

**DOES LUXURY REAL ESTATE BRANDING INCREASE BUYER  
PERCEPTIONS OF HOME VALUE?  
AN EMPIRICAL STUDY OF STABLE, AFFLUENT COMMUNITIES**

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## EXTENDED ABSTRACT

Luxury and premium brand affiliation have been and likely always will be about quality and status. Extant studies in marketing consumer behavior aim to explain the effects of hedonic drivers and how these shape consumer behavioral choices when choosing a brand.<sup>1</sup> A consumer's subconscious hedonic motivations are thought to result in buying decisions. Their purchase decision may thus satisfy their emotional needs as explained in hedonic theory.

With respect to the distinction between tangible products as “goods” and intangible products as “services,” it appears that luxury branding has always been seen as one characteristic of goods. Many consumers will purchase a luxury brand good for the pleasure of holding that good and the social status that it represents. But luxury branding in the service industry is a bit harder to grasp. Little research exists dealing with luxury branding in the service industry and, especially, in the real estate industry.

Using this contradistinction once again, a luxury consumer will purchase either a good or service. A good is tangible and may be held by the consumer indefinitely, but a service is generally time restricted and might only be a one-time purchase transaction. To probe this issue in greater depth, luxury retail marketing research and consumer behavior will inform this study. Luxury branding, that is, perceived value versus actual value in

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<sup>1</sup> The term “hedonic” derives from classic philosophies of “hedonism” in which the primary purpose of life is to enjoy its many pleasures and avoid its many pains (Haybron, 2008).

real estate sales, will be analyzed. In that the real estate industry is specifically characterized by brokers at many brand levels, this study uses this characterization of brand level to determine if luxury branding of real estate brokers impact homes sale price (and/or other components of value) by returning a premium to one or more stakeholders in the value chain.

With little extant literature in the luxury branding service sector and residential real estate brokerage activities, this research, in particular, considers empirical results from previous real estate and luxury branding research in other markets to set forth a framework for brokerage branding level in real estate. The resulting framework categorizes this as real estate brokerage firm “level,” typing brand into three levels based on service and price (for the purposes of the current work, the delineation will be binary, that is to say, either luxury brand representation or not).<sup>2</sup> These brokerage brand levels are: (1) low, i.e., flat fee or discount firms; (2) middle, i.e., traditional, commission-based firms; and (3) high, i.e., luxury brokerage firms. Each category appeals to a different social class of consumers in that purchasing power is highly related to home listing and final sales pricing.

Given that all firms have the same resources available for listing, marketing, and syndicating a home on the market, consumer perception, which is a key component in the branding research, also becomes central in the current study when considering residential

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<sup>2</sup> Although one outcome of this research establishes this framing of brand level in real estate brokerage firms, for purposes of this study we are interested in the high level (luxury branding) and its impact or contribution to a home’s value (sales price of a home); therefore, we identify the luxury brand, but all others (middle and low level) are categorized as non-luxury.

real estate brokerage and brand levels, when studying the luxury home market and the high-end brokerage firms targeting the luxury class, an interesting question arises: Do these brokers add value? Or is it an inaccurate, but common perception? These questions are addressed in the research by analyzing the marketing characteristic of luxury real estate brokerage branding in one particular market in the Dallas-Fort Worth region of the US. Specifically it asks whether branding impacts a home's value. The study follows prior scholarly suggestions to derive quality and comparable data and to focus on geographically targeted luxury real estate markets. The research builds on prior research frameworks exploring the hedonic pricing model, an established research stream that has looked into the effect of home hedonic characteristics on its ultimate valuing. To date, little research has been conducted analyzing the impact of market branding on the final sales price of a home and other features of perceived value.

In the empirical results of Study 1 and Study 2 of stable, affluent communities in the Dallas-Fort Worth area of the US, we analyze the outcome of the two studies indicate that buyers may not perceive a high value related to the brand of the listing and/or selling broker. This may appear to counter the general marketing branding literature, but the strength of brand in goods could be quite different than the strength of brand in services such as real estate and we formulate null hypotheses to test this possibility. Brand loyalty to a class of brokers, for example, could be less likely given that most buyers only engage in home buying on an infrequent basis. Indeed, in the two studies conducted, the hedonic factors are overwhelmingly powerful predictors of value and these hedonic and tangible

physical characteristics of a home could well be responsible for allaying or undermining any real effect of brand.

This research consists of two studies conducted separately in different locations of a single county within the Dallas-Fort Worth Texas area. By studying two separate but similar communities in the same geographical area, external validity was thus enhanced, assuring that the results here were not a one-off empirical finding in only one setting. The two studies were coded for brand and hedonics and used as predictors of buyer perceptions of value, as represented in the final, agreed-to sales price and other forms of valuing. Based on the research findings, these two independent studies overall strengthen statistical power and allow for possible generalization to other unstudied populations, which, presumably, would be other real estate markets. Utilizing the current methodological approach, for example, would permit future researchers to see if the findings generalize to communities in other metropolitan areas in the US and beyond.

In all such studies, it might be possible that the effect of brand becomes statistically significant, for instance, but this could be, strictly speaking, merely a function of the larger N. In this thesis, however, branding was not statistically significant and, moreover, the branding effect was minimal in terms of explained variance of the DVs such as final sales price. If these finding should hold across settings, the predictive power of brand would continue to have a very small value component and hedonic characteristics would likely dominate, rendering branding to be a far distant, minor effect.

The implications of this study can be seen with respect to both academic thinking and practice. There is a theoretical contribution in showing that a brand in real estate may not impact buyer value, admitting the limitation of the dataset having been gathered from one North Texas market. These results run counter to some marketing research to date and certainly contend the thinking of many brokers and home buyers and sellers. Based on the results of this study, branding might be considered in future studies as a control variable that is not expected to affect outcomes to any marked degree. Alternatively, scholars might continue to introduce branding as a direct effect on value and compare their findings to this thesis. Challenges to the hedonic pricing model might also emerge from future empirical results, but, given the persuasiveness of prior studies of the hedonic model in real estate, we expect that such hedonic factors will continue to reign supreme.

For practitioners, non-luxury brokers have some evidence that luxury branding of a home might not result in value for the buyer and this could be an effective marketing tool for them (with the caveat that scientific findings thus far are limited to a study drawn only from the Dallas-Fort Worth region). Claims that sellers should choose a luxury brokerage to list their homes may not stand the empirical test of real-world data and analysis and luxury brokers can be cautioned not to overstep in arguing that they can definitely produce economic premiums for sellers.

Hedonic characteristics continue to be the most important predictor of home sales prices, as is likely, all brand levels will likely be even better informed of the relative importance of hedonic factors in the presence of branding effects in future studies. By

holding brand constant, variance associated with brand can be patriated out and the resultant weights of hedonic factors can be more clearly seen and understood.

## DEDICATION

This dissertation and all of my achievements are dedicated in the loving memory of my mother, Carol Broseh, who taught me that life was limitless and that I can do and achieve anything. Her unwavering belief and encouragement are treasured and in my heart forever. My mom declared to her girls many times that we all needed to persevere. As it says in Proverbs 31:25-26: *“She is clothed in strength and dignity and she laughs without fear of the future. She speaks with wisdom, and faithful instruction is on her tongue.”*

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I love you and I'm so proud of you. I pray that my efforts are an example of perseverance and grit and that your dreams will become reality.

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## CHAPTER 1

### INTRODUCTION AND MOTIVATION FOR RESEARCH

Products in luxury markets are expected to be of premium quality, justifying higher prices than non-luxury substitutes (Porter, 1979). But when a luxury brand's product quality and price are equal to its substitutes (that is, they are not as esteemed as substitutes), then premium quality no longer defines and differentiates “luxury.” Whereas the logic of this is compelling, most of the academic literature on brand has focused on how luxury branding of goods (rather than services) affects buyer perceptions of value, with much less work examining how branding operates in service industries, especially services such as real estate where the services of a broker are a comparatively an infrequent event for many (Anderson and Foc, 1998).

Are buyers influenced by a home being listed by a luxury broker rather than one of the other non-luxury tiers of broker brands? This question is unexamined, but what has been explored in recent studies in marketing is the role of hedonic behavior in consumer

choice of premium products (Allsopp, 2005). The study of hedonic potential<sup>3</sup> assesses personal feelings related to luxury brands (Silverstein and Fiske, 2003) Such feelings reflect the promise of pleasure on the part of buyers in purchasing and owning a new home.

Indeed, in the residential real estate sales market, a seller's decision to employ a luxury brand for representation (i.e., listing) may benefit them more as a signaling of social status, rather than actually returning a higher value when sold. Perhaps controversially, it may well be that luxury brands representing homes for sale in residential real estate do not create an added value for a property because buyers may be much more influenced by the hedonic characteristics of the property than by a non-existent or thin loyalty to a broker's brand.

What is value in real estate? All in all, a home's value is ultimately determined at the time of sale by what terms a seller and buyer agree to, terms like sales price, conditions of sale, assumption of prior obligations, etc. Sellers across price points (low-mid-high price range categories) of residential real estate want to capture the maximum price for their property at the lowest cost but this does not immediately affect the value of the property. Or does it?

What is the intrinsic value to a buyer to purchase a home listed by a luxury brand? Or, on the flip side, for a seller to list their home with a luxury real estate brand? Is there a monetary value that can be attributed when a luxury-branded broker lists or sells a home or is it mostly consumer perceptions of value, that is to say, the hedonic characteristics that buyers are moved by? "Beauty is in the eye of the beholder" is a

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<sup>3</sup> The term "hedonic" derives from ancient philosophies of "hedonism" in which the primary purpose of life is to enjoy its many pleasures and avoid its many pains (Haybron, 2008).



saying passed down for generations, but it is a timeless quote and likely all too true. What one person sees as beauty, another will not. Defining beauty is ambiguous but one way to create a metric for this perception of value is what buyers are willing to pay for it.

Along the same lines of thinking, definitions of luxury can be ambiguous because luxury has a different meaning to virtually everyone, but there are ways to create a reasonable metric for the different types of brokerage brands that exist in the real estate marketplace.

