**Determinants Impacting Resale Premium Disparity When
Selling a Small Business: A Predictive Non-Linear Approach**

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Abstract

Small and entrepreneurial business activity worldwide continues to have a positive influence on economic growth and development. While there has been a plethora of studies on small business development, enhancement, and drivers for success, minimal research examines small business resales. Specifically, studies regarding the exit of small business owners through the selling of their business is sparse. More notable, no previous literature can be found concerning variables that optimize or impact the value of a small business resale. The purpose of this study is to identify variables that may have a positive influence on small business resale prices. Through non-linear analysis, the research identifies which variables most accurately predict an above average small business resale price. A dataset that examines 2,159 small business firms sold over a 10-year period is utilized to derive the study conclusions. Findings confirm that franchise firms receive a higher resale premium when compared with non-franchise firms. The analysis also supports that firms with greater than 25 years in business and that are engaged in Food/Restaurant (non-grocery) businesses receive a higher resale premium, as compared to any other firms in their respective categories.

Keywords: small business resale, franchising effects, neural network classification

Introduction

The analysis of build verses buy has historically been a question that emerging entrepreneurs have consistently asked. Is an existing business worth paying a premium for or would the same investment dollars be better spent building the business from scratch? Conversely, as a SME business owner, can one generate a premium when selling an existing business? Are future owners willing to pay a premium for an existing entity? A similar investigation is needed to determine, if an entrepreneur decides to purchase an intact business, will they purchase and pay a premium for an established franchise, as compared to a business that is not affiliated and supported by a franchisor? The conundrum is that buyer behavior and preferences and the potential advantages to sellers are largely unsupported in the small business and franchise literature. While the definitive answers to these questions are critical, the research to guide business owners and future investors is minimal. This research seeks to answer these questions regarding the potential premium on the purchase and sale of existing small businesses and then extends this investigation additionally to franchise businesses.

This study examines sales of existing small businesses that are both franchises and non-franchise entities. The lack of research that delineates if entrepreneurs or emerging business owners (a) have a preference for and are willing to pay a premium for an existing business and (b) have a greater propensity to buy a franchise or non-franchise business is the justification for this study. The existing research to answer these questions is scant and what does exist is dated, and with little current relevance. The results provide entrepreneurial theorists with a better understanding of the long-term implications of small business behavior at the time of succession or termination as various theoretical implications are presented late in the firm's life cycle. The study results also provide insight on factors that determine when a buyer is willing to pay a higher price for an existing business as these data points do not appear in the existing literature.

Literature Review

Twenty-first century small business and entrepreneurship research has produced some germane and relevant findings which are contrary, in some cases, to theories proposed in the thirty years prior. This study uses the following literature to develop its objectives and later support its conclusions.

Small Business and Entrepreneurship Theory Development

Important and seminal small business and entrepreneurship research findings include the following seven topical areas.

Small Business / Entrepreneurship Contribution to Economic Growth

Subsequent to the mid-1980s, small business development and entrepreneurship have been identified as an important and critical contributor to economic growth in both emerging and established economies (Ács et al.,2008).

Recognition of Quality over Quantity Entrepreneurial Ventures

In the 1980's and 90's uninformed economic growth advocates argued that merely increasing small business and entrepreneurial activities would result in an improved economic outcome (Szerb et al, 2019). More recent empirical studies however provide mixed evidence of

this and suggest that quality small business and entrepreneurial ventures are far more important than the quantity of organizations that exist or are added (Ács et al., 2018; Ács and Varga, 2005. Nightingale and Coad (2014) found that while it was an "almost universally accepted belief outside academia that entrepreneurial activity is a positive driving force in the economy" (p113), most entrepreneurial ventures and small business do not add to economic growth. The authors reevaluated the performance of a number of entrepreneurial firms and evaluated each entity's contribution in terms of innovation, job creation, economic growth and productivity growth and found that there were only a "small number of high performance 'gazelles' that drive most positive impact on the economy," with most organizations failing to contribute at all to economic expansion (Nightingale and Coad, p.113).

High Growth Firms are the Real Contributors to Economic Growth

Wong et al. (2005) found that through adding innovation, enhancing rivalry and creating competition, entrepreneurship made an economic impact, but noted that it a true contribution to economic growth, in a country or region, was limited to more innovative and "fast growing new firms" and "not new firms in general" (p335).

The Benefit of a Supportive Entrepreneurial Environment (EE)

With continued support for the economic benefit of small and entrepreneurial businesses in economic expansion, researchers have focused on (a) developing measures of economic impact of small and entrepreneurial businesses and (b) identifying and fostering environments that increase the propensity for small business and entrepreneurial expansion within a geography (Ács and Szerb 2007).

REDI and Measuring Propensity for Supporting Small Business Ventures

Szerb et al. (2019) identify that small business and entrepreneurial success varies from region to region and are positively supported by an effective regional entrepreneurial ecosystem. Regional readiness and propensity to attract and support entrepreneurial activity can be measured by the Regional Entrepreneurship and Development Index (REDI). Szerb et al. (2017). The REDI index measures a regions performance in supporting entrepreneurship development and small business growth by measuring 14 interrelated pillars that help create and support an effective entrepreneurial environment.

New Technology and Business Models Facilitate the Shift to Small and Developing Businesses

Numerous studies have identified that the technology and information revolutions over the past 25 years have allowed smaller, emerging businesses to remain competitive, flourish and begin to replace large corporations in the global marketplace (Ács and Audretsch 1988; Audretsch and Thurik 2001; Jorgenson 2001; Thurow 2003).

