. Instead, we estimate a censored model and obtain qualitatively similar results though the estimates for the founders' type are greater. In particular, we find that couple-founders maintain ownership over the chain for 19 years more than individual founders (column 1). Last, in the analysis presented in table 7 we restrict attention only to chains that were sold to external parties. We find that couple-founders maintain ownership for an additional seven years compared to individual founders who sold their chain. Other control variables have similar magnitudes and statistical significance levels as before. Overall, the results presented in Tables 3-7 suggest that the identity of the chains' founders and particularly the familial ties among them affect the sell-out decision and the duration over which the chain is under the ownership of its founders.

[3]We verify the robustness of the Cox model results by estimating identical linear probability model (LPM) specifications in which the dependent variable is an dummy variable taking the value 1 if the corresponding firm were sold out. The results presented in Table 4 are similar qualitatively, though smaller in magnitude. For example, according to this analysis, chains founded by couples were 32% less likely to be sold compared to chains founded by individuals.

We now turn to analyzing whether the decision to sell the chain affect the chain's decision to expand internationally, and the timing of this decision.

3.2 International Expansion Decisions

International markets seem like a natural growth engine for large restaurant chains. These chains often exhaust the potential growth opportunities in the home market and opening additional restaurants in their domestic market may lead to cannibalization of sales by other restaurants of the same chain. On the other hand, international expansion poses non-trivial challenges such as building a customer base, attracting local franchisees and establishing the reputation of the chain in a new market. Addressing these challenges often require financial and managerial capabilities that the founders may lack. In this subsection, we address this issue and examine whether changes in ownership can help to facilitate international expansion. First, we note that 87% of the chains that changed ownership operate overseas, whereas only 40% of the chain whose founders are still in control operate overseas. For instance, Carl's Jr. was founded in 1941 by Carl and Margaret Karcher. The couple sold the chain in 1981, and in 1985 the chain expanded to its first international market, Mexico. Nevertheless, attributing the differences in the propensity to operate overseas only to the identity of the owner is probably misleading. First, some of the chains began operating overseas before their founders lost their control over the chain. For example, Domino's Pizza was founded by the Monaghan's brothers in 1960. The chain expanded internationally in 1985, and only afterwards, in 1998, was sold to a private-equity firm. Second, the decision to acquire a chain is not exogenous and investors such as private equity firms may choose to purchase chains that are already contemplating to expand overseas. If this is the case, then we should not view the relationship between ownership change and international expansion as a causal one.

To deal with these two issues we focus on chains that went international after their founders sold the chain. Thus, in our analysis described below our dependent variable equals 1 if the firm began operating outside the U.S. after the sell-out decision, and zero otherwise (i.e., it is assigned the value 0 if the firm began operating internationally before the sell-out decision or if it has not expanded internationally). Second, to address the endogenous sell-out decision, we rely on our analysis in Section 3.1, and use the spouse-partner variable as an instrument for the sell-out decision. Thus, the exclusion restriction is that the only channel that the spouse-partner variable associated with the decision to internationally expand is through the founders' decision not to sell the chain. To further illustrate this point, in Table 8 we present regression results examining if the sell-out decision serves as a trigger for international expansion. Accordingly, the main control variable is whether the firm was sold prior to international expansion. Columns 1-4 of the table suggest that not only ownership change is correlated with international expansion, but that this

correlation could have a causal interpretation. Specifically, while in columns 1 and 3 we ignore the potential endogeneity, it is taken into account in columns 2 and 4. Further, to verify that the results are not driven by the selection of firms that are unlikely to be sold anyway, columns 3-4 focus only on the subset of firms that went international. Regardless of this distinction, the 2SLS results in columns 2 and 4 suggest that changing the ownership of a firm from its original founders is a trigger for international expansion.

We also examine an "intensive margin" version of the international expansion decision by estimating the effect of the sell-out decision on the *age* in which the firm went international. Since the age of a firm at that point is censored from above by the difference between the data collection year (2013) and the foundation year, we use a Tobit model. Columns 5-6 of Table 8 present the corresponding results. While column 5 abstracts from the endogeneity of the sell-out decision, column 6 presents the the estimation results from an instrumental variable Tobit model. Although the coefficient of this last specification is insignificant, the results from this analysis provide suggestive evidence that the sell-out decision not only increases the likelihood of international expansion, but also shortens the time at which it takes place.