Having a much richer academic tradition than branding in real estate, hedonic models<sup>4</sup> have focused on the perceptions that buyers have about characteristics of a property, rather than attributes of the real estate firm marketing the property. Specifically, hedonics are the pleasure(s) that buyers expect to receive by purchasing and owning homes, with hedonic models basically capturing many physical and tangible characteristics such as size of the home and its amenities, its locational situation (such as being in a development or being on a golf course), its up-to-datedness (that is, its age and renovations), and so forth. These models also typically work with psychological and quality-of-life aspects of hedonics like quality of educational system (i.e., the school district in which the home is located) and views. Prior research has identified a list of home characteristics that impact perceptions of value and, ultimately, the home final sales price. Such study characteristics include market conditions, location, physical attributes, and time-related, environmental-related, and community-related attributes.

Unsurprisingly, this real estate valuation process has received a lot of research attention

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<sup>4</sup> This topic will be explored later with citations to relevant sources.

in the past three decades as a number of studies have looked at the effects that market and physical characteristics have on home values.

In brief, the primary research question examined in this study is: Does branding makes a difference in how buyers value a prospective home? We expect that hedonic characteristics will predominate in the buyers' minds, but will this still occur in the presence of a strong brand such as a luxury brokerage brand? A second RQ would be whether a dual branding whereby both the listing firm and selling firm are luxury brokers makes a difference.

Before more thoroughly reviewing this literature, though, it would seem to be useful to create a level playing field by reviewing the background and basic operations of the residential real estate market. For this review, please see the Appendix A.

## CHAPTER 2

### THEORY AND LITERATURE REVIEW

A hedonic study is an effort to understand what characteristics contribute to the value of a good. Hedonic studies have been used for two reasons. First, and most commonly it seeks to define the relationship between the characteristics that make up the composite good and its price. Second, hedonic studies have attempted to describe individual preferences that drive people's decisions about what they buy. The second objective tends to be seen only rarely (Witte, 1979).

Composite goods consist of a bundle of characteristics that are relevant to people's decisions to purchase them. Examples of composite goods include homes, cars and cell phones etc. These goods have multiple characteristics that factor into what someone is willing to pay for it (Gilbert 2018). Such studies are useful in estimating the value of a non-market good as a characteristic, for example, that is part of some larger composite good. A National Institute of Standards and Technologies Report by Gilbert

(2018) advises that many past studies assume that hedonic pricing directly reflect underlying consumer preferences, but, in fact, this is not always the case. First and foremost, price is a product of supply and demand. Factors that affect the supply side of the market will be reflected in the price even if they have no impact whatsoever on consumer preference (Rosen, 1974). Second, it is likely that consumer preferences are heterogeneous, making it difficult to describe in simple terms (Witte, 1979).

Developed by Lancaster (1966) from the idea surrounding the treatment of a composite good, consumer hedonics theory will be expanded upon in the next chapter. Hedonic studies mushroomed after Rosen (1974) gave it firm footing by using the seminal treatment of a composite good using consumer theory.

Real estate sales prices as stated in other sections of this research are determined by what a seller is willing to sell for and buyer willing to pay and, thus, they both agree to. So, the final sales price can be thought of as what the buyer perceives is an acceptable negotiated value of the home. The buyer may perceive that the final home price is higher than they would have wished, and they certainly seek to minimize this price in their negotiations. The seller, naturally, has the opposite perspective and tries to maximize the sales price, but in doing so, may have to accept a lower payment than what they originally wanted.

This study considers both aspects used in hedonic studies. First, it seeks to identify if an explanation of value (i.e., final sales price of a home) exist from the home sale characteristic of the marketing being carried out by a luxury branded real estate firm. Second, it seeks to understand the hedonic motivational drivers behind a buyer's choice of such a composite good. Luxury branding in the study is grounded in hedonic behavior,

as it appeals to consumer emotions and social status. Both buyers and sellers may perceive that a luxury listing brand may help them in their buying or selling. The seller may see the marketing capability of the luxury branded firm to be superior to others whereas the buyer may feel that the luxury branding represents a higher quality residing in the home.

### **Consumer Theory and Hedonic Theory**

Consumer theory claims that a consumer will purchase a product for its attributes and not for the actual product itself (Lancaster, 1966). Consumer theory also says all goods are composite and people buy those goods for the characteristics that make them up rather than for the goods themselves (Lancaster, 1966).

Hedonic theory, likewise, argues that the key potential is a promise to please, thus impacting feelings and pleasure. Hence, the two theories go hand in hand. A person will buy a product for its attributes if it has the potential to satisfy their desires. This is seen in luxury market branding where the product is viewed as being premium.

### **Hedonic Behavior in Consumers**

“Hedonics” is derived from ancient philosophies and is defined as seeking pleasure. However, in the economic context, it refers to the utility or satisfaction one derives from the consumption of goods and services (Chin and Chow 2002). When characteristics of a target object that are thought to stir pleasure in the receiver it is explained through the consumers hedonic behavior and choice to consume one product over another.

The study of hedonics explains the sensory aspect of why we choose the products we choose. The feelings one has because of affiliation, brand experience and social status, and affirmations of having associated with or owning the brand are attributed to one's extended self.

Extended-self theory (first articulated by William James and described in more detail below) explains this perception, for example. Because consumers are increasingly motivated to pursue products that provide an emotional benefit, luxury branding is intended to extend efforts to appeal to a consumer's emotions and the evaluation of brand extensions is based on what "feels right." Conversely, a value brand appeals to a consumer's sensibility, and the evaluation of brand extensions is based on what "makes sense" (Hagtvedt and Patrick, 2009). According to Rosen (1974), this idea gave hedonic studies a solid logical foundation. Rosen's Hedonic Model assumes that supply and demand come from the consumers' (or buyer's) preferences such as hedonic preferences and the producers' (or seller's) profit-maximization preferences.

### **Branding and Social Status of Consumers**

It is important to lay the groundwork for the factor of social status in the minds of consumers because it helps explain the underlying psychological hedonic motivation, especially of the intellectual significance of brand. In 1890, William James laid the foundation for the modern concepts of self. His beliefs held that a man's Self is the sum of all that he can call his own. His own self extends beyond his body, mind, works and reputation. It includes his family, friends and every material thing he owns. If a man gains, he feels triumphant, but if he loses, then he feels cast down. The premise of a

man's extended self helps us understand consumer behavior and how they identify in society.

A plethora of scholars have written on hierarchical groups and classifications in history, politics, economics, marketing and so on. A social class is defined as a group of people within a society who possess the same socio-economic status, according to the encyclopedia Britannica.

German philosopher Max Weber expanded on social class theory in the late 1800's based on the work of Karl Marx, but he found Marx's work to be incomplete. Weber described a class structure as being made up of three major factors: wealth (income and assets), prestige (status position), and power (ability to achieve goals), thereby introducing the idea of the importance of societal status. These social statuses as described in late 19<sup>th</sup> century research are understood from an income and/or assets perspective as high (upper end), middle (also described as working class), and low.

Influenced by Weber, American sociologist Dennis Gilbert created a more modern view and identifies six separate classes in the United States. The capitalist class, upper-middle class, middle class, working class, working poor, and underclass are described below in Table 1.

Table 1. Gilbert's Social Class Model

<b>Gilbert's Social Class Model</b>	
Capitalist class	Elite, powerful; richest one percent
Upper-middle class	Relatively wealthy; highly educated, work in white-collar professions
Lower-middle class	Can afford basic expenses; work in semi-skilled professions
Working class	Relatively low income; sometimes qualify for assistance programs
Working poor	Not always able to afford basic expenses, work in service professions
Underclass	Marginalized members of society; stuck in chronic poverty

Social class and status theory is observed in a variety of research fields so that every person in society will fit into one or another. Overall, the term “class” and/or “status” is understood to have the same meaning to a rank or order when referring to hierarchical placement of groups in society. From a categorical perspective one can classify a consumer into a social class based on their wealth, income, or assets, but how a consumer personally identifies themselves as a part of is another point of interest to make note of. Social class identification is partly seen in signaling cues with brand associations that they use to they boast to others. One’s social status at any given point in time may not be their status forever. A consumer’s perception of self and that from others will change if s/he attains wealth or experiences a loss. Some consumers may fit into two classes.

Contemporary marketing research recognizes that a person’s social class is signaled by the possessions they own (Belk, 1988). The products that tend to be high priced or expensive relative to the average cost of substitute products in the same category symbolize a person’s success (Fourinier and Richins, 1991). Additionally, consumers are influenced by their own group and whom they want to associate with as well as whom they want to be disassociated with. (White and Dahl, 2016; 2017). Consumers may interpret a brand’s image or symbolic meaning based on their association of the brand and type of users. A consumer’s selection of brand thus signals their social status to others.



## **Brands and Branding**

There are two brand categories for a good, product and service. A brand is an identifying characteristic of its product or service. The Dictionary of Marketing Terms by Barrons defines a brand as “an identifying mark, a distinguishing symbol, word(s), or combination that separates one company’s products or services from another or any other feature that identifies a seller’s goods or service as distinct from those of other sellers (Imber and Toffler, 2000. p. 68)”. Kotler (1997) defined a brand as a “name, term symbol, logo, design, or a combination aimed at identifying a product or service of a seller or group of sellers and distinguishing these goods or services from those of competitors.” Kotler and Keller (2015) describe branding as endowing products and services with the power of a brand.

The literature on branding goes on to set forth brand categories as a generic classification of products or services, similar and competing products and services fall into the same brand category (Imber and Toffler, 2000, p. 69). Products and services within a category may not necessarily compete with all brands offering products in the category. Luxury brands target a higher-level socioeconomic income class of consumers rather than a value brand seeking to fulfil a utilitarian need. Consumers often identify brands according to price point or the perception of the product quality from low-to-medium-to-high.

In the grocery industry, these branding classes and categories are well displayed. A low-end brand in many cases may be a store brand and also referred to as an “off” brand. It will tend to have the lowest price and is very cost-conscious. The low-end brand

meets the utilitarian needs of the consumer, but only that consumer can decide for themselves if it will meet the same taste satisfaction than the premium brand will.

Coca-Cola is an example in this category that is recognized as a premium product in its class. The internationally known beverage has many competitors. Grocery stores and supermarkets have developed their own cola product that sells at a cheaper price. None the less, the Coca-Cola product has remained the preferred for decades as consumer satisfaction and its pricing category has sustained. In American culture today, Coca-Cola is interpreted more as a house common product and necessity rather than a luxury.