Cost and Efficiency Advantage Diminished

Leibowitz (1997) notes a 21st century shift in entrepreneurial thinking with respect the value potential buyers place on purchasing an existing business. Leibowitz observes that in a global marketplace, efficiency and cost containment are no longer barriers to entry or an impetus for buying an existing business. Optimal geography, low cost labor and more efficient

production facilities are not seen as a differentiator that would enable a seller to claim there was a competitive advantage that the buyer would benefit from and thus worth purchasing. With more relatively available capital and nearly limitless options and resources for recreating an efficient, cost contained entity, purchasers are no longer willing to pay a premium for an existing company's cost or efficiency advantage. The abandoning of the cost advantage being a benefit to buyers, leaves potential future sales as the driver of value and the factor that increases a buyer's willingness to pay a premium for an intact business.

In summary, the seminal small business development literature that informs this study outlines that only a small number of emerging small and entrepreneurial businesses result in economic growth for a country or region. This suggests that purchasing an existing entity with a track record may have advantages to the individual or group seeking to start a new business. Research also shows that while lower costs and efficiency achieved by an intact business previously were of value to a potential purchaser, future potential sales appear to be the impetus for a buyer to be willing to pay a premium for an existing business in the current economic climate. Finally, the literature outlines that there are other critical factors that determine the success of a new venture, including the entrepreneurial environment and the regional support for new businesses. As this study examines a buyer's willingness to pay a premium for an existing business or franchise, these findings are factors to be considered.

Franchising Theory Development

This study examines the resale of existing small business and then extends that analysis to franchise businesses. The following provide existing relevant research on franchise businesses to further support this study.

Franchised firms are a strong contributor to the US economy. There are approximately 4,000 franchise brands supporting nearly 900,000 franchise outlets that operate in at least 230 major industries in the U.S. New franchise brands enter the market at a rate of 300 per year (Frandata, 2019). Emerging franchisors create new businesses by licensing their brands to thousands of new and existing small business owners. Collectively, franchisors and franchisees provide more than 23 million jobs, generate more than $2.3 trillion to the American economy and account for more than 40 percent of all U.S. retail sales. The International Franchise Association (IFA) outlines that almost 4 percent of all small businesses in the U.S. are franchises. In recent years franchising has grown by more than 10 percent annually, faster than the GDP. The S&P 500 which has historically returned 7 to 10 percent annually is being consistently outperformed by the FRANdex, which tracks the performance of 62 U.S.-based publicly traded franchise companies.

There are numerous core theories traditionally used to support franchising theory. These include: (a) resource scarcity theory, (b) agency theory, (c) signaling theory, and (d) the resource-based view.

Resource Scarcity Theory

This theory posits that firms engage in franchising to acquire capital benefit and a faster awareness of markets while reducing the burden of traditional small firm growth constraints. While franchisee motivations are to leverage the advanced development of the firm's seasoned

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business activity, documented procedures and market knowledge, appearing to be a win for both parties (Caves and Murphy, 1976). To date this theory has not been able to gain wide-spread acceptance due to validity concerns, primarily when explaining why larger firms with no capital constraints would still choose a franchising strategy (Lafontaine and Kaufmann, 1994).

Agency Theory

This theory provides an alternative view of franchising by looking at the relationship between the franchisor and franchisee. This comes when examining the motivations and risks by both parties (Blair and Kaserman, 1982). Each are involved in the same business activity with the same or similar objectives but often use different motivations to achieve those objectives. The behavior of the principal (franchisor) and agent (franchisee) struggle with goal conflict while at the same time reaching efficiencies and effectiveness (Rubin, 1978). The support for agency theory being the underpinning for the franchise model is robust. Research has noted that franchisee motivation in the role as agent, was the single most important reason franchisees decided to purchase a franchise, creating a strategic alliance between the parties (Stanworth and Kaufmann, 1996).

Signaling Theory

While resource scarcity and agency theory focus on internal constraints, signaling theory considers externalities of market imperfections and knowledge asymmetries. The two primary drivers of these misalignments are the type of information being sought and the inability of individuals to ascertain knowledge cues (Dant and Kaufmann, 2003). Recent evidence provides a different perspective of the franchise model. Lafontaine and Shaw, (2005) suggest that a firm's inclination to franchise is an organizational decision determined like any other similar decision. An examination of risk and return coupled with firm resources, and the competitive environment are all variables at play in the decision. Competitive advantage can be obtained quickly, given the available resources, lending further credence to the theory.

Institutional and/or Resource Based Theory

Varotto and Aureliano-Silva, (2017) provide a comprehensive literature examination regarding franchise theory and franchise motivators. The authors identified that while there was support for the traditional theories, a growing number of scholars were identifying explanations for a propensity for franchising beyond the traditional firm-specific economic factors. Varotto and Aureliano-Silva found that the access to resources was an advantage of purchasing a franchise. Specifics such as legitimatizing one's business in a new region or country (Marie Doherty, Chen, and Alexander, 2014) or gaining access to additional resources (Smith and Seawright, 2015) were reasons why buyers saw value in purchasing and existing franchise.

