

FRANCHISING AS A STRATEGIC MARKETING PLAN FOR SMALL ENTREPRENEURS: A TEST CASE OF THE REAL ESTATE BROKERAGE INDUSTRY

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ABSTRACT

Franchising is normally viewed as a governance mechanism and/or a distribution medium. Most of the existing literature on franchising takes the view of the parent corporation (Franchisor) in order to explain behavior from the corporate level. Measures used in many studies are firm level performance metrics which capture profitability and efficiency. In this paper, I attempt to find if there are differences between franchised firms and independent firms in the residential real estate brokerage industry. In essence, franchising in a fragmented industry such as real estate brokerage is an attempt at a strategic marketing plan. This plan includes a branding element which can be an important motivator to franchise. I find, in a sample of 158 real estate transactions, that there are no differences between the two types of firms by using three statistical techniques—T Test, Regression, and Probit Analysis—and five variables—Listing Agent Type, Days on Market, Original Asking Price, Sale to Asking Price Ratio, and Commission Rate. The results put in doubt the use of franchising for strategic marketing purposes in that independent firms fared as well as franchised firms. These findings have implications for studies in Marketing, Entrepreneurship and Strategy.

BACKGROUND

Differences in industry structure can help to explain divergences in the strategic planning that new ventures undertake. Considering that entry barriers are lower in highly fragmented industries, one would expect to find that many new entrepreneurial firms gravitate toward these industries. Amongst the topics that are key to this issue is that of a new firm's strategic planning and, more specifically, its strategic marketing. The strategic marketing plan for a new venture is crucial to firm survival for a number of reasons dealing with the nature of scarce resources in startup companies. Resources such as brand name, financial capital and founder experience are central to many startup firms. However, there are few instances where all three are present at the initial conditions of firm founding.

In order to optimize a firm's survival, founders must utilize their scarce marketing resources efficiently and effectively or risk failure through death or substandard profits. In a fragmented industry, one way to maximize firm exposure is through franchising. Although many scholars in the Strategy field have seen franchising as an issue in the context of Agency Theory, franchising can

also be viewed as a technique to maximize the problem of newness (Stinchcombe 1965) that many small firms face. Therefore, franchising can address several issues pertaining to both small, new firms and fragmented industries.

First, in an environment that approaches perfect competition, franchising can consolidate sellers by placing them under a common umbrella. Secondly, franchising can allow a startup to have instant brand recognition giving it validity and legitimacy (Terreberry 1971) through acquisition. Thirdly, franchising can act as a management mechanism for the franchisor by delegating the franchisee as a de facto corporate manager even though the franchisee is technically a proprietor. This paper will treat franchising as a strategic marketing tool in the context of fragmented industry space. The test case for the industry type is the real estate brokerage industry in the United States. Real estate brokerages can be considered fragmented because there are numerous small agencies (sellers) in the marketplace. In the past 20 years, franchising has become more prevalent in the brokerage industry as firms such as Remax, Coldwell Banker, Long and Foster, and Prudential consolidate small agencies under one umbrella.

A number of research questions follow. First, are there significant differences between franchised and non-franchised brokerage firms in terms of the number of listings per agent employed, days on market (DOM) of listed properties, commission rates, and advertising presence? Secondly, and in light of the findings to the first question, can it be stated that becoming a franchised brokerage is a strategic marketing option over becoming an independent firm. In other words, franchising is a business trade off. For the recognition and standardization that the franchisee receives, he or she must incur transaction costs which have to be no more than the benefits incurred. Is this the case?

This study will use brokerage data from the Philadelphia Multiple Listing Service (MLS) to answer the preceding questions. The paper will be empirical in nature in that hypotheses will be posited and tested which correspond to these research questions. Multiple regression, T-Tests and Probit Analysis will be used to analyze the data in order to test the overarching notion that franchises in fragmented industries act as a strategic marketing option over independent agencies. This work will add to the existing literature in Marketing, Entrepreneurship and Strategic Management.