In a study of luxury brands and how they shape class subjectivity in the service encounter, researchers have argued that the brand acts as the gatekeeper, model, and a broker of class, signaling the status of consumers that are being welcomed to buy. Further it provides a class model that consumers must relate to in order to feel socially accepted, thus falling into the appropriate social hierarchy. A brand shapes the social game in the service encounter and makes the consumer *enact* a specific class (Dion and Borraz, 2017). As seen in prior research, the luxury brand is a status marker and a consumer's display of the brand is a social class identification cue to others.

### **The Perceived Value of a Brand**

There are a set of rich topics that should be quickly surveyed in order to set the stage for perceptions of branding in services like real estate. These include: brand character, brand equity, brand personality, brand image, brand awareness, and brand attitude.

### *Brand Character*

A brand is a *character* attribute of its product (Kolter, 1997). A luxury brand provides its customers the highest quality and product performance within its category (Dubios and Czeller, 2012). Branding process gives meaning to an organization's image and products by creating and shaping the brand in the mind of consumers. How the brand is perceived in the market relates to its ability to provide quality products with a positive reputation. With decades of marketing research in a full array of academic journals, there is a consensus that a luxury brand brand's products are exclusive, expensive, higher quality materials and even, in some cases, limited in quantity.

A premium brand will seek to establish their "premium-ness," observed by their ability to command a higher price for their product than that their competitors over time. There are factors included in a premium equation that ultimately results in a premium product. The quality of that product must meet consumer expectations in order to justify the tradeoffs of paying a higher price than that of a competitor's substitute.

Putting a high price on a low-quality product alone will not make a product "premium" and ultimately will not build overall brand success. Past marketing literature has identified that a premium product possessing a high product quality perception is also interpreted through the consumers' lens of the brand experience, quality, packaging, and customer service (Hulten, 2011). Hulten (2011) describes these factors as the emotional component and psychological (need) satisfaction of premium products as explained in his hedonically-motivated research. Branding strategy helps people identify and experience the brand, giving them reason to choose a given product over the competition (Kotler and Keller, 2015; Lindstrom, 2005).

Is it the product itself that makes it premium or is it the brand? Or, likely, both? A product can be easily copied by other players in a market, but a brand will always be unique. Prior research suggests a brand's social perception can predict its consumers and their loyalty (Johnson, et, al., 2000). Indeed, a brand's value is determined by its perceived product characteristics. The simple equation for this is:  $\text{Perceived Value} = (\text{Perceived Benefits}) - (\text{Perceived Cost})$ .

### *Brand Equity*

In an earlier study in 1993 by Keller, brand equity was defined as the knowledge involving a set of brand associations involving the brand's image and awareness. Brand equity is an added value that the brand name gives the product (Aaker, 1991). A brand with high brand equity indicates the value of the product is increased because of its branding (Keller, 2003). Brand equity from a customer perspective is often adopted for luxury brand enterprises to explore luxury brand value and strength from the consumers perspective (Kim and Kim, 2005; Okonkwo, 2009).

### *Brand Personality*

Brand personality offers the human trait to a brand (one can relate or identify) where one can link their personal preference to the characteristics of the brand (Aaker, 1997). Brand personality reinforces the emotional connection between the consumer and the brand and consequently greater brand loyalty occurs (Johnson, et, al., 2000). Fournier (1998) speaks to practitioners putting more effort in the brands symbolic meaning, beyond the functionality of its product. It establishes and strengthens emotionally bonded connections (i.e., brand loyalty) between customers and their products as opposed to a simple and transactional relationship (Fournier, 1998). A unique and distinctive brand

personality results in a favorable consumer perception and an increased brand value (Keller, 1993).

### *Brand Image*

Brand image relates to how the consumer views the brand. This image can be strong or favorable, having unique brand associations in its product attributes, non-attributes, benefits and attitudes. Brand attributes are usually seen in the product's performance. Non-attributes are related to the price of the product, the identity or the type of consumer that uses it, where the product is used and its packaging. Importantly, consumers associate price with the quality of the product. Packaging is an attribute of the brand in the non-product category that does not affect the actual function of the product, but it serves as a cue for product quality. Quality products are sold in quality packaging (Keller, 1993).

### *Brand Awareness*

Brand awareness can be word-of-mouth or promotionally cued, from low to high. A high level of brand awareness is when a consumer can recall the brand by memory. A low level of brand awareness exists when a consumer must be aided by a promotional cue to recall by memory. A brand's personality comes through creative advertising. It may also be described through consumer inferences about the user and the usage of the product (Keller, 1993).

### *Brand Attitude*

Brand attitude is related to both product and non-product attributes. It is the beliefs the consumer holds towards the brands' products or services. The strength of the belief's consumers hold about a product or service, good or bad, affects the brand

attitude. A few strong negative beliefs about a product can overcome many positive beliefs (Fishbein and Ajzen, 1975).

### *Summary of Brand Elements*

To our knowledge, there are no studies that link branding and brands in goods to the service industry of real estate. Nevertheless, it is quite likely that much of the logic of branded goods will transfer seamlessly over to branded services, and perhaps even to services like real estate brokerages. Consumer perceptions and their decision-making are dramatically affected by the social status conveyed by the brand, by the equity/reputation of the brand, and its “personality” and image. It is probable that luxury brokerage brands in real estate share in their expectation that their branding should result in higher home prices and, hence, a higher payout to the brokerage firm itself (and its agents). This logical extension to services in the real estate industry will be tested in the current work.

### **Luxury Branding**

The Merriam-Webster Dictionary defines luxury as “a condition of abundance or great ease and comfort, something adding to pleasure or comfort but not absolutely necessary.” As opposed to branding in general, *luxury brands* evoke exclusivity and have a well-recognized brand identity. They also retain a measurable number of loyal customers (Phau and Prendergast, 2000). In their 2009 research, Hagtvedt and Patrick pointed out that luxury brands are more extendable than non-luxury brands and motivate their customers to re-experience the brand because of their hedonic potential and their promise to please. Consumers are increasingly motivated to pursue products that provide them with a positive emotional benefit.

Past marketing research in the retail industry conclude that a product cannot be separated from its luxury brand and evoke the same effect on consumers. This suggests that if the consumer were to purchase the identical premium product direct from the brands supplier or manufacturer, then the product loses its identity as luxury. Luxury, traditionally associated with exclusivity, status, and quality have high brand awareness and perceived quality and thus retain consumer loyalty and sales levels (Phau and Prendergast, 2001). Several factors found to be among the most important in luxury branding are product quality and status and the signaling of wealth (Truong, Simmons, McColl, and Kitchen, 2008). Past studies of luxury brands in marketing research have traditionally focused of consumer perceptions and how they define luxury brands (Keller, 2009). According to Dubios and Duquense (1993), consumer preference, purchase intention, and use of a luxury brand are all motivated by consumer perception of the brand, be it extravagance and lavishness. In other words, perceived brand luxury offers the experience of psychological benefits such as enhancing of social status and self-image (Dubios and Duquensne, 1993).

Many brands are considered to be luxury brands, but researchers have found that consumers value these brands unequally (Vigneron and Johnson, 2004). Some luxury brands have stood the test of time being and are internationally recognized as an exquisite brand and a luxury status symbol. Indeed, Kapferner, Klippert and Leproux (2013) state that “[t]he higher the prestige, the higher the price... [and] that is why successful brands have to be expensive” (p. 9). “Successful brands such as Rolex have systematically increased their price each year without any objective or reason (cost based), just as an entrance fee” (Kapferner, et al., 2013, p. 9). They go on to provide further examples of

social status messaging as signaled by its consumers; One example is the purchase of an L Vuitton bag: “One does not buy an L Vuitton bag[;] one buys the right to flaunt with this bag at one’s arm[.] [I]t is the price to pay to be allowed this allegory of success” (Kapferner et al., 2013, p. 9).

More recent research has included the experiential aspects of luxury brand consumption. Brand experience has been determined as a set of sensations, feelings, cognitions, and behavioral responses stimulated by customer interactions with the brand both indirectly and directly (Brakus, Schmitt, and Zarantonello, 2009). A consumer’s perception of their contemporary reality will be shown as they experience the brand. They will create their own fantasies through this experience. Experiential factors are crucial, related studies show that consumers seek brands that offer unique and memorable experiences. Thus, the experience influences loyalty, satisfaction, trust and future purchasing decisions (Brakus, et al., 2009; Zarantonello and Schmitt, 2000).

Consumer Culture Theory further explains that consumer consumption is contextual and symbolic as it results from the experience of the brand (Arnould and Thompson, 2005). A consumer’s satisfaction from a luxury brand product is related to preservation of their emotional and social status. Its consumption is seldom related to the actual usefulness of the product. Kapferer (1997) argues that luxury products provide extra pleasure and flatter all the senses, while providing a psychological benefit rather than simply the functional benefits of the product itself.

Luxury product categories are multi-dimensional and have been measured by quality, experience, and price. Traditionally price has been an accepted identifier of a good falling into a luxury category. In a 1998 study by Neuno and Quelch, luxury



products are defined as those “whose ratio of functionality and price is low, while the ratio of intangible and situational utility to price is high” (Nueno and Quelch, 1998, p. 61).

Because price is partly a qualifier of level within luxury categories, it is important to make note of new emerging categories mentioned in research. “New Luxury” is a term found in research as scholars are identifying the changes in contemporary consumer behavior (Silverstein and Fiske, 2003). New luxury is said to be “products and services possessing higher levels of quality, taste and aspiration than other goods in its category, however they are not as expensive and are not considered to be out of reach” (Silverstein and Fiske 2003). Super luxury is another new classification term for luxury consumers; the term was found, for instance, in a U.S. real estate study by Trulia.com saying that “\$5 million is the new \$1 million.” Trulia’s report notes that \$5 million+ home now epitomizes the new threshold for luxury real estate, furthering evidencing its new category as “Super Luxury”. Their study considered all homes on market and off in the top 100 U.S. metro areas from the years 2002 to 2017 measuring the \$1 million and \$5 million mark. The super luxury home (valued at \$5 million or more) is said to be 17.5 times the average sales price in the market. On average, a super luxury home had two more bedrooms, four more bathrooms, three times the square footage and four times the acreage than that of the median price home in its market (Young, 2018).