Firm Level Motivators

When examining the firm level behaviors about why an individual chooses a franchise or an independent business, managerial input and brand performance play a key role (Falbe & Welsh, 1998). Managerial input is leveraged by the franchisee, generating a higher probability of success. Firms who demonstrate managerial experience and success, much like a franchise would exhibit, is probably the most sought-after characteristic in the decision to purchase. This is followed closely by brand. Franchise buyers tend to believe the brand offers a competitive

advantage and will lead to success faster than a firm with no brand (Aaker, 2003). Brand strength can manifest in different ways depending on the type of firm being sought. Different manifestations of brand strength may come through monetary brand value, customer loyalty, customer positioning, or future customer revenues.

Buyers of franchises often look to 6 characteristics of the firm to assess value. They are (1) financial strength, (2) growth and survival, (3) innovation, (4) coordination and conflict, (5) brand image, and (6) personal factors (Combs, Ketchen, and Hoover, 2004). Numerous studies suggest that a franchise brand has value for potential franchisees (Rubin, 1978; Knight 1986; Peterson and Dant 1990; Baron and Schmidt 1991). However, given these confirmations, only a few research studies exist regarding the franchisee perspective. In addition, little insight is provided regarding expectation to actual franchisee performance (Inma, 2005).

One such study was done by Leslie and McNeill, (2010). Using interview-based data, they found that there were five common positive and one negative characteristic of choosing a franchise over starting a firm from scratch. The positive characteristics, by rank were: (1) security, (2) fear of starting own business, (3) service/brand management, (4) negotiation leverage, and (5) professionalism edge. The one negative characteristic was loss of control.

Small Business Valuation

Due to the nature of this study, pricing valuation methods are examined to determine if one or more methods of business valuation are evident. There are two general perspectives for valuing the potential franchise, one determined by the potential buyer and the other by the potential seller. Potential buyers tend to use brand value beyond the assets and systematic programs in place. They also viewed, to a lesser extent managerial experience and training, and capital and business support. These factors were applied more subjectively by the potential buyer, supporting whether they would pay a premium or discount of the asking price. This valuation approach is supported by Rubin's earlier work (1978). However, it did not examine existing franchises for sale, only new franchises (Leslie and McNeill, 2010).

When examining how the potential seller may estimate their firm's value, Pricer and Johnson, (1997) found twelve valuation approaches in the previous literature such as net book value, future earnings, gross sales and various forms of discretionary cash flow approaches to determine the estimated selling price. Although there were differences in the predictive level for each, all displayed some predictive impact of value given differing variables of the firms such as size and business activity.

Several studies suggest that although franchise choice literature is abundant, much less is available at the micro-level, such as firm to firm behavior and performance, franchisee characteristics, franchise life-cycle position, local competitive environment (Barthelemy, 2008; Combs, Ketchen, and Short, 2011; Gillis and Castrogiovanni, 2012; Dada 2013).

Methodology

Based on the review of literature, numerous gaps were apparent when examining the resale opportunities of small firms. No evidence exists regarding the variables that impact the resale value of small businesses.

The study has the following three research objectives:
1. Offer support to substantiate that specific determinants impact small business resale premiums.
2. Determine if any high-ranking predictive determinants exist for classifying small business firms receiving higher than average resale premiums.
3. Employ a proven non-linear statistical technique for accurately predicting firms that will receive higher than average resale premiums.

Variables

The dependent variable used in this study is sold price of the firm divided by seller's discretionary earnings (SDE). This measure is used primarily to exclude variances in asset and equipment value and to include any franchise costs prior to earnings calculations. Although higher goodwill exists for a franchise, the costs to obtain that goodwill at the firm level would have been realized prior to earnings results. This research did not use the sold price to sales ratio as the dependent variable because the nature of the sales premiums were skewed by type of business variance and capital requirements. Seller's discretionary earnings is an approach to calculate the value of a firm, primarily at the time of sale. This approach provides a more accurate picture of cash flow. Furthermore, this approach is more common in firms with earnings less than $25 million. The rationale is that smaller firms tend to focus on lowering earnings for tax purposes by lowering the true value of the firm's financial performance. Using the SDE approach adds discretionary, nonrecurring, unexpected, and other like expenses back into stated earnings providing a more accurate picture of the firm's worth. Typically, buyers are most interested in total income available in the potential firm which is best provided using SDE. For use in the PNN, the dependent outcome variables are categorized by sold price to SDE ratio, generally below, at, or above the mean for all firms. Specifically, the categories are below 25 percent sold price to SDE ratio, 25 percent below to 25 percent above sold price to SDE ratio, and above 25 percent sold price to SDE ratio. (See Table 1).

Variable Category

		Label
DEPENDENT		
Mean Sold Price to SDE Ratio	Below 25%	Low=.25
Category	25% Below to 25% Above	Avg=.50
(SP/SDECat)	Above 25%	High=.75
INDEPENDENT		
Franchise Category	Yes	1
(FranCat)	No	0
Business Activity Category	Personal Services	1
(BusCat)	Professional Services	2
	Food/Restaurant (not grocery)	3
	Retail	4
	Manufacturing and Production	5
	Automotive and Aviation	6
Years in Business Category	Less than 6 years	1
(YBCat)	6-10 years	2
	11-15 years	3
	16-20 years	4
	21-25 years	5
	More than 25 years	6
Valuation Method Category	P/L Statement	1
(ValCat)	Tax Returns	2
	Annualized	3
	Owner Estimate	4
Asset Value in Sale Price Category	Less Than 33%	1
(AVSCat)	33% to 66%	2
	More Than 66%	3

Table 1: Model Variables

Study Variables

The independent variables used in this study are selected to reflect how firms could contribute to the potential resale premium they may gain at the time of resale. Some of the variables are long-term oriented such as franchise category, business category, and years in business, while others are shorter term, such as resale valuation method or treatment of assets at the time of resale.