The gap in the current literature that I am addressing in this paper is in looking at the decision to franchise or not as a strategic marketing decision in an entrepreneurial setting. Although there is an extensive literature on franchising as a phenomenon, very little of it is focused on the decision of the franchisee. In this paper, I will posit several hypotheses related to the differences between those firms that franchise and those that choose to stay independent. If the results show that there are differences and that the differences are positive for franchisees, then franchising is possibly a strategic marketing move by firms that wish to consolidate both a brand and business processes. If the groups have no significant difference, then one needs to ask what is the actual benefit in franchising in fragmented industry space.

The structure of this paper is as follows. First, the existing literature on franchising will be presented. Secondly, the real estate industry, in general, and the real estate brokerage industry, specifically, will be explained. In Section 4, I will list the hypotheses to be tested. In section 5, I explain the data and variables used in the study and in Section 6 the study methodology will be described. Following these topics will be a Results Section as well as a Discussion.

EXISTING LITERATURE

Theories from the Strategy, Marketing, Entrepreneurship and Economics literature are pertinent to this analysis and will be discussed in this section. Franchising has different meaning to different scholars all who wear different functional lenses. To simplify, the Strategy literature tends to treat franchising as a control mechanism in which the franchisor can extend operations by implementing a de facto local management through the franchisee. The Marketing view of franchising is one that values the branding of the franchised name and the resultant success, or lack thereof, of firms that choose to franchise. The Entrepreneurship literature focuses on the question as to how franchising can help new ventures survive through a mixture of standardization, control, and branding. Finally, the Economics literature stresses property rights, externalities and choice in the decision to franchise.

Strategy Literature

More specifically, the Strategic Management literature includes topics such as vertical control without the cost associated with vertical integration (Carney and Gedajlovic 1991). In this manner, franchising can be viewed as a hybrid organizational form. Following on this theme are companies that mix operations whereby some outlets are company owned and others are franchised out. The ability for the franchisor to pick this strategy is derived from the amount of power involved in the relationship between mother firm and franchisee (Michael 2000).

Yin and Zajac (2004) argue that it is not whether companies franchise or not in terms of performance but instead that the right fit is incorporated into the company structure. Put differently, since flexibility is a benefit of franchising, firms that need to be more flexible will perform better if they choose franchising whereas a more rigid structure is conducive to more control oriented firms.

The resource based view of the firm (RBV) has been a leading framework for Strategy scholars for the past few decades. Along this line of reasoning, Knott (2003) stresses the tie between competitive advantage and tacit knowledge in the context of routines. Her logic is that if routines are what make firms flourish, then in a franchising system these routines must be transferred to the franchisees. However, if the routines do not contain tacit knowledge, they are easily transferable and not likely to garner a competitive advantage.

However, the prevailing Strategy-based them in terms of franchising is in the study of Agency Theory which is concerned with Principal-Agent alignment especially in incentive schemes. The problems that arise in the Agency approach are adverse selection, moral hazard and holdup. In order to minimize the first two issues, firms may choose to franchise operations in order to give the other party a residual claim on excess profits. In this manner, the franchisee can be viewed as a district manager but one that holds the right to earn these profits (Shane 1998; Lafontaine 1992; Brickley and Dark 1987). Conversely, franchising increases the probability of hold up (Klein, Crawford and Alchian 1978; Shane 1998). Empirically, Combs and Ketchen (1999) found that agency variables were significant predictors of firm franchising. However, they also found partial support for Capital Scarcity Theory which argues that franchising is a mechanism to for the franchisor to avoid capital depletion.

Marketing Literature

In the realm of Marketing, Srinivasan (2006) studies the link between the dual distribution schema of a firm and its intangible value. According to Srinivasan, the dual distribution consists of firms which own some of their retail locations while also franchising others. Although he focuses on the Restaurant industry, the finding that having a dual distribution mechanism of governance increases intangible value is pertinent for numerous industries. In addition, this paper is relevant to this analysis in that both are attempting to study industries which are highly fragmented.

Contractor and Kundu (1998) study another industry which has relevance to real estate brokerage—Hotels. Contractor and Kundu are interested in finding out what factors induce hotel chains to choose company run versus franchising in certain locations. They find that the level of development of the foreign market, the international experience of the firm and branding effect this strategic marketing choice.