Luxury interpretation is closely tied to culture and practices of the demographic it both emerges from and shapes. Luxury touches all of us. Therefore, luxury may be produced by individuals and organizations who practice it. It is important to keep in mind what is luxury to some may be considered ordinary to others. Luxury is multidimensional

and it is continually evolving. When discussing luxury and its meaning, one should depend on a selected perspective identified beforehand (Batat, 2019).

When a consumer is faced with the choice of a luxury brand versus a non-luxury brand and the price is the same, will the consumer be more likely choose the luxury brand over the non-luxury? The hospitality and hotel industry are familiar with this observation. When luxury hotels are offering their hotel rooms on sites such as Expedia or Hotels.com, the rate is published along with all categories and brands competing for consumers. The higher rating hotels are usually preferred when offered at the same or similar price than the lower rated. This observation segues us nicely into a review of luxury branding and the services industry.

A luxury brand may be preferred in some cases, but not necessarily all. An alternate view in support of the idea that a luxury brands perceived value will depend on the products category and type. Scholarly work is noted throughout this research supporting luxury brands being seen as as premium, evoke and requiring a fairly expensive translating to how consumers perceived the value of a product. One would think that if a luxury product is offered at an equal or similar price to the non-luxury, then the luxury product would be automatically preferred. However, previous research supports the idea that it depends on the product category and type. In a 2019 study by Gunasti, K. & Baskin, E. of “The Asymmetric Value of Luxury Gift Cards”, the researchers found that a \$200.00 luxury retailer gift card was worth less than a \$200.00 non luxury retailer gift card. The research analyzed retailer gift cards given to people as a gift, and then the gift receiver resold the gift card online. The gift cards of included observations from 69 different retailers, both luxury retailers and non-luxury retailers.

The overall results showed that Luxury retailers gift cards sold an a deeper discount than the non-luxury. That is to say, consumers were, perhaps counter-intuitively, willing to pay more for the non-luxury store gift card.

### **Luxury Brand Product Versus Luxury Brand Service**

To date there is limited research available on solely luxury brand services in spite of the abundant literature on luxury goods. Much of the luxury branding research noted throughout this study is aimed at luxury brand goods combined with services. For example, Brakus et al. (2009) and Zarantello et al. (2000) studied the crucial branding characteristics for luxury brands and services. With luxury goods, a consumer has continual hedonic pleasure when owning a high-quality tangible product (Silverstien and Fiske, 2003). A luxury brand product experience is continued with ownership and is ongoing with the use and display of the brand. Consumers are motivated to pursue products that provide emotional benefits (Hagtvedt and Patrick, 2009).

Luxury brand services are bit different. In general, a service can be described as the intangible act relating to labor, skills, expertise or network performed by a third party for the benefit of another. Services are often time-based, transactional, and with no transfer of ownership relating to a tangible product. For example, when someone engages a real estate brokerage (third party) to sell their home, the expertise and labor is performed by the third party for the benefit of the consumer. The brokerage generally takes on no ownership of the home.

Although offering a different product, luxury service brands still evoke exclusivity and seek to establish their identity thru brand character, image, and

personality, thus distinguishing themselves from the lower brand level competition. Sotheby's International Realty prominently display these messages throughout their advertising. In general, services, although non-tangible, still satisfy a need, want or desire of the consumer.

### **Branding in Real Estate**

Many people believe branding makes a difference in real estate marketing. A consumer's perception of a real estate brand will vary from one to another, but their beliefs contribute to their decision in choosing the particular brand to sell their home over another. A study in the late 1990's pointed out that a brand name in real estate brokerage services served as a signal of quality to those unfamiliar with the real estate professionals in the local housing market (Anderson and Foc, 1998). Another study by Locke (2019) found that buyers moving into an area they are unfamiliar with found peace of mind and quality assurance in the new areas housing market because of a nationally recognized real estate brand guiding them in their decisions to purchase. However, for a seller familiar with his or her area and the local market conditions, a nationally recognized brand may have little to no value (Locke, 2019).

These findings and a few more noted below constitute the accumulated, faint evidence that luxury branding does or does not matter in home sales. Being a nationally franchised firm is by no means the same as being luxury firm. These results are useful, none the less, as a conceptual background, if nothing else, for the current study and its research questions.

In point of fact, franchised versus independent firms have been a focus in earlier research. Past real estate studies have shown that a national real estate franchised brand signals a message of quality and uniformity to those consumers unfamiliar with a local market (Anderson and Fok 1998; Brickley and Dark 1987). A 1987 study by Brickley and Dark showed that there was a 3% added value to the home's final sales price when the listing brokerage firm was a national franchise. Relocation consumers purchasing a home in an unfamiliar market had greater faith in a recognized national or international franchised brand because of their personal familiarity with it from their prior location (Brickley and Dark, 1987). The franchised brand signaled that quality and brand awareness already existed. They trusted the brand relying on their expertise in an unfamiliar market. For sellers moving within their local market, a recognized franchised brand made no difference because the consumers were familiar with their local market. This interesting finding challenges the logic and assumption that branding does have a substantive impact in real estate brokerage studies.

A brokerage performance study by Locke (2019) compared the performance of national franchised brokerage firms to local market independent brokerage firms. It showed a strong correlation between the degree of overpricing of a home on the market and longer days on market. It was noted that brokers with nationally recognized franchise brands listings sold for 3.2% greater than that of an independent broker (Locke, 2019). While this finding is intriguing, it needs to be noted that franchised brands are not necessarily luxury brands, by any means.

A housing study of Atlanta apartment rentals by Benjamin, Chinloy, and Hardin (2006) argues that branding does matter. Researchers found that rents and occupancy do

not depend on hedonic physical characteristics alone. The results show that tenants pay higher rents for a branded complex (meaning a known brand, which, again is not necessarily a luxury brand), controlled for by rents being at normal market levels of occupancy. The results show higher monthly rent revenues of 8% over unbranded properties. This difference was attributed to the brand (Benjamin, Chinloy, and Hardin, 2006).

### **Brand Level of Real Estate Firms**

While brand levels in a marketplace are empirically obscure, there is a general consensus that brands fall into categories such as low, medium and high, or as strong or weak. Level centers around price points such as luxury (expensive and pleasurable) and value brands (low cost) that meet a need for utility.

A real estate firm can be conceived of as characteristics such as brand. Its brand is an identifier signaling consumers. Each firm is unique and behaves differently in the marketplace. In this research the approach to classifying brand level of real estate brokerage firms in the marketplace ranges from high to medium to low, based on their service offerings and average sales price per unit.<sup>5</sup> A study of real estate agency practices by Dunning et al. (2019) categorized real estate firms into three levels based on their typical service offering and indicative fee ranges. Their study considered brokerage firms in other countries where their fees vary from real estate in the United States, however the levels of classification from low to medium to high is a similar approach to this study. Our categorization using Dunning et al.'s (2019) firm levels is shown in Appendix B.

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<sup>5</sup> Again, what is being tested here is luxury versus non-luxury. This three level distinction is not studied *per se*.

Real estate firms, both independent and franchised, are branded regardless of size, presence, consumer awareness, or market share; all firms have some brand level. A firm's local market performance, quality of service, average price of its sales and its typical user is used in this study for determining the real estate firms brand level in its market. Table 2 below identifies typical services provided to consumers and the relative fee range of the service by brokerage firm brand level.

Table 2. Factors Determining Real Estate Firm Level

Real estate firm brand level	Brand level defined	Scope of listing services	Cost of service in dollars and/or percentage of final sales price
Low level: Discount/Flat fee brokerage:	<p>May not have local market presence. Brokerage may not be local.</p> <p>Does not have local market share</p> <p>Low local market brand awareness.</p> <p>Services offered ala-carte.</p>	<ul style="list-style-type: none"> <li>Limited/ Minimal services from broker: Broker submits all offers to seller.</li> <li>Listing entered on MLS with photography. No external marketing at broker's expense.</li> <li>Listing contract terminated after 6 months in majority of cases.</li> <li>Seller determines the asking price.</li> <li>At sellers' cost, the firm will obtain and submit to listing broker their own photography, virtual tours (if any), measurements, property descriptions, highlights and disclosures.</li> <li>Seller schedules showings and communicates with buyer agents.</li> <li>Listing broker may not visit the property in person.</li> <li>Listing broker may not have expertise or market area knowledge.</li> <li>Listing broker headquarters location may not be in the same geographic area or state.</li> <li>Listing is transacted online.</li> </ul>	<p>Listing fee options:</p> <ul style="list-style-type: none"> <li>Flat fee paid at listing execution: ranging \$500-\$1000. 1%-3% of sales price paid at closing to buyers' broker for bringing the buyer.</li> <li>4%: where 1% for listing firm + 2%-3% offered to the buyer's broker for bringing a buyer</li> </ul>
Medium level: Traditional brokerage firm	<p>The firms overall average sales price of homes listed is closer to the average price of home in its local market.</p> <p>Has local market presence.</p> <p>Has market share</p>	<ul style="list-style-type: none"> <li>Full service</li> <li>Market analysis prepared by agent to aid in determining the right price.</li> <li>Staging services referred, if needed.</li> <li>Property preparation and timeline.</li> <li>Major repairs addressed and determined.</li> <li>Marketing plan discussed and agreed with seller.</li> <li>MLS listing with professional photography and virtual tours.</li> </ul>	<ul style="list-style-type: none"> <li>6% of sales price. 3% to listing broker and 3% to buyer's broker.</li> <li>Commission is earned when property pends under contract.</li> <li>Commission is paid at closing and funding.</li> <li>If no contract is accepted then no fee is due to broker.</li> </ul>