4 Concluding Remarks

Existing studies on family businesses often rely on agency theory to guide the analysis and explain the findings. One view of agency theory emphasizes that family-ownership implies closely-held, concentrated, ownership which mitigates incentive misalignment between the family and its agents. A different view stresses that concentrated ownership could have negative implications because large share-holders can use their power to exploit the business to their own benefit (Anderson and Reeb (2003b)). While these arguments have merit, we contend that the main conduct and the performance of family businesses differ from that of non-family businesses not only owing to different ownership structures but because family-firms operate in a different environment and the profit-maximization objective is not the only goal pursued. Bertrand and Schoar (2006) offer the term legacy considerations to describe these considerations while in the management literature researchers have often used the concept of socioeconomic wealth as the distinguishing feature between family and non-family businesses (Berrone et al. (2011)).

In this paper, we contribute to the empirical literature on family-businesses by providing evidence which we believe is consistent with such legacy motivations. In particular, we empirically examined how restaurant chains that were founded by families (and more specifically couples) differ from non-family founded restaurant chains with regard to two important issues: the decision to sell-out and the decision to expand internationally. First, we find that restaurant chains that were

founded by family-related individuals are more likely to maintain their ownership over the chain compared to similar "non-family" restaurant chains. Second, we show that these sell-out decisions are strongly associated with international expansion decisions, and chains whose founders remain the owner of the chain are less likely to expand internationally than chains that changed ownership. Our study is important not only for understanding the role of family ownership but also has relevance for the trade literature, in that it explains how non-economic motivations can affect and shape decisions to expand internationally. Though we focus on one industry, this industry could serve as a case-in-point for other areas in which businesses are often founded by families. It will be worthwhile exploring how the familial relationship among business founders affects other decisions and other industries.

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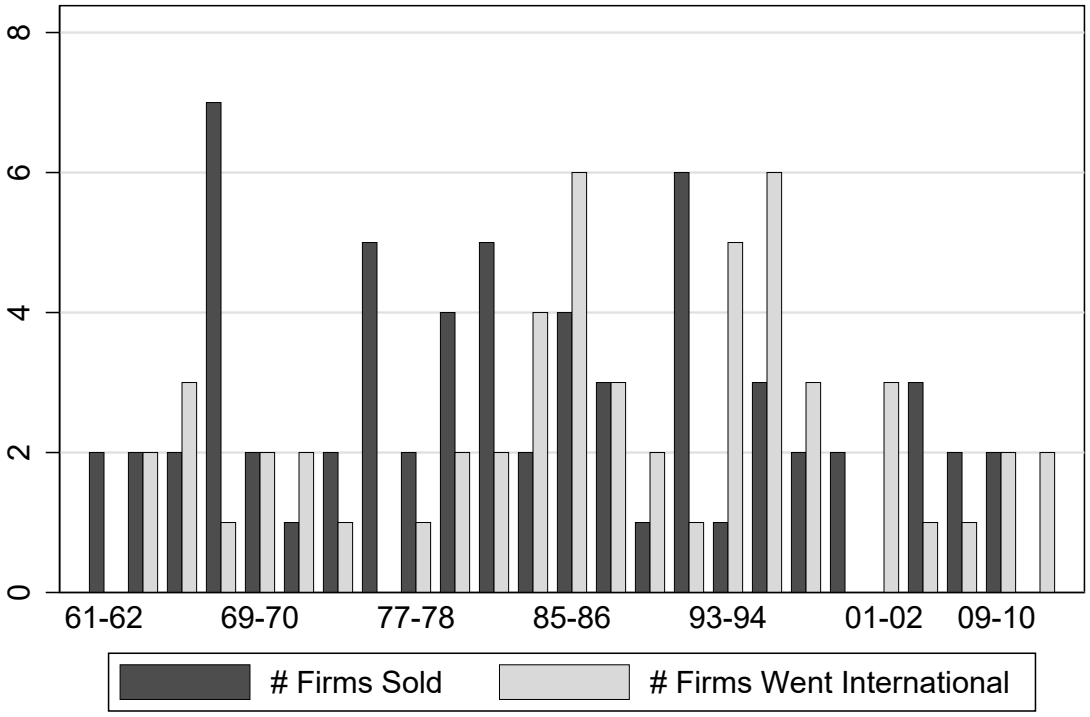
Figure 1: Founder's Loss of Ownership and International Expansion