Dant, Paswan and Kaufman (1996) follow the history of Oxenfeldt and Kelly's (1968) argument which was that once the franchisor established itself enough in terms of assets, experience and cash-flow generation, that it would discontinue franchising operations and, instead, only focus on company-run stores. They find that moderators such as sales share, lack of long-term contracts, net conversion gain and attrition are contributing factors in the ownership redirection thesis posited by Oxenfeldt and Kelly (1968).

Economics Literature

The Economics literature contains many works that reiterate some of the same themes previously discussed yet from a different, and often more quantitative, angle. Kalnins (2005) is concerned with franchisor-franchisee contracts in the context of development commitments. He finds that the larger the development commitment in the franchise system, the less likely a firm is

to survive. Lofontaine and Shaw (2005) revisit the dual distribution schema that many scholars have studied and find that franchisors with high brand name value have higher rates of company ownership. Dnes and Garoupa (2005) focus on externalities in franchising systems. They posit that firms have a trade-off decision between managerial motivation and trying to limit externalities. Furthermore, this trade-off explains which organizational forms firms choose.

Windsperger (2002) emphasizes the role of intangible assets in franchising with a concentration on property rights. In essence, and after testing the hypothesis, he finds that there is a positive relationship between the amount of intangible knowledge that a franchisor owns and the amount of ownership rights that should be transferred to the franchisee. Following on the rights and contracts approach to franchising, Chaudhuri, Ghosh, and Spell (2001) show that franchisors, due to asymmetry in power and rights, choose more profitable locations for company owned stores and less profitable ones for franchisees.

Entrepreneurship Literature

The Entrepreneurship literature takes a different focus on franchising than Strategy, Marketing and Economics because, at its core, franchising is an entrepreneurial option. Combs, Ketchen and Hoover (2004) study franchising in the backdrop of strategic groups and find that those restaurant firms that franchise out of resource scarcity had poorer performance than other groups. Hoffman and Preble (2003) studied conversion franchising where franchisors pull independent firms in to their system as opposed to only recruiting potential entrepreneurs to commence new operations. This paper has important implications to real estate brokerage because conversion franchising has been an ever-increasing phenomenon in that space in recent years.

Kaufman and Dant (1998) look at four topics regarding franchising including 1) innovation, 2) concepts, 3) risk and 4) multi-unit franchising in an attempt to explain three key areas of their work namely traits, processes and activities. Wu (1998) focuses on the pricing of a brand name (i.e. Franchisor) in the motel services industry and asks a question that is pertinent to this analysis which is: Are franchised brands valuable? In other words, if franchised and non-franchised firms not only compete but thrive in the same space, how does branding help?

Real Estate Brokerage and Franchising Literature

There are a few studies in the academic literature which combines the topics of franchising and real estate brokerage. Anderson Et. Al. (1998) study the efficiencies of franchised firms versus non-franchised firms in the real estate brokerage industry and find that efficiency levels are similar in both types of firms. Anderson, Chinloy and Winkler (2007) look at the decision to franchise in the brokerage industry by studying the economic rents and the residual effect of the franchisor-franchisee setup. With data from the 2001 National Association of Realtors (NAR) Survey, they

conclude that franchisors offer relevant additional inputs in helping their franchisees garner higher revenue.

Benjamin et al. (2006) also use the 2001 NAR Survey to study the profitability of franchising in real estate brokerage. Although two of the four co-authors are also included in the Anderson, Chinloy and Winkler (2007) study, they conclude that net margins are less for franchised firms. Excess rents, in their opinion, are absorbed by the franchisors when contrasting against independent firms.

Gaps in the Literature

There appears to be a plethora of franchising papers many of which are empirical in nature. However, there is a gap in the literature in looking at franchising as a strategic marketing tool. What is meant by a strategic marketing tool? As a thought experiment, think of an entrepreneur who has committed to starting a real estate brokerage. Since this is a fragmented industry and small firms are plentiful, the barriers to entry are low including both human capital and financial capital. In making the decision, the entrepreneur considers a national chain as a franchisee as well as a pure startup firm with no affiliation.