	Has local brand awareness	<ul style="list-style-type: none"> <li>• Agent schedules open houses (if requested or needed)</li> <li>• Agent or scheduling service set all appointments.</li> <li>• Secure lockbox or alternative made available.</li> <li>• Branded yard sign installed.</li> <li>• Agent negotiates on seller's behalf and presents all offers.</li> <li>• Agent advises seller on best offer price and terms of offer.</li> <li>• Agent verifies strength of buyer financing or funds available if no financing is involved.</li> </ul>	
High level: Luxury brokerage firm	<p>The firm's overall average listing price of homes is 2.7X or greater than the average price of home in its local market.</p> <p>Has local market presence.</p> <p>Has market share.</p> <p>Has local brand awareness</p>	<ul style="list-style-type: none"> <li>• Full services from broker/agent.</li> <li>• Market analysis prepared by agent to aid in determining the right price.</li> <li>• Staging services (if needed).</li> <li>• Property preparation with repairs, updates and landscaping (if needed).</li> <li>• Marketing: across range of media in a bespoke package.</li> <li>• Professional photography: MLS listing, professional photography, drone footage if needed, virtual tours.</li> <li>• Agent is highly involved in transaction with a hands-on approach.</li> <li>• Agent or scheduling service to set all appointments.</li> <li>• Branded yard sign installed.</li> <li>• Agent schedules broker tours, luncheons to local realtor network.</li> <li>• Agent negotiates on seller's behalf and presents all offers.</li> <li>• Agent assists seller with best offer price and terms.</li> <li>• Agent verifies and qualifies buyer consideration terms., i.e., financing or funds made available if no financing is involved.</li> </ul>	<ul style="list-style-type: none"> <li>• 6% of sales price. 3% to listing broker and 3% to buyer's broker.</li> <li>• Commission is earned when property pends under contract.</li> <li>• Commission is paid at closing and funding.</li> <li>• If no contract is accepted and pends then no fee is due to broker.</li> </ul>

### *Low*

A low-level firm, many times referred to as a discount brokerage or a flat fee brokerage is known for charging a flat listing fee, plus an agreed amount of commission, usually a percentage of sale that is offered as compensation to a selling agent to whom it brings a buyer. Discount brokerage firms advertise to consumers as a discount from what



is common in their market or as a flat fee. For example, Redfin is a brokerage firm has nationally advertised to list a residential property for sale for a 1% listing fee to the sellers. Many discount brokers have advertised similar, and others have offered as a limited services listing for a flat fee of X. For example, in many cases it is \$1000.00 USD to take a limited services listing and list the property on MLS for a period of time.

### *Medium*

A mid-market or traditional brokerage firm is described as a full-service brokerage and charges accordingly. The fees of a mainstream brokerage may remain as average or according to what the market will bear. However, a mainstream brokerage firm does not make themselves widely known as a firm that will list homes for sale for the discount or a flat fee. They do not carry the reputation as a discount brokerage. In the real estate industry, the listing commissions are not a set price, nor is there a set pricing standard. However, the 6% sales commission is the most common practice, but is not the case in every situation. Price fixing in real estate is prohibited and is a violation of antitrust laws. Real estate commission and fees are negotiable, but ultimately it is the brokers decision as what he or she will ultimately accept as fee for service. The mid-market brokerage firm's average sales price of homes listed and sold will be closer to the average sales price of a home in the local market area.

### *High*

A luxury brand is almost by definition high level. These firms evoke exclusivity in their marketing strategies and seek to sell the selling or buying experience itself to consumers. They are a full-service brokerage firm that facilitates relatively the same

services a traditional brokerage would provide. Photography is professionally done and depending on the listing price of the home, a twilight photo may be required. Their property descriptions are lavish, and they aim to draw consumers with their use of the vernacular.

Sotheby's International Realty is known for their use of the word "extraordinary," for example, in their marketing campaigns. In this study a luxury brokerage firm is identified to have an overall average brokerage listing and sales price of 2.7X higher than the average sales price of homes in the same market area. Additionally, a luxury firm describes their service experience as global, highly extraordinary and exclusive. The word "luxury" and its synonyms are used extensively in their advertising. A luxury brokerage brand will advertise to a target market of affluent real estate homeowners by area, income or publications that are created to serve the affluent market.

The luxury home market is an identified sector in the real estate market (defined in Table 4 in Chapter 3). The National Association of Realtors promotes educational courses providing realtors with continuing education along with a certification as a certified luxury home specialist, such as the accredited luxury home specialist "ALHS". The certifications are not required for an agent to sell a luxury property; however, the Luxury Home Council encourages that the training certification as a differentiator for agents by providing a professional network to all its members for enhancing their professional skills in dealing with luxury consumers.

## **Gaps in Research of Luxury Branding**

As noted above, luxury branding research in the service industry is thin to almost nonexistent. Even extending the service industry sector to real estate, very little research deals with marketing and branding of residential real estate firms even though it is an attribute that is clearly reflected in the final sales price and deserves scholarly attention.

Establishing criteria for a luxury classification for local real estate markets is necessary and is the first step in order to see how a brand's level will impact final home sales price. In luxury branding research, there is a consensus that everyone interprets luxury differently. It is a consumer perception and therefore will not have the same meaning across consumers. An individual's cultural context and upbringing and societal class has a big part to play in their interpretations of the term's "elite" or "luxury." A person raised in a low-income working-class home will have a demonstrably different response than one raised in an elite, upper-class home.

In short and as noted many times above, luxury has a different meaning to every person. An individual interprets a luxury (hedonic) product or service from the base line of what they are accustomed to. Culture also has much to offer in this interpretation. In 2021 American culture, a cell phone as a necessity across all classes. But in a third world culture, it is a luxury today. Cultural norms will thus differ from one country to another.

The ambiguity, contradictions, and need for research in service sectors of the luxury market pique one's interest. In marketing, there are many studies related to luxury goods, but very little is found regarding luxury services. The research relating to branding luxury services seems to be mostly focused on the hospitality industry.

Luxury research in general still seeks to define luxury. All the while categories and classifications within luxury have been expressed by market makers. Recent research that identifies what consumers fit into an ultra-luxury class only furthers such ambiguity. There is need for a definition of “luxury” in real estate brokerages. Based on previous work, the current research defines what constitutes a luxury residential property but is conscious of the research limitation this leads to in that the working definition adopted is not based on a set of prior scientifically-rigorous studies in their own right.

Setting aside branding, we next examine the time-honored alternative explanation of home value, the hedonic pricing model.

### **Defining “Luxury” in Real Estate Firms**

The premium-ness of a product may rely on the branding effect of that product and is the result of perception within a specific consumer, but not all consumers. A luxury brands' premiumness provides pleasure as a central benefit and connects to the consumer's emotional level. Contrasting with this is that a brand inherently promises to meet a need at a minimum price, a point that is only relevant to the extent to which consumers are content with mundane needs. There is a utilitarian purpose served as well. Although luxury is desirable, a good price is also desirable (Hagtvedt, 2009). While there is a general trend towards luxury, there is also a trend since the turn of the millennium that consumers want a better value for the money (Silverstien. 2006). Prior research shows that consumers in general prefer a luxury brand rather than the equivalent offered by a low-end brand (Randall, Ulrich and Reibstein, 1998). However, this is only true if the difference in quality is not overwhelmed by a difference in price (Bronnenberg and Reibstein, 1998).

While consumer perception is an interesting phenomenon, what defines a luxury brokerage in real estate is when its services and price to consumers are equal to that of its substitutes. In real estate markets, a seller wants typically to sell at the highest price and a buyer wants to purchase it at the lowest price. Thus, the market price (home value) of a home is determined by its buyers' evaluation of its bundle of inherent attributes (Freeman, 1979).

Research noted above though, does explain the hedonic potential of luxury brands and their impact on consumers so this thesis seeks to further separate luxury perception from actual hedonic value attributes.

Past marketing research recognizes that the luxury is difficult to define. It is often loosely used and without defining parameters. A recent marketing publication from Christies in the International Global Luxury Report 2021, there are segmented categories within the luxury market, identifying an "ultra-luxury" segment with a minimum net worth mark for its classified consumers. An ultra-luxury consumer will have a minimum net worth of \$30 million (Christies International, 2021). Other observations made more recently of luxury homes prices claim that a \$5 million-dollar home is the new \$1 million-dollar home (Young, 2018).

Over time there has been much overuse of the term "luxury" without defining parameters and this has resulted in diluted and clichéd meanings of the term. It leaves one to create and imagine one's own meaning of what luxury is. Thus, luxury will have a varying meaning from one person to the next. One can find MLS listings and sales of homes at low and medium price points described as luxury homes because of having a few upgrades, for example, granite countertops in the kitchen.

In a general sense, there is certainly ambiguity when defining luxury. What characteristics make a real estate brokerage a luxury real estate brand? In defining a luxury brokerage firm in real estate, careful consideration has been placed on how recognized institutions have defined the luxury status of products or services in the past. The table below compares luxury home real estate market definitions and measurements from recognized luxury institutes in the U.S.

Table 3. Luxury Real Estate Definitions

Construct	Definition	Measurement	Source
<b>Luxury Real Estate Firm</b>	Performs in the top 10% of their given market.	The firms overall average sales price per unit within their local market is within the top 10% of home sales prices in that given market	2017, Hartley, D. Luxury Home Council
<b>Luxury homes</b>	luxury market is very localized. Real Estate Markets will differ based on geographical area. An example would be that the: Miami residential real estate market will differ from Los Angeles.	3.4 times higher than the average homes sale price. The average price of residential property in its local market multiplied by 3.4.	2020, Christie's International global luxury report
<b>Luxury homes market</b>	The top 10% of the real estate market.	The United States residential real estate sold with-in a given year..	2020, Luxury Institute
<b>Luxury home</b>	Homes valued at 1 million dollars or more,	Residential homes in the United States overall real estate market valued at 1 million USD and more. This is compared to the national average home sales price per given year. Note: NAR averages all home sales in the U.S. per year for an average sales price as a whole. An example would be that the 2019 average home sale price in the U.S. was \$264,645.	2019, National Association of Realtors
<b>Luxury home</b>	homes that are 2X more than the average in its local market by zip code The local RE/MAX Real estate listing broker or agent determines if home meets the luxury criteria.	2X the average home sale in the local market area. This market calculation is commonly done as the average home sales price for past year within the city of the subject residential property. Average sales price of home in local market area=N. $N*2=X$ If X is 2 times higher than N, then it classifies as a luxury property.	2019, RE/MAX International

<b>Luxury home</b>	Minimum value of \$750,000 USD or Top 10% of Market.	Threshold minimum value cannot fall below \$750,000 in any given market. If property is in an area where average home value exceeds \$750,000 then they will calculate the top 10% of the home values in that area to determine luxury threshold	2020, Keller Williams Realty
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For a firm to be identified as luxury in this study, it must qualify as a luxury brokerage real estate firm. For this study a luxury threshold has been determined as a 2.7 multiple for the average home price in its local market area. The logic applied uses several international real estate industry leaders defining calculations such as NAR, RE/MAX Int'l, Christies International Real Estate and Keller William Realty in developing the fitting multiple for the study. The RE/MAX International definition of a luxury home, luxury firms are defined as those handling homes with an overall average sales price of 2 times the average market sale price in the county. The luxury home category qualification from NAR is a broad scope and aligns with the national average home values. According to NAR, the national average of US home values were \$384,900 for 2017, \$385,000 for 2018 and \$383,900. When considering the difference between the average home value and NAR's determined minimum luxury home value of \$1,000,000, it is reasonable to conclude that the difference is about 2.7 times the national average. The national average home sales price in the U.S. during the time period of this study is considered and the homes meeting these studies determined threshold of 2.7 times greater than the average homes sales price in its given market would qualify. In this study, a 2.7 multiple has been set as the threshold determination calculation. The chosen multiple is an average of both Christies Realty International and Re/Max International determined calculation to be multiplied by the average home sales price within a home's market area.