The figure presents the number of firms sold (darker bars) and the number of firms that went international (brighter bars) over time. Each pair of neighboring bars corresponds to a pair of years, starting from the years 1961-62 to 2009-2010. For example, 2 firms in our sample were sold-out on 1961-62 while none went international.

Table 1: Top 20 Restaurant Chains

Chain	Annual sales	No. of outlets
McDonald's	35,600	14,157
Subway	12,100	25,549
Starbucks	10,600	11,128
Wendy's	8,600	5,817
Burger King	8,587	7,183
Taco Bell	7,478	5,262
Dunkin' Donuts	6,264	7,306
Pizza Hut	5,666	6,209
Chick-fil-A	4,621	1,683
KFC	4,459	4,556
Panera Bread	3,861	1,652
Sonic	3,791	3,556
Domino's Pizza	3,500	4,928
Jack-in-the-Box	3,085	2,250
Arby's	2,992	3,354
Chipotle	2,731	1,410
Papa John's	2,402	3,131
Dairy Queen	2,300	4,462
Popeye's	2,253	1,679
Hardee's	1,900	1,703

The table presents the annual sales (in 2012, in millions of USD) and the number of outlets in the US for the 20 restaurant chains with the biggest sale volume.

Table 2: Descriptive Statistics

Variable	N	Mean	Sd	10%	90%
No Partner	86	0.326	0.471	0	1
Partner: Spouse	85	0.165	0.373	0	1
Partner: Brother/Child	85	0.176	0.383	0	1
Partner: Business	85	0.329	0.473	0	1
# Years to Franchise	86	6.93	8	0	19
First Business of Founder	78	0.308	0.465	0	1
Age at Foundation	81	32.8	9.82	21	43
Company Age at Sell-Out	86	47.4	18.7	25	73
Founder's Educ.: B.A.	45	0.356	0.484	0	1
Founder's Educ.: M.A.	45	0.111	0.318	0	1
Founder's Educ.: Professional	45	0.0444	0.208	0	0
Sold Out	86	0.826	0.382	0	1
# Years to Sell-Out	86	23.2	17.3	5	44
# Years to Sell-Out | Sold Out	71	18.4	12.4	4	38
Went International	86	0.791	0.409	0	1
# Years to Go International | Went International = 1	64	25	16.6	9	44

Table 3: The Effect of Familial Relationship on the Sell-Out Decision - Cox Proportional Hazard Model

	(1)	(2)	(3)	(4)
Partner: Spouse	0.404***	0.328***	0.320***	0.034***
	[0.214,0.760]	[0.159,0.679]	[0.141,0.723]	[0.004,0.273]
Partner: Brother/Child	0.634	0.614	0.672	0.257**
	[0.350,1.147]	[0.332,1.136]	[0.346,1.303]	[0.072,0.919]
Partner: Business	0.764	0.668	0.757	0.676
	[0.426,1.371]	[0.369,1.209]	[0.412,1.389]	[0.293,1.562]
Franchised within 7 Years of Foundation		3.241***	2.602***	2.867***
		[1.947,5.395]	[1.481,4.572]	[1.381,5.950]
First Business of Founder		0.443**	0.410***	0.374*
		[0.233,0.841]	[0.214,0.785]	[0.132,1.061]
Foundation Year			1.022***	1.033***
			[1.009,1.035]	[1.013,1.052]
Founder's Education: B.A. or Below				1.381
				[0.590,3.231]
Founder's Education: M.A. or Above				1.199
				[0.399,3.596]
Founder's Education: Professional				0.255*
				[0.054,1.197]
P-Val: Spouse = Borhter or Child	0.231	0.120	0.093	0.085
P-Val: Spouse = Business	0.089	0.065	0.037	0.005
P-Val: Spouse = Borhter or Child & Spouse = Business	0.226	0.161	0.106	0.008
N	85	78	78	44