Regarding the literature, as noted above, there are very few contributory discussions regarding how franchises, business activity, years in business, selling firm's valuation method or asset value contribution to sales price affect a firm's resale. Given the lack of coverage, there are five independent variables included in this study (See Table 1). Specifically, (1) franchise category (FranCat), a categorical yes or no, (2) business activity (BusCat), a categorical placement of firms by category into one of six groups, (3) years in business category (YBCat), a categorical placement of firms based on years in business, one through six (4) valuation method

(ValCat), a categorical placement of firms based on the how the firm's value/price was determined (5) asset value in the sale price (AVSCat), a categorical placement of based on how much of the firms sold price was from asset value.

Sampling

The data collected for this research was performed over a ten-year period. Results of the collections yielded a sample size of 2,159 firms, 882 (41%) franchise firms and 1,277 (59%) non-franchise firms. All firms were located and sold in Florida. All firms were active, with 1 to 67 years in business. The firms represented business activities from six different categories as noted in the above variable discussion. The firms ranged in selling price from $40,000 to $7.3 million and were all defined as small businesses. Although the data was collected by a sales broker and provided specifically for this study, it is considered as secondary data.

Statistical Methods

Probabilistic neural networks (PNNs) are becoming commonplace in answering multi-layered problems with large data sets in a non-engineering environment. Use in the social sciences has grown dramatically over the last ten years and is being applied to solve both theoretical and proprietary problems involving prediction and predictive classification. Common variables examined include revenue, earnings, performance categorization, and productivity metrics. PNN's bring advantages of data compression, pattern recognition, generalization and parallel computation (Lopes et.al. 2018).

The typical neural network is broken into three phases: learning, validation and feature extraction. The model learns the pattern in the first phase, then randomly confirms the accuracy of the pattern in the second phase, then identifies which variables are most important in the pattern development. This third phase is considered by most users to be the payoff as it identifies which variables are most significant in the predictive capability of the network (Bigus, 1996). More specifically, the PNN is selected because of its ability to consistently and precisely identify and predict category classification and for determining independent (input) variable impact strength (dominant=high weighted impact, moderate=medium weighted impact, passive=low weighted impact). Specifically, the optimization of a PNN is determined by modifying the weights of the connections during the learning phase (McClelland and Rumelhart 1986) with the intent of establishing the specific neural network architecture with the optimal number of neurons and layers. Network architects need to be wary of overfitting or underfitting the model, by employing too many or too few hidden neurons.

The formation of the probabilistic neural network is done using Parzen windows classifiers. The Parzen windows method is a non-parametric procedure that produces an approximation of the probability density function (pdf). The calculation of the pdf is done using algorithm one. The function fk(x) is an aggregate of small multivariate Gaussian probability distributions centered on each training example. Using probability distributions allows for generalization.

$$f_k(x) = (1/(2p)d/2 \, sd) (1/N) S_{i=1}N_k \exp[- (x-x_{ki})T (x-x_{ki}) / (2s2)] \qquad (1)$$
where: x_{ki} is the d-dimensional i-th example from class k

The number of training examples in the training set determine how well the estimated pdf reaches the true outcome. This occurs because increased examples generate increased Gaussians. The classification optimum occurs according to the inequalities which are established from previous calculated probabilities.

$$S_{i=1}^{N_k} \exp[-(x-x_{ki})^T(x-x_{ki})/(2s^2)] > S_{i=1}^{N_j} \exp[-(x-x_{ji})^T(x-x_{ji})/(2s^2)], \qquad (2)$$
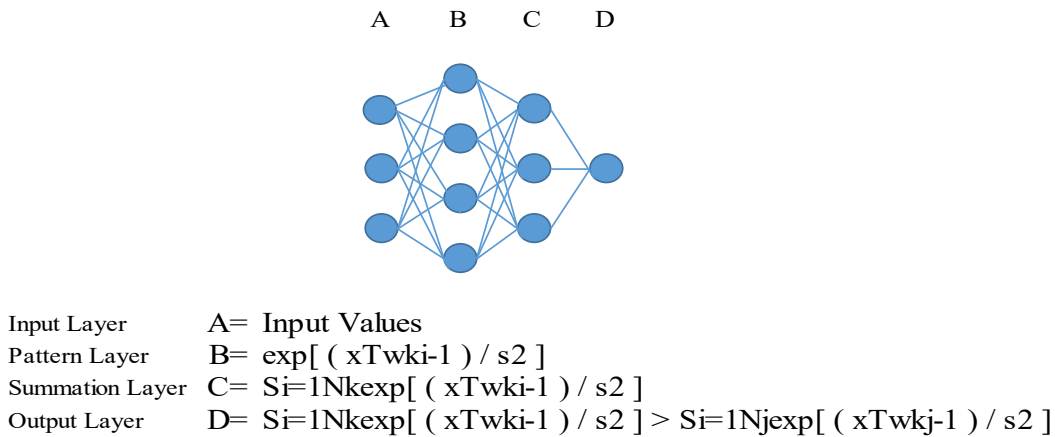for all $j \neq k$.

$p_k = N_k / N$.
where: N is the number of all training examples
N_k is the number of examples in class k.