It is difficult to argue, if cost is taken out of the discussion, that a franchise is not more valuable. The instant brand recognition adds legitimacy to the franchisee immediately. However, franchises are costly. In addition to an up-front franchise fee, the franchisee must pay a portion of its revenues to both marketing and royalties. Although franchises help this person to claim a portion of the market, the fees paid to the franchisor are off of the top-line (i.e. Revenues and Start Up Capital) and, in no way, guarantee success.

Therefore, looking at the decision through the entrepreneur's eyes, it is important to distinguish the costs and benefits of this choice. Although a cost-benefit analysis is outside of the scope of this project, it must first be determined if there are performance differences between the two groups. Since independent firms are generally private, obtaining detailed data from them is difficult. Therefore, many of the studies cited here, while robust and important, are studying the decision from a purely academic standpoint.

Utilizing my data set, I am attempting to measure the differences between the groups with transaction-level data which is both recent and accessible. It is accessible because the Multiple Listing Service (MLS) contains information on transactions which is the same if the Listing Agent is a franchise or not.

INDUSTRY

Real Estate and Real-Estate Related

The real estate industry (to include Hotels) includes all firms that work primarily with real property. Major sub-groups are operative builders, general contractors, real estate brokerages, title insurance companies, real estate lessors, and hotels. This industry was chosen because it characterizes one that has been neglected in the literature of several disciplines. Additionally, real estate is an interaction of two industry types which have not been prevalent in many works. This interaction includes service industries which are also highly fragmented. Why is this interaction important to the literature?

The short answer is that fragmented service industries have not received the attention that they deserve. Concentrated industries consumed the early Business literature for good reason. First, data sets compiled in the 1960s and 1970s were of concentrated, and often oligopolistic, industries because it was much easier to collect data in this space. Secondly, many early studies were interested in manufacturing concerns which tended to be oligopolistic. However, the composition of the U.S. economy has changed in the past fifty years. The majority of U.S. business revenues are now derived from the service sector yet the academic literature has not kept up proportionately (Department of State Website 2006).

Another reason that this industry type is important is that, by its nature, it is filled with anomalies. A fragmented industry has low barriers to entry which leads to numerous small entrants. Some of these entrants remain alive for a long period of time (i.e. Holiday Inn, Centex Homes) while some enter and exit with great frequency. Therefore, the composition of the industry is contained within a dynamic state.

More specifically, real estate brokerage includes firms that list, market and sell real property. Although these firms can be residential or commercial in nature, this paper addresses only residential firms. The real estate brokerage sub-industry, like the broader real estate industry, includes many small firms none of which has a very large market share. Since this is the case, even the largest firms do not have excessive market power in setting the tone of the industry.

Characteristics of Fragmented Industries

Fragmented industries have several common characteristics that are present albeit to different extents. Porter (1980) describes fragmented industries as those that contain all or some of the following:

- ◆ Low Entry Barriers
- ◆ Lack of Power Advantages with Buyers

- ◆ Lack of Power Advantages with Suppliers
- ◆ Lack of Economies of Scale
- ◆ Lack of Economies of Scope
- ◆ Regional Issues such as High Transport Costs
- ◆ Regulation

All points have merit but three are key. First, low entry barriers are a given when discussing fragmentation because ease of entry disallows large firms to set the tone. Simply put, the lack of high entry barriers is an open invitation for more small companies to join the industry. One finds that in fragmented industries a plethora of small firms, many privately held operating alongside large, publicly traded corporations (Wright et al. 2004). The second common trait is a lack of power advantages with buyers in fragmented industries as buyers often are equally fragmented. Because buyer consolidation, usually through multiple distribution levels, is absent in these industries, power is absorbed in demand as opposed to supply (Briesemeister and Fisher 1998). This tends to lead to a greater variance in pricing than if buyers were a more solid cohort. The third aspect is low economies of scale which contribute to industry fragmentation as sparse resource origins supply different industry actors but in a non-unified way. Low economies of scale in fragmented industries are not in all inputs but often in a few important ones.