Exponentiated coefficients

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the exponentiated coefficients from hazard Cox model presented in Equation refeq1. Point estimates and 95% confidence intervals are presented. In addition, the table includes p-values of tests for equality of the spouse and the brother/child coefficients as well as the spouse and business coefficients. The results of column 1 indicate that chains founded by couples were 60% less likely to be sold compared to chains founded by individuals.

Table 4: The Effect of Familial Relationship on the Sell-Out Decision

	(1)	(2)	(3)	(4)
Partner: Spouse	-0.321**	-0.325**	-0.327**	-0.767***
	(0.136)	(0.145)	(0.144)	(0.173)
Partner: Brother/Child	-0.164	-0.139	-0.146	-0.304
	(0.112)	(0.115)	(0.115)	(0.195)
Partner: Business	-0.143*	-0.145*	-0.147*	-0.149
	(0.082)	(0.080)	(0.081)	(0.099)
Franchised within 7 Years of Foundation		0.181**	0.197**	0.177
		(0.086)	(0.089)	(0.113)
First Business of Founder		-0.188*	-0.181*	-0.218*
		(0.096)	(0.098)	(0.115)
Foundation Year			-0.002	-0.003
			(0.002)	(0.003)
Founder's Education: B.A. or Below				0.015
				(0.092)
Founder's Education: M.A. or Above				-0.010
				(0.205)
Founder's Education: Professional				-0.416
				(0.460)
R^2	0.086	0.199	0.205	0.515
N	85	78	78	44

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the LPM regression results of Equation 2. The results indicate that chains founded by couples were 32% less likely to be sold compared to chains founded by individuals. Chains founded jointly by other family members (e.g. brothers) or together with business partners are also less likely to be sold, but to a smaller magnitude.

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Table 5: The Effect of Familial Relationship on the Number of Years until Sell-Out

	(1)	(2)	(3)	(4)
Partner: Spouse	12.214**	12.116**	11.466**	23.484***
	(4.693)	(4.776)	(4.335)	(4.162)
Partner: Brother/Child	5.271	4.331	2.203	9.739
	(4.733)	(4.868)	(4.562)	(6.636)
Partner: Business	3.393	5.550	5.132	3.465
	(4.734)	(4.836)	(3.847)	(3.570)
Franchised within 7 Years of Foundation		-14.608***	-9.985***	-8.706**
		(4.008)	(3.194)	(3.338)
First Business of Founder		5.774	8.061**	10.306**
		(4.078)	(3.454)	(3.782)
Foundation Year			-0.459***	-0.424***
			(0.097)	(0.092)
Founder's Education: B.A. or Below				-2.695
				(2.934)
Founder's Education: M.A. or Above				0.631
				(4.911)
Founder's Education: Professional				37.837***
				(12.815)
R^2	0.057	0.240	0.461	0.772
N	85	78	78	44

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the results of OLS regressions in which the number of years from foundation to sell-out is used as the dependent variable. For chains that were not sold by the data collection year (2013), the time elapsed between the chain's foundation year and that year is used as the dependent variable. The results indicate that chains founded by couples are sold at least 12 years later than those founded by individuals.