The PNN is an extension of Bayes classifiers. The model initially learns to approximate the pdf using distribution maximization. The PNN has four layers: input (A), pattern (B), summation (C), and output (D). The pattern layer uses neurons, or nodes, which generate a weight vector and are then passed to the summation layer. The summation nodes receive the weight vector outputs, then calculate the optimal weights and are moved to the output function for the classification decision. These last two actions are often referred to as the activation function. Output nodes are binary seeking the specified optimal outcome category placement (see Figure 1). The data is analyzed using Neuroshell Classifier for the purpose of predictive classification and determinant impact value. Neuroshell Classifier is a very popular neural network software package and has been used in numerous similar applications (Smith, 2020).

A   B   C   D

Input Layer	A=	Input Values
Pattern Layer	B=	$\exp[(x^T w_{ki}-1)/s^2]$
Summation Layer	C=	$S_{i=1}^{N_k} \exp[(x^T w_{ki}-1)/s^2]$
Output Layer	D=	$S_{i=1}^{N_k} \exp[(x^T w_{ki}-1)/s^2] > S_{i=1}^{N_j} \exp[(x^T w_{kj}-1)/s^2]$

Figure 1: General Structure of a Probabilistic Neural Network and Corresponding Activation Equations

Results

Results of the employed PNN are quite impressive. The neural network was able to learn and verify an architecture resulting in a 95 percent accuracy outcome. To interpret, using the 2,159 samples in this study, the PNN model is able to predict the correct category classification of Mean Sold Price/SDE Ratio membership with 95 percent accuracy.

Consequently, given the addition of one more sample, the network could predict whether the added firm would be in the: Below 25% (Low), 25% Below to 25% Above (Avg), or Above 25% (High) Mean Sold Price/SDE Ratio category, with a robust 95 percent accuracy, provided the same input variables are used (See Figure 2).

In detail, the learning set consists of five input neurons (corresponding to the number of independent determinants), 1 hidden layers with 42 neurons, and 3 outputs (corresponding to performance category membership and scaled to (.25 for *Low SP/SDE*, and .50 for *Average SP/SDE* and .75 for *High SP/SDE*). The learning rate was set at 0.7; the momentum rate was 0.9. The training set included 1511 (70 percent) arbitrarily entered samples. The learning phase demonstrates that the neural network was able to sequence adequate category classification of the three sold premium groups. The TRUE expected scores (.25, .50, .75) are very close to the ACTUAL calculated PNN scores in each of the categories (see Table 2). The closeness in results suggests that the neural network learned the optimal classification pattern with a high degree of accuracy providing confidence in the findings. The mean scores for each of the categories are provided, however each unique sample had its own ACTUAL score.

Feature Extraction

Examining the feature extraction provides insight into the model's architecture through the identification of independent determinant (input) strengths. The stronger the determinant weight, the more impact, or importance, the variable has on the model's predictive capability. For example, if a determinant has a low weight, then the value of that determinant has little to no influence on the predictive outcome, confirming that the determinant has low value or significance with the dependent variables.

Network Validated On			
Total Rows	2159	Start Row	1512
Training Rows	648	End Row	2159
Network Structure			
Training Strategy	PNN	Output Cat.	SP/SDECat
Number of Inputs	5	Categories	3
		"High"	
		"Avg"	
		"Low"	
Results of Training Session			
Training Time	2:57	Max Epochs	100
Training Generations	311	with no change	
Correct Classifications Total		95.37%	618/648
Incorrect Classifications Total		4.63%	30/648
Correct Classifications by Category			
"High"		96.53%	7/202
"Avg"		94.94%	13/257
"Low"		94.70%	10/189

Figure 2: PNN Model Output - Learning and Validation Phases

Respondent Category	Output	LOW SP/SDE Score	AVG SP/SDE Score	HIGH SP/SDE Score
LOW SP/SDE Score	ACTUAL	**0.24895**	0.00215	0.00422
	TRUE	**0.25000**	0.00000	0.00000
AVG SP/SDE Score	ACTUAL	0.11203	**0.49618**	0.02781
	TRUE	0.00000	**0.50000**	0.00000
HIGH SP/SDE Score	ACTUAL	0.80058	0.01441	**0.75558**
	TRUE	0.00000	0.00000	**0.75000**
Correctly Classified Cases: 95.30% n=1511				

Table 2: Learning Phase - Mean Score Output

The PNN constructed here identified one dominant, two moderate, and two passive determinants. Franchise Category membership (.377) is without question the most dominant determinant. The two moderate determinants are Years in Business Category (.252) and Business Activity Category (.202). The final two passive determinants are Valuation Method Category (.113) and Asset Value in Sale Price Category (.056) (See Figure 3). Once the determinant weights have been established, it is common practice to examine the variables further as correlations are not evident using the PNN.
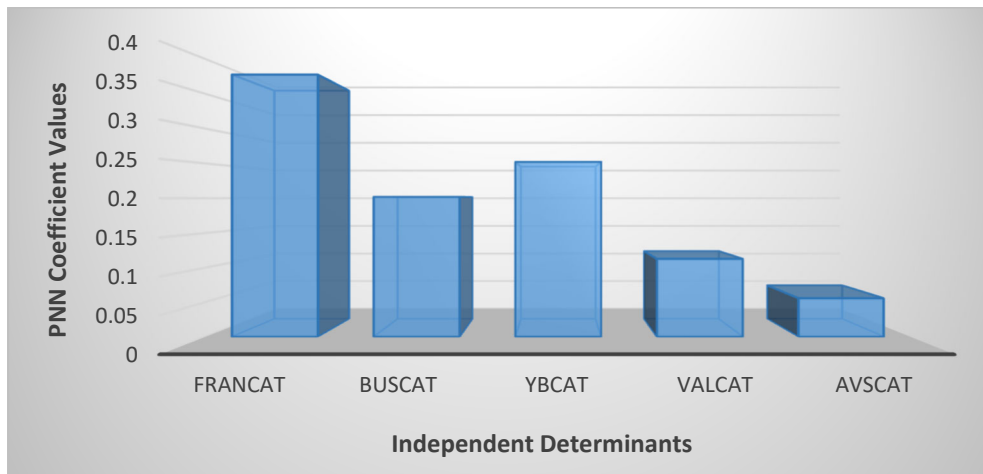
Figure 3: PNN Feature Extraction Weights