Additionally, the selected multiple of 2.7 meet the Keller Williams Realty's threshold by calculation of their minimum required home value criteria in a market area. Keller Williams sets a minimum criterion for determining if a home meets a luxury classification. According to Keller William Realty, for a home to be considered a luxury property within their brand, it must have a minimum value threshold of \$750,000 in any given market. Keller Williams (2005) further states if a home's market typically closes luxury homes at higher than \$750,000, then its market basis will be set at the price point of the top 10% of closed transactions in its local market area. If a home's market typically closes luxury homes at lower than \$750,000, then its market basis will be set at \$750,000.

The Tarrant County market area in the current study had an average home sales price in 2018 of \$279,204 according to Texas A&M Real Estate Research Center. When using the calculation determined for luxury threshold in this study of 2.7 times the average market price sale, the market threshold for a luxury home would be properties valued greater than \$750,000, thus also meeting the criterion of Keller Williams.

Luxury as a descriptive has been loosely used, especially in advertising homes. Any brand level can depict itself as a luxury brand but may not have the sales performance to support their advertising claims. It is difficult for a consumer to fact check a real estate firm's advertising claims since information on brokerage firm performance is not publicly available. However, it can be obtained by practitioners through the MLS, and this gives the current study access to this privileged data since the author is a registered real estate broker.



## **The Hedonic Pricing Model**

It is likely that consumer preferences are heterogeneous (Gilbert, 2013). Many studies assume that results of price are a direct reflection of consumer preferences, however that is not always the case. Price is a product of supply and demand and the factors affecting the supply side will be reflected in the price even if they have no impact on consumer preference (Gilbert, 2013). The housing market is heterogeneous, and it is difficult to estimate value without some kind of framework (Simrans, Macpherson, and Zeitz, 2005). There are different methods an appraiser will use, for example, to estimate a value depending on the type of property they are assessing (Fisher and Martin, 2008). Hedonic models are likewise used to identify characteristics that impact real estate prices. Because a home is made up of many characteristics, there should never be a “one size fits all” approach to valuing.

Carrying this logic forward, the hedonic price model research in real estate has analyzed the relationship between a home’s final sales price and the time on the market to sell the property. A regression analysis is typically used to estimate the marginal contribution of the individual characteristics of a home (Sirmans, Macpherson, and Zeitz, 2005). Researchers that use the model design their study using main categories and subcategories of home characteristics.

Scholars note that collecting sufficient real estate data is necessary since the variables included in the hedonic model are usually limited by the availability of real estate sales data and in many cases making it difficult and expensive for researchers to collect (Chin and Chau 2003). The dataset of such characteristics and attributes differs across markets. Prior research studies of real estate valuations show that a property's

geographic location and attributes have an impact on their sales price. To compensate for this, the hedonic pricing model isolates the effect an individual attribute has on its value by regressing the sales price on hedonic predictors. Past studies have examined homes sales price as impacted by its characteristics such as geographical location, community attributes, physical characteristics, locational distance proximity and other quality of life amenities, just to name a few.

Previous real estate studies using hedonic modeling to estimate home values have reported on which characteristics positively and negatively affect the sales price. Positive contributions to selling price can be observed in attributes such as a slanted versus flat roof, a sprinkler system, a garden bath, a separate shower, double oven and a gated community. Dis-amenities have negative effects on selling price and can be observed in factors like an undesirable location (e.g., an earthquake zone, proximity to a landfill, proximity to high voltage lines, corporate-owned properties, percentage of minorities in an area, low performing schools and properties that require flood insurance) – all negatively affect selling price (Sirmans, Macpherson and Zietz, 2005).

Sirmans, Macpherson, and Zietz (2005) identified the top twenty hedonic characteristics of homes. They compiled and sorted the data and segmented markets by geography. The research explained how geographical location of the study was important because a home's attributes vary due to its geographic location. Characteristics identified and grouped by geographical region shows the difference and variation in the markets. For example, a pool will add value in a hot climate region like Texas or the US southwest will positively affect the sales price because the consumers value the attribute and are willing to pay more for a home with a pool. However, on the flip side, a property in

Michigan or the US northeast is a much cooler climate with long winters. This attribute value, hence, is not interpreted equally across consumers. Research has uncovered shows characteristics by category by measuring the hedonic impacts as positive, negative, or not significant.

The hedonic price model is a significant tool used in real estate housing research today. With sufficient data, it allows us to understand and estimate the individual effects of different housing attributes has on housing prices (Chin and Chau, 2002). This information is crucial for developers, development consultants, real estate brokers, appraisers, investors, investment consultants, and policy makers (Chin and Chau, 2002)

To date, hedonic research has not examined brand level as a marketing characteristic of the home value and, indeed, it may not be a hedonic aspect. Whereas consumers clearly respond to brand, whether it contributes markedly to their pleasure in the same way that having an updated home with a pool on a golf course and a view might, is debatable. But the key point remains that prior real estate research has not studied luxury branding as a factor in home value and that is why this is a novel contribution of this proposal and thesis.

The current study will use the hedonic pricing model to measure the impact that hedonic factors have on sales price and contrast this set of coefficients with the surrogates for luxury branding. As argued throughout, our *a priori* are that branding will not compare well with the hedonic model in spite of the advertising claims of luxury brands.

#### *Challenges When Using the Model*

Researchers need be aware of the challenges when using the model. Most scholars seem to agree that a researcher using hedonic modeling should be extremely

knowledgeable about the market and characteristics they are using in their studies (Chin and Chau, 2002; Wheatley, 2011). The method in some cases will have limitations because it is very data intensive. Difficulty arises when transaction data is not available (e.g., due to thin transactions) or is available, but at very high price to the researcher (Chin and Chau, 2002).

Second, misspecification of the hedonic function is possible, and this may be due to missing variables where the data is not available (Gilbert, 2013). All of this can lead to bias in the estimates.

Third, if there is a lack of prior knowledge of the independent variables, it is difficult to choose a functional form; therefore, the functional form may be misappropriated (Goodman, 1978). There are several basic functional forms that can be applied to the hedonic price model such as linear, semi-log, and log-log forms. Certain choice in functional form may result in inconsistent estimates (Bloomquist and Worley, 1981; Goodman, 1978) or model non-convergence. Rosen's (1974) model does not specify a specific relationship between characteristics and commodities, although he did adopt the goodness of fit criterion, and this is widely used in empirical studies. When using the hedonic pricing model with a large dataset, for instance, there is ample room for error. In many cases when dealing with a large and diverse group of consumers in the housing market, it may be difficult to observe the principle of parsimony. The more independent variables that are included, the higher chance of random explained variance. There is also a chance of misspecification where an irrelevant independent variable is included (over-specification) or a relevant independent variable is omitted (under-

specification) in the model. The coefficients are more likely to be unstable when a large number (over-specification) of independent variables are included (Butler, 1982).

A way to mitigate misspecification in a model is to use a smaller number of key variables (Butler, 1982). Sirmans, Macpherson and Zietz (2005) recommend that the locations be alike in order to keep consistency in the data; otherwise, the misclassification of attributes can occur and the findings can be skewed. The researcher should derive results in one geographic area and not generalize across different geographic locations (Sirmans, Macpherson and Zietz, 2005).

There appears to be disconnect among researchers applying the hedonic price model in past studies. In some the data collection may have been too large and crossed territories that they tried controlling for. Results may have been clouded, and, seemingly, it gave the appearance of forcing a fit for the researchers' results. According to Chin (2002), there is a limitation in the hedonic model by saying that "it only works when you have a market equilibrium." If hedonic research studies were bound within the same market by state, city, and/or school district, it may derive more accurate results. For example, properties with pools will be comparable to other properties with pools in the same geographic territory but not outside that territory. The further narrowing of geographical boundaries from which to derive results would prove to be even more accurate and leave less room for error (Sirmans, Macpherson and Zietz, 2005).

Butler (1982) suggests that if a researcher is going to use the hedonic price model, then it is important that the researcher narrow down the hedonic attributes to only those that are costly to produce and yield utility be considered to avoid the possible misspecification in the hedonic models (Butler, 1982).

## The General Thesis

The general thesis is that home values are a function of numerous characteristics. Consumers purchase a product for the composition of its characteristic and to satisfy their own desires. As mentioned in Chapter 2, home characteristics include physical, locational, time related and market characteristics. When analyzing characteristics of homes and seeking to understand if individual attribute impacts the value, the hedonic price model is an appropriate starting point.

The study was carried out within the time period of 2016-2019 in a geographically targeted area where each year of the study experienced a relatively balanced market (at equilibrium), as demonstrated in Table 6. There are two studies conducted in this research. While the both Study 1 and Study 2 were conducted in Tarrant County in North Texas, they were carried out in different areas of the county. They are separate communities with equal experiential creature comforts but entirely different cities, zip codes, and school districts, hence, if they are consistent yielding greater external validity for the overall results. One dataset was collected for Study 1 and a second for Study 2. In both studies, we consider the number of homes sold in the given year and the time (number of days) it took on average to sell.