Table 6: The Effect of Familial Relationship on the Number of Years until Sell-Out - Censored Model

	(1)	(2)	(3)	(4)
Partner: Spouse	19.061***	17.941***	15.144***	34.768***
	(6.692)	(6.693)	(5.769)	(8.439)
Partner: Brother/Child	9.016	7.882	5.160	11.996
	(5.527)	(5.514)	(5.022)	(7.692)
Partner: Business	6.147	8.274	7.417*	4.254
	(5.485)	(5.410)	(4.133)	(3.757)
Franchised within 7 Years of Foundation		-17.678***	-12.418***	-10.674***
		(4.906)	(3.889)	(4.055)
First Business of Founder		7.328	9.670**	11.324***
		(4.949)	(4.131)	(4.197)
Foundation Year			-0.458***	-0.349***
			(0.107)	(0.102)
Founder's Education: B.A. or Below				-2.418
				(3.259)
Founder's Education: M.A. or Above				2.358
				(6.391)
Founder's Education: Professional				42.342***
				(15.347)
N	81	74	74	44

The table presents marginal effects obtained from estimating censored models

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the results from Tobit regressions that account to the censoring in the number of years to sell-out. Specifically, for chains that were not sold by the data collection year (2013), the time elapsed between the year of foundation and that year is taken as a lower bound on the number of years to sell-out. The results indicate that once censoring is taken into account, chains founded by couples are sold at least 15 years later than chains founded by individuals.

Table 7: The Effect of Familial Relationship on Number of Years to Sell-Out (Restricted to Firms that Were Sold)

	(1)	(2)	(3)	(4)
Partner: Spouse	7.519*	8.165*	6.040	15.047***
	(4.470)	(4.815)	(4.200)	(4.099)
Partner: Brother/Child	2.102	2.196	-0.497	2.228
	(4.104)	(4.223)	(3.698)	(3.642)
Partner: Business	-3.148	-0.693	-0.020	-0.584
	(3.565)	(3.788)	(3.024)	(3.043)
Franchised within 7 Years of Foundation		-10.052***	-6.079**	-5.089*
		(3.587)	(2.747)	(2.705)
First Business of Founder		0.953	3.135	4.452
		(3.406)	(2.895)	(3.617)
Foundation Year			-0.369***	-0.348***
			(0.065)	(0.095)
Founder's Education: B.A. or Below				-0.303
				(2.631)
Founder's Education: M.A. or Above				5.604
				(6.049)
Founder's Education: Professional				32.499***
				(5.120)
R^2	0.072	0.213	0.464	0.769
N	71	65	65	33

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the results from OLS regressions that are restricted to firms that were sold out. The results indicate that focusing on this restricted sample, chains founded by couples are sold 7 years later than chains founded by individuals.

Table 8: The Effect of the Sell-Out Decision on the Decision and the Timing of Going International

	Intl. Expansion Indicator				Age at Intl. Expansion	
	(1) OLS	(2) 2SLS	(3) OLS	(4) 2SLS	(5) Tobit	(6) IVTobit
Sold	0.660***	0.866*	0.782***	1.417*	-8.186*	-9.905
	(0.082)	(0.510)	(0.089)	(0.801)	(4.221)	(13.131)
Franchised within 7 Years of Foundation	0.105	0.063	-0.007	-0.099	-13.796***	-13.787***
	(0.104)	(0.145)	(0.114)	(0.159)	(3.858)	(3.925)
First Business of Founder	0.015	0.055	0.001	0.034	3.249	3.276
	(0.109)	(0.139)	(0.123)	(0.136)	(3.932)	(4.065)
Foundation Year	-0.003	-0.003	-0.004*	-0.004*	-0.609***	-0.609***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.102)	(0.100)
R^2	0.290	0.269	0.243	0.107		
N	78	78	61	61	75	85

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The table contains the results from a set of specifications that examine the relationship between firm's change of ownership from the original founder(s) and the decision to expand internationally. The dependent variable in columns 1-4 is an indicator taking the value 1 if the firm began operating outside the U.S. after the sell-out decision. While the first two columns are focused on all firms, columns 3-4 focus only on firms that went international (either before or after the sell-out). Since the sell-out decision may be endogenous, it is instrumented in columns 2 and 4 by the spouse-partner variable. The dependent variable in columns 5 and 6 is the age at which the firm went international. The censored nature of this variable is taken into account by estimating a Tobit model. Similarly to columns 2 and 4, the potential endogeneity of the sell-out decision is taken into account in column 6 by estimating IVTobit specification. The results indicate that the sell-out decision is a catalyst for international expansion and is negatively associated with the time it takes for a firm to go international.