Additional Confirmatory Confidence

The above feature extraction provides robust results, specifically with three variables: Franchise Category, Years in Business, and Business Activity. An additional examination of these one dominant and two moderate predictive determinants are provided.

Franchise Category

The Franchise Category ANOVA examines the similarity/difference between the two franchise groupings. Specifically, is the reselling firm a franchise (Yes) or not (No). The

objective of this supportive technique is to determine if there is a sales premium between groups. The results indicate that the f-Calculated is higher than the f-Critical, and the p-Value is below .05%, confirming that there is a significant difference between the groups (See Figure 4).

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
FranCat	2159	881.000	0.408	0.242
PRICE/SDE	2159	4672.772	2.164	23.775

ANOVA					Reject Null Hypothesis	
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3329.674	1	3329.674	277.279	0.000	3.844
Within Groups	51828.283	4316.000	12.008			
Total	55157.957	4317.000				

Figure 4: ANOVA - Sold Price to SDE Ratio and Franchise Category

To provide further information, the mean scores with error are examined to determine how these groups may vary. The results show that resold franchise firms enjoy a 1.52 sold price to SDE resale premium (about 75%) over the non-franchise firms, confirming that franchise going concerns yield an evident higher resale price to non-franchises, holding other constraints constant (See Figure 5).
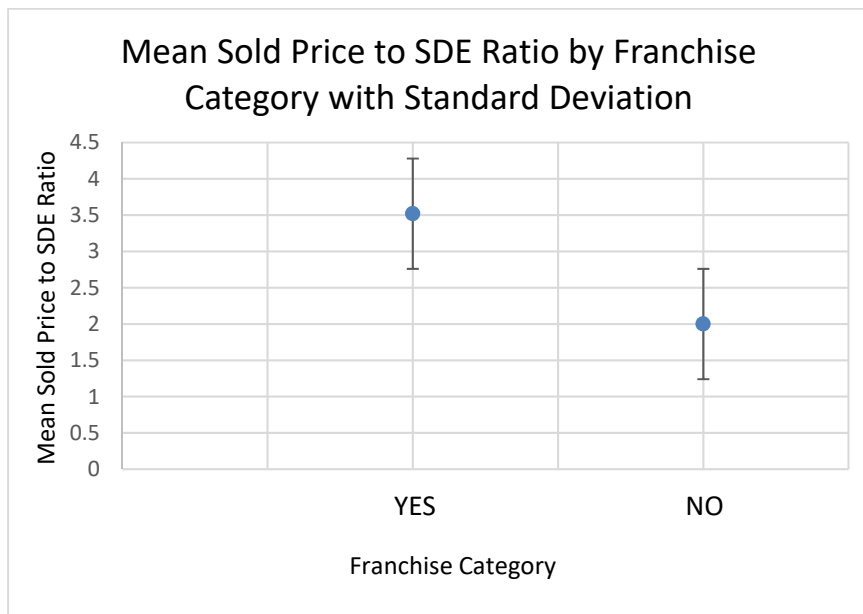
Figure 5: Difference in Franchise Category Ratio Premium

Years in Business

The Years in Business ANOVA examines the similarity/difference between the years in business groupings. Specifically, how many years in business does the reselling firm have? Each of the six groups were categorized between 1 and 6. The objective of the technique was to determine if there is a sold price premium between groups (years in business). The results indicate that the f-Calculated is higher than the f-Critical, and that the p-Value is below .05%, confirming a significant difference between the groups (See Figure 6).

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
SP/SDE Ratio	2159	4672.772	2.164	23.775
YBCat	2159	6227.000	2.884	3.013