Porter's definition concentrates on industries that tend to produce something. However, in the new economy, many firms that are service-oriented tend to be in fragmented space. With the advance of technology, especially the internet, firm entry in the service sphere has become increasingly more tenable. This study combines the interaction between the service sector and fragmented structure.

Measurements of Fragmentation

Fragmentation measures typically have two variants. First, there are Concentration Ratios (CR) which measure a certain number of industry leaders. CR₄ and CR₈ levels are most common in the academic literature and they measure the top four or eight industry leaders, respectively, by market share. Mathematically, these levels are represented by:

$$\sum_{i=1}^n MS_i$$

In this case, the summation of market shares (MS) of N market participants are simply calculated to derive at a number. In a highly concentrated industry, a CR₄ level is greater than 40 percent and often above 60 percent (Caves and Porter 1978). In a fragmented industry, these levels

may fall to below 20 percent. The closer an industry approaches perfect competition, the closer the CR₄ level approaches zero.

Another measure of industry concentration is the Herfindahl-Hirshman Index (HHI). This differs from the previous equation in that the market shares are squared as shown by the equation:

$$\sum_{i=1}^n (MS_i)^2$$

The major difference is that the HHI (Federal Reserve Bank of Atlanta 1993) accounts for large industry players by squaring the market shares. The index has values that range from perfect competition (0) to pure monopoly (10,000). As a mental exercise, think of two industries. One has market leaders with respective market shares of 50 percent, 10 percent, 10 percent, and 10 percent while the other has a split of four leaders with 20 percent per firm. In each case, the CR₄ level equates to 80 and this industry would be considered oligopolistic (CR₄>60). However, if the market shares are squared to derive at an HHI value, Industry 1 has HHI=2,800 while Industry 2 has HHI=1,600.¹ These two values are significantly different because the HHI accounts for firms with very large market shares exponentially while the CR levels are a simple summation.

However, in a fragmented industry, the effect is reversed. Imagine an industry where there are 10 players with an average of four percent of market share and then a number of tiny firms each with less than one percent of the market share. The HHI would equate to 10*(4²) or 160 plus the aggregated amount of the small firms. However, since the square of a market share under one produces a smaller value, even if there were hundreds of small firms, the aggregated figure would not have a significant influence on the HHI. In this case, squaring small values keeps the HHI low.

HYPOTHESES

Based on the research questions posed at the beginning of this paper and the gaps in the literature, the following hypotheses are presented. The hypotheses are focused on differences between franchised versus independent firms. This is an important distinction because if there are differences in marketing performance between the groups, then a follow up question would deal with the level of difference since there is significant cost involved in starting and running a franchised company. Conversely, if there is no difference between the groups, then this result would raise serious doubts to the effect of franchising as a strategic marketing tool regardless of if it is a superior managerial control mechanism. It should be stated again that the hypotheses and the subsequent results are important not just for Strategic Marketing research but also for Entrepreneurship because many industries that are entrepreneurial in nature have similar characteristics to real estate in that many are fragmented.

- H1: Real estate brokerage firms that are franchised are significantly different from real estate brokerage firms that are non-franchised (i.e. independent) in terms of the amount of Days on Market (DOM) of the properties that they list for sale.*
- H2: Real estate brokerage firms that are franchised are significantly different from real estate brokerage firms that are non-franchised (i.e. independent) in terms of the commission rate charged to their customers.*
- H3: Real estate brokerage firms that are franchised are significantly different from real estate brokerage firms that are non-franchised (i.e. independent) in terms of the original price of homes that they list for sale.*
- H4: Real estate brokerage firms that are franchised are significantly different from real estate brokerage firms that are non-franchised (i.e. independent) in terms of the ratio of sale price to original price of homes that they list for sale.*

DATA AND VARIABLES

Data for this study was downloaded from the Multiple Listing Service (MLS) of greater Philadelphia which includes the city of Philadelphia and surrounding suburban counties in Pennsylvania and New Jersey. All subject properties were sold and settled sales in Philadelphia county which settled during the week of June 1, 2009 and June 7, 2009. Only residential sales were included and all property types and sales price ranges were included. All told, there were 158 sales during this week ranging in price from under \$10,000 to well over \$1,000,000. Property types included condominiums, row/town houses, twin/semi-detached, and single/detached.