Table 4. Selected Predictive Characteristics of Home Sales

<b>Construct</b>	<b>Definition</b>	<b>Source</b>
<b>Luxury Branding</b>	Conveying an image of performance, authenticity and attempting to sell an experience by reading the lifestyle constructs of consumers	Atwal (2008)

<b>Locational Characteristic</b>	Locational Characteristics: Locational in distance related measures amenity for the subject property. Benefits or non-benefits to residents: Tax base, assessments, utility services available to residents, city services (library, parks, recreation and emergency: fire, police and ambulatory). Quality of school district, subdivision, Exclusive Community- Country club, golf course lot, lake or water view, proximity to recreation, shopping, airport, major highways, restaurants and grocery stores.	Monson (2009) Chin and Chau (2002) Fik, Ling and Milligan (2003) Jud, Seaks, and Winkler (1996)
<b>Physical Characteristics</b>	Physical Characteristics: Tangible or observational attributes that make up the home: The age, number of bathrooms bedrooms, square feet, lot size, level of construction/material quality, pool, updated.	Monson (2009) Chin and Chau (2002)
<b>Market Characteristic</b>	Market condition at the time of sale. Year of sale, month or season of sale.	Sirmans, Macpherson and Zeitz, (2005)

### Using the Hedonic Price Model in the Study

The Hedonic Price Model is a statistical method explained as  $SP = F(X+Y+Z)$ , where the sales price, SP is equal to the characteristics X, Y and Z that make up a home, F. In previous real estate market studies, the hedonic price model is used to isolate the impact that a home's individual characteristics on its value. This study likewise analyzes marketing characteristic of a real estate listing firm's brand level to identify its impact on home values.

#### *Physical Characteristics*

There are many physical characteristics that make up a home used in prior hedonic model's research (Rosen, 1974). The amenities chosen for a model to be used in study should be those that are costly to produce (Butler, 1994). Rosen (1974) suggested the top twenty home attributes that should be considered for real estate hedonic models. A list Rosen's top twenty home characteristics can be view in Appendix I.

#### *Locational Characteristics*

Locational amenities have been investigated in past research and have shown an impact on the home's value (Taibah, 2002). Locational characteristics can positive or

negative. Prior studies have looked into the effects of environmental quality, school districts, socio economics of the sub-market, flooding zoned areas, proximity to a landfill or power plant. Homes located on or near a golf course have consistently had a positive effect. However, homes that were in close proximity to a hog farm had a negative effect on the selling price (Clark and Herrin, 2000; Richardson, Vipond, and Furbey, 1974).

#### *Time Related Characteristics*

Time related attributes consider the market conditions at the time of sale. The month or season, the year, and how many days the property was on the market are such conditions. Overpricing a home has been found to impact number of days on the market. A study by Knight (2002) examined homes price changes during the marketing to the selling price and its time on the market. The study found that homes that were initially overpriced experienced longer days on the market, thus having larger price reductions. Homes with higher price reductions also sold at a lower-than-average selling price per the area (Knight, 2002).

A 2003 study by Anglin, Rutherford and Springer determined the importance of setting the original listing price and the marketability of the property. This 2003 study measured the degree of overpricing as a percentage of difference between the original listing and the expected listing price. Their finding show there is no direct tradeoff between selling price and selling time but that the market conditions affect how the expected selling price and selling time vary jointly based on the initial listing price.

The utility, condition, design and layout of a home are very important factors in their desirability. The functional obscene-ness and physical attributes are also known to impact the number of days on market and ultimately the overall value. For example, a



home with a terrible floor plan may sit on the market for a long time before it sells. Standard professional appraiser practices take into consideration a home's quality, condition, functionality and dated-ness (Fisher and Martin, 2008).

Consumers vary in their desires and needs for each attribute. For example, a home with a pool may sell faster with fewer days on market in a warm climate than a similar home for sale at the same time of equal quality, age, and area with no pool. Past scholars have concluded that higher days on market potentially will have negative impact on the final sales price. Overpricing a home is not suggested either in that a study by Anglin et al. (2003) suggests that the original listing price impacts the number of days on market, thus affecting the price. The degree of overpricing compared with similar homes in the market should be considered when analyzing how it impacts the home's value as observed in the sales price.

## CHAPTER 3

### STUDY 1

#### **Research Methodology for Study 1**

The Study 1 is a quantitative field study of the 2016-2018 real estate market in North Texas. The results of the study will be empirically analyzed to determine if luxury branding as a marketing characteristic of homes sales has an impact on a home's value (value being determined by the final sales price). In the equation below, branding is captured in "other influencing factors.

$$\text{Home Sale Price} = f(\text{tangible and building characteristics, other influencing factors})$$

The collected real estate data was categorized by characteristics existing in home sales and modeled in Smart PLS statistical software.

## **Data Collection for Study 1**

The historical sales data was derived electronically from the Multiple Listing Service. The MLS Database has all historical records of real property that has been listed for sale, lease, leased, sold, expired, withdrawn, or canceled for any given time period. The MLS holds all real estate market data pertaining to legal identifiers and descriptive characteristics for all real property. The MLS is divided into regions across the US. For purposes of this study, a stratified North Texas affluent community within the metropolitan area. The NTREIS region is the North Texas district of the MLS and comprises many cities within multiple counties.

This study is stratified geographically in the residential real estate market where all sales observations collected had the equal benefit of previous determined factors known to impact a home's value in real estate research observing home sales locational characteristics. The selected locational areas of sales records that was obtained is a concentration of high-end homes constituting desired luxury home communities within a metropolitan area. These amenities included zip code, school zone, tax base and utility service providers to name a few (Chin et al, 2002; Monson, 2009). All subjects in the Study 1 and 2 were located in gated communities, thus higher security and safer environment. Additionally, they benefitted from the same locational effects such as distance to major highways, hospitals, churches, and shopping.

The data collection for Study 1 is a stratified sampling of 98 observations of all home sales from 2016, 2017 and 2018. The sampling observations were targeted geographically to the town of Westlake Texas in Tarrant County which lies in the metropolitan area of Dallas-Fort Worth. The town is encompassed within the North

Texas Real Estate Information Systems “NTREIS” region of MLS. The real estate sales sample data collected ranging from January 1, 2016, thru December 31, 2018 of the small, affluent town of Westlake, Texas. All sales data for homes sold within the time frame was gathered. The sampling consists of 98 home sales records for the three-year period displayed in Table 6 below. As seen in Table 6 below, the town’s average home sales price during the years of this study exceeded the criteria used in determining a luxury property classification. This study considers characteristics used in past real estate research studies while adding the variable for the marketing characteristic of branding firm level.

Table 5. Geographically Stratified Data Sample for Study 1

<b>Westlake, Tarrant County, Texas</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Total observations (number of sales)</b>	25	41	32
<b>Minimum sales price</b>	\$1,260,000	\$489,000	\$490,000
<b>Maximum sales price</b>	\$4,500,000	\$4,925,000	\$4,000,000
<b>Average sales price</b>	\$2,047,017	\$2,082,756	\$2,147,656
<b>Median sales price</b>	\$1,650,000	\$2,000,000	\$2,017,000
<b>Average days on market</b>	161	162	116

The dataset was originally built in Excel to collect the characteristics of each observation. Table 5 identifies the variables used in this study. Keeping in mind that the geographic locational stratified sampling was already accounting for some of the characteristics collected in the dataset, variables used in the study were chosen accordingly. This meant that all 98 homes in the sample (see Table 6) experience the

same locational effects such as zip code, environment, service providers, tax base and other municipal benefits and therefore they were not used as variables in the model.

## Constructs and Measures for Study 1

Table 6. Dependent and Independent Variables in the Study 1 Research Model

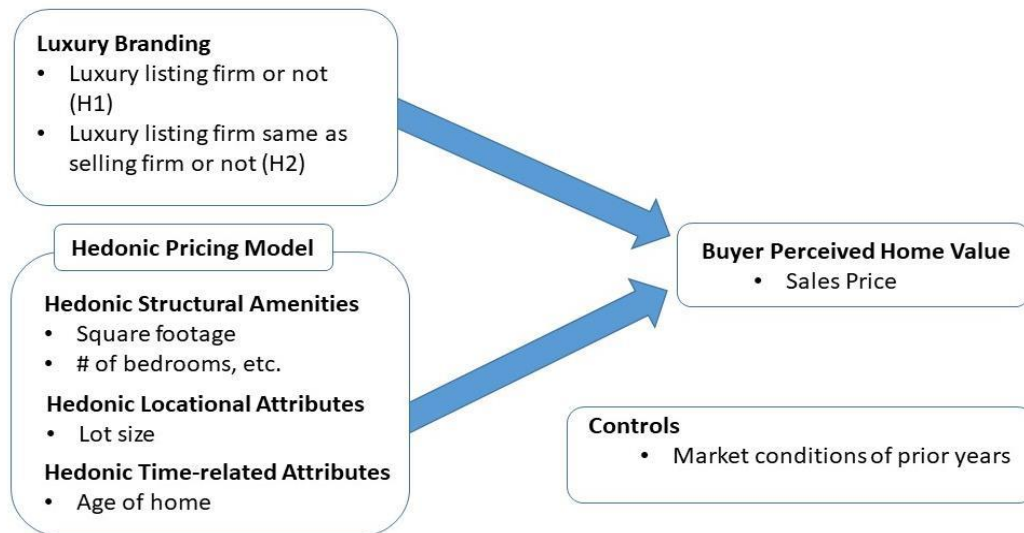
Theoretical Construct	Variable and Acronym	Theoretical Reasoning and Explanation of Operationalization
<b>DV Buyer Perceived Home Value</b>	<i>Final Sales Price</i>	In real estate the value of the home with respect to the buyer is represented by its sales price. Expressed as dollars. The final sales price is determined by what a willing buyer and willing seller agree to. The agreed upon sales price will depend on both the buyer's and seller's perceptions of value and their negotiations.
<b>IV Luxury Branding from Listing Brand</b>	<i>Listing Firm Luxury Brand</i>	Listing brand level is a dummy variable equal to 1 for luxury brand brokers and 0 otherwise. Luxury brand brokers are defined by the premium that such brokerage agents list their properties. In this study a luxury brand had an average listed price of 2.7X higher than the average sales price in its county market.
<b>IV Luxury Branding from Both Listing AND Selling Brand</b>	<i>Both Listing and Selling Firm Luxury Brand</i>	Both listing and selling (Buyer's) brand level is a dummy variable equal to 1 for both being luxury brand brokers and 0 otherwise. Luxury brand brokers are defined by the premium that such brokerage agents list and sell properties as defined above. In this study a luxury brands had an average sales price of 2.7X higher than the average sales price in its county market.
<b>IV Hedonics</b>	<i>Total Square footage; SQFT</i>	Square footage is measured as the number of square feet of a home's living space. Homes offering a larger amount of square feet typically sell at higher sales price than smaller homes based upon the sellers and buyer's perceptions of value.
	<i># Bathrooms</i>	Full bathrooms are measured as the total number of full bathrooms a home has. Half bathrooms are measured as a decimal of the number of full baths. For example: a home with 4 full baths and 2 half baths will be measured as 4.2.
	<i># Bedrooms</i>	Bedrooms is measured as the total number of bedrooms a home has.
	<i>Lot size</i>	Lot size is measured as the total size of the lot in acres the home located on. Homes on larger lots typically sell at a higher sales price than those on smaller lots based upon the buyer and sellers' perception of value.
	<i>Age</i>	Age is measured as the difference in years from the home's year of sale and the year it was built. Newer homes typically sell at a higher price (relative to the square feet) than older homes.
	<i>Garage</i>	Garage is measures as the total number of automobile spaces a home has. Homes offering more spaces typically sell at a higher sales price when compared to other homes of similar characteristics.