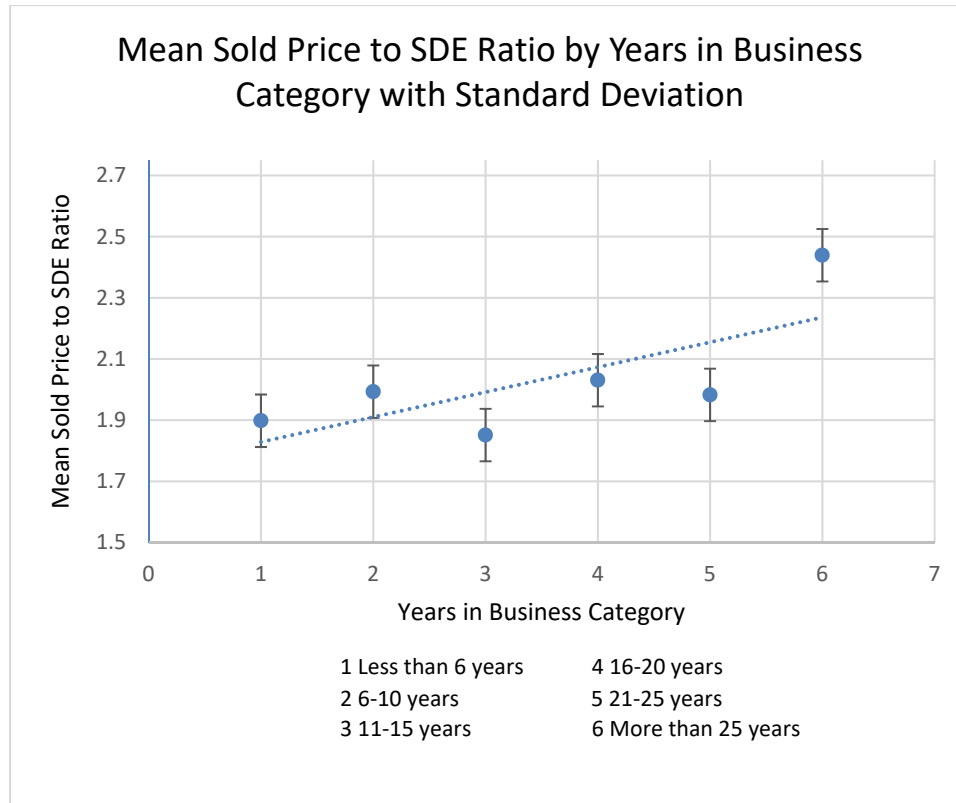| ANOVA						Reject Null Hypothesis
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	559.432	1.000	559.432	41.766	0.000	3.844
Within Groups	57809.834	4316.000	13.394			
Total	58369.266	4317.000				

Figure 6: ANOVA - Sold Price to SDE Ratio and Years in Business Category

When examining the six Years in Business categories, category six is noticeably higher than the other five categories confirming that firms in business more than twenty-five years generate the highest reselling premium at the time of resale (See Figure 7).

To gain further clarity with the significantly different category (greater than 25 years in business) the findings are evaluated with the sold price to SDE ratio between franchise and non-franchise firms. Again, using a t-Test, the findings suggest that no significant difference exists with the Years in Business Category and franchise/non-franchise activity. Specifically, the t-Statistic (0.324) was well below the t-Critical (1.648) with the p-Value at .372.

Business Activity Category

The Business Activity Category ANOVA examines the similarity/difference between the six business activity groups. Specifically, what business activity is the reselling firm engaged? Each of the six groups are categorized 1 through 6. The objective of the technique is to determine if there is a sales premium between groups. The results indicate that the f-Calculated is higher than the f-Critical, and the p-Value is below .05%, confirming a significant difference between the groups (See Figure 8).

Mean Sold Price to SDE Ratio by Years in Business Category with Standard Deviation

Mean Sold Price to SDE Ratio (y-axis)
Years in Business Category (x-axis)

1 Less than 6 years   4 16-20 years
2 6-10 years   5 21-25 years
3 11-15 years   6 More than 25 years

Figure 7: Difference in Years in Business Category Ratio Premium

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
SP/SDE Ratio	2159	4672.772	2.164	23.775
BusCat	2159	5788.000	2.681	2.171

ANOVA   Reject Null Hypothesis

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	288.035	1.000	288.035	22.202	0.000	3.844
Within Groups	55991.903	4316.000	12.973			
Total	56279.938	4317.000				

Figure 8: ANOVA - Sold Price to SDE Ratio and Business Activity Category

When examining the six business activity categories, category three is significantly different than the other five business activity categories confirming Food/Restaurant (not grocery) firms produce the highest reselling premium (See Figure 9).
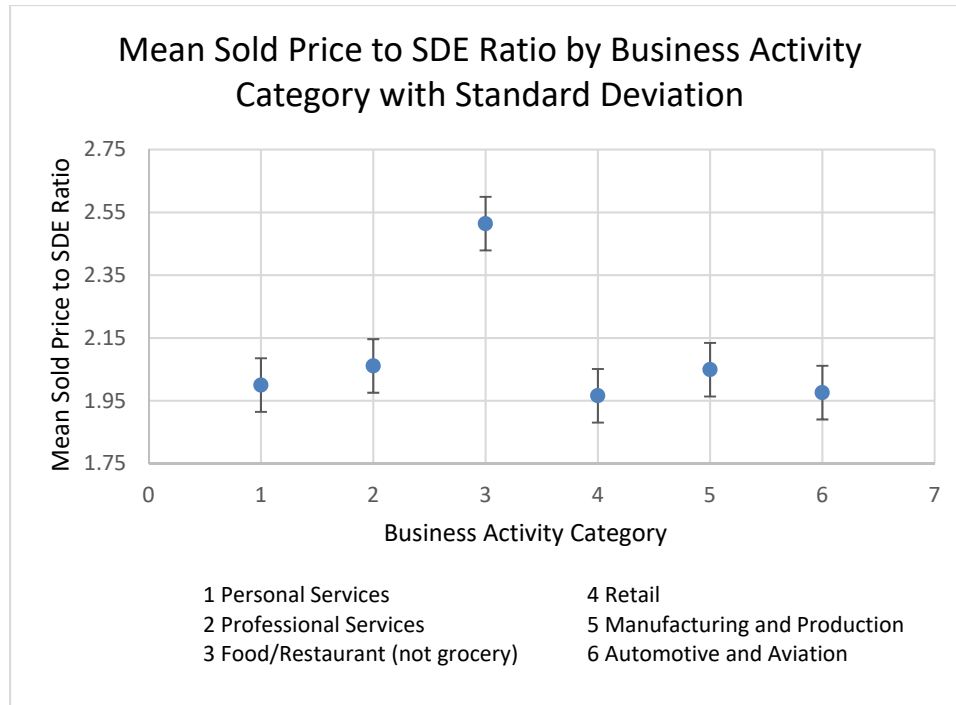
Figure 9: Difference in Business Activity Category Ratio Premium