The variables used were as follows:

Ratio Index—This was calculated as the ratio of sold price to original price multiplied by 100. This is an important measure in attempting to uncover if one type of firm had a greater success at reaching the original sale price relative to the settled price on the property.

Natural Logarithm of Days on Market (Ln DOM)—Days on Market was measured as the amount of days the property was listed for sale until the date a sales contract was executed on the property. The Natural Logarithm of Days on Market was used as the variable for the tests because the range of values were extreme.

Commission Rate (Comm Rate)—Published rate of commission for the property. The Commission Rate is the one performance metric in this study that measures the performance of the firm types as opposed to the success or lack thereof in marketing the properties.

Natural Logarithm of the Original Price (Ln Op)—The property's original asking price. Additional information was available and recorded for a property's most recent asking price before a sale but this information was not used for two reasons. First, it was not available for all subject properties. Secondly, original price was important in attempting to determine which listings were won by which type of organization. The natural log was used because the range of values recorded were extreme.

Listing Agent Type (LA Type)—This is a dummy variable with 1=Franchised Brokerage and 0=Independent Brokerage.

METHODOLOGY

In order to determine if there was a significant difference between the two groups in question—Franchised Firms and Independent Firms—three separate statistical tests were completed. First, a T-Test for Group Means was run on SPSS. However, the T-Test is limited in the amount of information given as well as in its robustness and so additional methods were utilized.

To corroborate the findings from the T-Test, multiple regressions were run using the General Linear Model (GLM) function in SPSS. In using the Generalized Linear Model (GLM), several regressions were performed with all variables in the place of the dependent variable in subsequent iterations. In addition to three continuous independent variables, a dummy variable was included for the two groups (1=Franchised and 0=Independent). This method was chosen because I was trying to determine, in the face of the other three variables, which group (Franchised or Independent) had a superior metric and if there were real differences between them. I was more interested in the direction of the Listing Agent Type variable than in specific parameter coefficients although they are available in the charts below.

More specifically, the general model being tested is as follows:

$$Y_{ij} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_{ij}$$

The four models that were specifically tested in SPSS include:

$$\text{Ratio Index} = \alpha + \beta_1(\text{Ln OP}) + \beta_2(\text{Ln DOM}) + \beta_3(\text{Comm Rate}) + \beta_4(\text{LA Type}) \quad (1)$$

$$\text{DOM} = \alpha + \beta_1(\text{Ln Op}) + \beta_2(\text{Ratio Index}) + \beta_3(\text{Comm Rate}) + B_4(\text{LA Type}) \quad (2)$$

$$\text{Comm Rate} = \alpha + \beta_1(\text{Ln Op}) + \beta_2(\text{Ratio Index}) + \beta_3(\text{Ln DOM}) + \beta_4(\text{LA Type}) \quad (3)$$

$$\text{Ln Op} = \alpha + \beta_1(\text{Ratio Index}) + \beta_2(\text{Ln DOM}) + \beta_3(\text{Comm Rate}) + \beta_4(\text{LA Type}) \quad (4)$$

Finally, using SAS, I tested the four independent variables—Ratio Index, Days on Market, Original Price, and Commission Rate—in a Probit Regression. Probit regressions are used when the dependent variable takes on a binary response as opposed to a continuous value response (Tabachnik and Fidell 2007). In this case, the dependent variable is the type of Listing Agent Brokerage with 1 equaling a Franchise and 0 equaling an Independent firm. The coefficients in a probit regression can be explained as Z-scores or standardized scores. Therefore, the model is measuring the propensity of the dependent variable equaling 1 (Franchised Firm). The general probit model is:

$$P(Y = 1 \text{ given that } X = x) = \Phi(X'\beta)$$

Manipulating both sides yields:

$$\Phi^{-1}P(Y = 1 \text{ given that } X = x) = (X'\beta)$$

In this case, I am modeling the propensity, or probability, that the dependent variable (Y) is equal to 1 (1=Franchise), given that we have certain independent variables (X). Additionally, probit analysis is based on the central density function (Φ) which is shown in the equation below. $(X'\beta)$ represents a vector of both independent variables and Beta coefficients. The cumulative central density function (CDF) is represented by:

$$\int_{-\infty}^Z \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{1}{2}Z^2\right) dz$$