To explore this result further, category 3 (Food/Restaurant-not grocery) sold price to SDE ratio is compared between franchise and non-franchise firms. Using a t-test, the findings suggest that there is no significant difference between franchise and non-franchise sold price ratio with regard to business activity category three. The t-Statistic (1.175) was below the t-Critical (1.652) and the p-value was above .05 at .24.

Discussion and Conclusion

Expectations for the results were somewhat anticipated prior to the study. There is clear evidence in the literature to suggest that the franchise firm would bring a higher resale amount to that of the non-franchise firm, stemming from several distinct constructs such as:

- Brand Equity theory through the purchaser's trust and comfort in an already recognized brand.
- Agency theory through the purchaser's recognition of proven and recognized business systems.
- Theory of the firm through the purchaser's affinity to risk aversion and investment expectations.

However, what was noticeably surprising was the level of difference between the two as franchise resales brought about 75 percent more in the realized sold price than non-franchise re-sales. Furthermore, findings confirming that Restaurant/Non-Grocery firms, regardless of franchise category had a significant sold price premium to the other business categories were completely unexpected. At this point, there is no explanation in this study, or in previous literature to support these findings. Additional research is warranted in this area of resale premium disparity between business categories.

The purpose of this study is to offer support to substantiate that specific determinants impact small business resale premiums. Additionally, it is to determine if any high-ranking predictive determinants exist for classifying small business firms receiving higher than average resale premiums and lastly, to employ a proven non-linear statistical technique for accurately predicting firms that will receive higher than average resale premiums.

Results confirm that existing franchise firms receive a higher resale premium to that of non-franchise firms. Franchise category membership is the most impactful variable in predicting a resale premium. Although this outcome was generally expected, the robust results offered by the probabilistic neural network and supported by the ANOVA are impressive and provide foundation for additional research in this vein.

The PNN and AVOVA also identifies years in business and the firm's business activity category as predictive indications of resale premium. Years in business category yielded a higher resale premium. This was expected and most likely attributed to the seasoning of sales and earnings as there are significant differences between the defined categories of years in business. Firms with greater than 25 years in business generate resale premiums much higher than the other five years in business categories.

Lastly, it was also determined by the PNN that business category has an impact on small business resale premiums. Although this was also somewhat expected, there was no estimation as to which category may be dissimilar. The ANOVA results support that category three, Food/Restaurant (non-grocery) receives a higher resale premium than any of the other business activity categories.

More plainly stated: At the time of resale for a small business; (1) Franchised small businesses sell for 1.5 times more than non-franchised firms, given the same value for both, i.e. a franchise firm worth $1 million will sell for $3.5 million, while a non-franchised firm worth $1 million will sell for $2 million dollars. (2) A small business with 25 years or more in business will sell at .4 times higher than the average for firms with less than 25 years in business, given the value of the firms are all the same. (3) A small business engaged in Food/Restaurant (non-grocery) activity will sell at .5 times higher than all other business activity categories, i.e. an Italian Restaurant worth $100,000 will sell for about $250,000, while a Retail Printing Company worth $100,000 will sell for about $200,000.w

Implications and Limitations

The importance of this research to a franchise or a franchise development agent is validation of franchising as a methodology. Many franchisors do not file a financial representation as part of their federally required disclosure document which must be given to prospective franchisees fourteen days in advance of selling the franchise. Franchisors that do not file the disclosure document are prohibited from discussing financial earnings with a prospective franchisee. This makes it more difficult for the development agent to successfully sell a franchise. Because people want to know how much money they are going to earn. Many prospective franchisees also want to know why franchising has value. We know that it has value because of the system the franchisor offers to the franchisee. That same system is what the franchisor teachers and coaches the franchisee to follow through the years of operation of owning a franchise. And it is the system that helps business owners succeed. So, having this

information that a franchise business will earn more money upon resale then a non-franchise branded business is extremely helpful to the franchisor or the franchise development agent.

Many important topics about franchising remain unexplored or under-explored. Why people decide to franchise a business, why people decide to buy franchises, why some franchisees out-perform other franchisees selling the same brand, etc., are subject matters about which little is known. In this paper, the authors report on the investigation of yet another unexplored but fundamental issue in franchising: Furthermore, although the identification of confirmed predictive variables is clear, more questions from the results arise. Little correlation and causality are offered here implying that more research is needed to further explain the constructs. Why do franchise firms bring a higher resale premium, why does the Food/Restaurant business activity bring a higher resale premium? More theoretical research is needed in this area. The literature is void of similar studies either because data is difficult to acquire or perhaps that scholars believe small business research is applicable to both franchise and non-franchising firms alike. Regardless, this research clearly shows that the two types of small business (franchise, non-franchise) are considerably different.

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