The specific model used in this analysis is:

$$Y = \beta_0 + \beta_1(\text{Ln Op}) + \beta_2(\text{Ratio Index}) + \beta_3(\text{Ln DOM}) + \beta_4(\text{Comm Rate}) \quad (5)$$

RESULTS

Variable:	t-statistic	Significance
Ln Op	1.661	0.100
Ratio Index	1.335	0.185
LN DOM	0.035	0.972
Commission Rate	-1.408	0.163

Table 1 includes the results from an Independent T-Test using SPSS. As can be seen, all four variables have significance values above the critical level of 0.05. Since we will fail to reject the Null Hypothesis that there are no differences between groups, the conclusion is that the groups are the same from a statistical view point. However, T-Tests only measure certain characteristics related to group means and, therefore, their robustness is often questioned.

	Model 1	Model 2	Model 3	Model 4
Full Model:				
F-Stat	13.111	12.674	5.467	9.590
Significance	0.000	0.000	0.000	0.000
Levene's Test	0.032	0.991	0.032	0.352
R-Squared	0.257	0.250	0.126	0.202
Variables:				
Intercept	101.851	-206.456	10.812	10.930
Ratio_Index		-3.105	-0.036	0.005
Ln_Op	0.910	50.053	-0.321	
Ln_DOM	-4.313		-0.080	0.282
DOM				
Comm_Rate	-2.016	-7.537		-0.101
LA_Type	-2.133	10.383	0.224	-0.212

Table 2 includes the regression results which were run in the General Linear Model (GLM) in SPSS. Four models were tested which correspond to Equations 1 to 4 in the Methodology section. In each iteration, one of the four continuous variables was used as the dependent variable and

regressed against the remaining ones. All four models are significant yet the Listing_Agent_Type variable is insignificant in each model. This finding leads to failing to reject all four hypotheses listed in Section 4 because the one measure that can give both a magnitude and direction of difference between franchised firms and independent firms is not significantly different than zero.

Table 3--Probit Regression Results			
	Estimate	Chi-Square	P Value
Likelihood Ratio		6.150	0.1882
Variables:			
Intercept	-2.3339	2.0122	0.1560
LN Op	0.1696	2.0509	0.1521
Ratio Index	0.0095	1.1522	0.2831
Ln DOM	-0.0061	0.0047	0.9453
Commission Rate	-0.0676	0.8597	0.3538

To further test the groups, I computed a probit regression using SAS where I modeled the Listing Agent Type variable as the dependent variable. The specific model is Equation 5 in the Methodology section. If the model is significant, this would mean that the four independent variables predict the propensity for the franchised group to be the listing agent over the independent group. However, the model is insignificant (Chi-Sq=6.15, p-value=0.1882) which leads to the conclusion that these groups cannot be distinguished using the performance metrics in the model. Therefore, all three tests pointed to the same conclusion which is that the groups are not different.

DISCUSSION AND FUTURE RESEARCH

In this paper, I have shown that in a sample of property sale data from the Philadelphia Multiple Listing Service (MLS), there are no significant differences between franchised firms and independent firms in terms of how long their listings stay on the market, the commission that is charged, the original sale price that is chosen, and the ratio of final sale price to original asking price. This is important in the choice that entrepreneurs must make when choosing franchises because of the cost involved. If these results are validated in other studies, then the use of a franchise as a strategic marketing plan could be considered a sub-optimal choice.

This study has several shortcomings. First, the data is taken in one area of the country during one week. Although there is no reason to believe that the results would differ due to location and the time of year, this should be investigated. Secondly, the sample is small (N=158) and, therefore, a larger study using multiple regions would be recommended.

ENDNOTES

- ¹ For this simple example, the other 20 percent of the market share is assumed to be the same between the two industries

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