<b>Instrumental Variable</b>	<i>Spread</i>	Spread is used to test for endogeneity. It is computed as the percentage difference between sales price and the original listed price. Under some market conditions, the spread can be related to the time on market. If luxury brokers list homes at relatively higher asking prices, then, the spread will be relatively higher for said brokers.
<b>Control Construct</b>	<b>Variable and Acronym</b>	<b>Reasoning behind Control</b>
<b>IV Market Characteristic</b>	<i>Year of Sale; 2017</i>	Year of sale is a dummy variable equal to 1 if the home sold in 2017, otherwise 0. Homes that sold in 2017 had an average of 162 days on the market. It was about the same of the prior year, 2016 when the homes average was 161 days on market (see table 6).
<b>IV Market Characteristic</b>	<i>Year of Sale; 2018</i>	Year of sale is a dummy variable equal to 1 if the home sold in 2018, otherwise 0. Homes that sold in 2018 had an average of 116 days on the market. In 2018, it took less time to sell a home in 2018 as compared to 2016 and 2017 that were used in this study (see table 6).

### *Conceptual Foundation and Research Model for Study 1*

A home is made up of a bundle of both desirable and undesirable characteristics. These bundled attributes are capitalized into the transaction price of the home. The hedonic price model is used to measure the influencing effect of these characteristics on the overall transaction price (Gilbert, 2013). The general function is: *Home Sale Price = f(tangible and building characteristics, other influencing factors)*. Table 4 in Chapter 2 displays common real estate characteristics of home sales that have been used in scholarly research. The research model for this present study (Figure 1 below) uses key predictive characteristics known to impact sales price from prior research (see Table 4). It adds luxury branding as a marketing characteristic to determine if it impacts home sales price and to test the hypotheses.

Figure 1. Research Model I for Study 1



### Hypothesis Development for Study 1

It is fair to say that a home purchase is one of the larger transactions a person will make in life and they are fairly infrequent for most people. One's primary dwelling is a tangible asset that houses their private lives. In 1628 Sir Edward Coke uttered the phrase "A Man's Home is His Castle," well capturing this sentiment. A home is an extension of one's self as argued in extended-self theory. When it comes to searching for a home to purchase, many consumers will carefully and strategically look for a home in desired areas of their choosing with in their price range.

There is a strong psychological motivation that might drive consumer to choose a luxury brand over that of another, as argued in the branding literature already covered. However, a real estate purchase could invoke a quite different behavioral response. In

this study, a real estate transaction for the home purchase is unarguably represented by the brand. But the house itself is not. When the home sells, it is an agreement, a meeting of the minds of sellers and buyers. The buyer determines what they are willing to pay for the home with all of its attributes regardless of the brand that brought it to the market. A buyer's hedonic desires in a home are met within the product (the home) itself. In this case, the product does not display a brand label or the characteristics of a brand. Therefore, there is much less of a cogent argument for why brand would matter at all, especially to a buyer. Based on the overwhelming prior research on what drives a home sale, the brand does not appear to bring a real value to the buyer that remotely compares to the hedonic motivations inspired by the actual home itself. In brief, luxury branding should have no significant practical effect on the final sales price. Given this reasoning, the hypothesis that follows logically is that:

**H1s1. Listings by luxury brand brokers return no premium on the final sales price.**

Carrying this logic even further, the luxury selling firm might also be the listing firm, but, once again, this is almost an irrelevancy to a prospective buyer. There can be little attributed value to this agency-representation that compares favorably to the hedonic attributes of the home in and of itself. Therefore:

**H2s2. Luxury brand brokers serving as both listing and selling agents return no premium on the final sales price.**

Since this thesis is positing that luxury branding will not be effective in the residential real estate market, the hypotheses are null hypotheses. Therefore, we are testing a two-tailed distribution. T-values need to reflect that in such a case and our interpretation in the results section below follows this logic.



## Results and Analysis for Study 1

Gilbert (2013) systematically reviewed the hedonics literature and concludes that hedonics in real estate studies can best be measured as composites.

The hedonic method provides a mechanism to estimate the impact on the price of a *composite* good of a new product innovation. Under the right circumstances, and with the right data, it can even help estimate the value to the consumer of those new product innovations. This helps in estimating the benefits of advances in measurement science (p. 10) [Italics and bolding added for emphasis].

The composite-based approach of the analytical technique partial least squares (PLS) and its capability of modeling composites as formative, unidimensional indicators were thus chosen as the most accurate way to capture hedonic characteristics of residential home sales. PLS is a structural equation modeling (SEM) approach that allows all exogenous and endogenous paths to be estimated simultaneously, hence PLS-SEM. This technique was also selected because it is robust to distributional assumptions and is, according to many studies, able to work with smaller samples than other second-generation techniques like covariance-based structural equation modeling or CB-SEM (Hair et al., 2014).

The following presents in detail the results of analysis of the study 1 conducted using the SmartPLS software (V 3.3.7). In the overall study, there are many characteristics that simultaneously determine a home's value when sold. The characteristics as constructs and the formative indicators of such are defined in Table 6 in Chapter 3. The PLS-SEM analysis includes the assessment of the measurement and structural (or path/coefficient) models. The measurement can report on the reliability and validity of the constructs. Our formative measurement model was assessed following the

procedures recommended by Hair et al. (2014). The model was assessed for convergent validity, collinearity, and the significance and relevance of formative indicators.

The structural model assesses the causality in the nomology and testing of the hypotheses. It also reports on the explained variance associated with each endogenous construct.

#### *Assessment of Measurement Model for Study 1*

According to Hair et al. (2017), the formative indicators that attribute to the constructs in the study are not and should not be interchangeable, therefore little or no overlap would occur and low correlations. Their distribution should maximize the amount of variance in the latent factor.

To determine whether the constructs can be formatively measured (Petter et al. 2007), we examined multicollinearity among the indicators through the Variance Inflation Factor (VIF) statistic. VIF values show how highly correlated the non-interchangeable indicators are. Diamantopolous and Sigauw (2006) suggest that if VIF is higher than 10, then multicollinearity can be a serious concern; however, with formative measures, multicollinearity presents even more of an issue. Therefore, we favored the more stringent VIF benchmark suggested by Hair et al. (2011) that VIFs should be less than 5.0. The VIF factor statistics for this study were below this threshold, i.e., less than 5.0, and therefore multicollinearity was not a concern (see Table 7).

Table 7. VIF Statistics for Study 1

	<b>VIF</b>
<b>2017 Sales</b>	1.000
<b>2018 Sales</b>	1.000
<b>Age</b>	1.587
<b># Baths</b>	2.699
<b># Bedrooms</b>	2.485
<b>Both Listing and Selling Firms Luxury Brand</b>	1.000
<b>Garage</b>	2.348
<b>Listing Firm Luxury Brand</b>	1.000
<b>Lot Size</b>	1.496
<b>Final Sales Price</b>	1.000
<b>Square Footage of Home</b>	3.596

According to Cenfetelli and Basselier (2009), the weights of the formative indicators should be statistically significant (and in the right direction) in the bootstrapping. In this case, most were. They also argue that for purposes of content validity, critical in forming constructs from formative indicators, it is desirable to retain the items that fall below the threshold. For this reason, the measurement model was not “purified” to strengthen the instrumentation (MacKenzie et al., 2009).

#### *Assessment of Structural Model for Study 1*

This study aims to determine if luxury brand listing influences a home’s final sales price. It was hypothesized that a listing firm of a luxury brand level will not return a greater premium to the seller when the home is sold, over those homes listed and sold by non-luxury brands.

Table 8 shows the p-values of the independent (and control) variables. With an alpha protection level of .05, a p-value less than 0.05 is a statistically significant predictor

of DV final sales price and can be generalized to the population. The independent variable listing firm luxury brand level regressed on final sales price resulted in a p-value of 0.285 ( $p > 0.05$ ), therefore not significant. The path from independent variable hedonics to the DV resulted in a p-value .000 ( $p < 0.05$ ), therefore significant. The independent variable path capturing both listing and selling firm as luxury brand resulted in a p-value 0.720 ( $p > 0.05$ ), therefore not significant.

Control variables leading to home value were both non-significant and significant. The independent variable 2018 sales resulted in a p-value 0.041 ( $p < 0.05$ ), therefore significant. The independent variable 2017 sales resulted in a p-value 0.471 ( $p > 0.05$ ), therefore not significant (see Table 8). Figure 2 presents a pictorial representation of the structural model estimates.

To assess the strength of the overall model, we reference the  $R^2$  of .795 (see Figure 2). Scholarly research suggest that  $R^2$  can be used as a rule of thumb to determine if a model is weak, moderate, or substantial. Weak would be 0.25 or below, moderate=0.50 and substantial would be 0.75 or greater (Hair et al., 2014). The resultant  $R^2$  supports a substantial explanatory power with 79.5% of homes sales price being accounted for by the predictors in the model. What is of relevance to this dissertation is that very little of this explained variance can be attributed to luxury branding (see more in-depth argumentation above).

Figure 2. Structural Model Estimates for Study 1 (with weights)

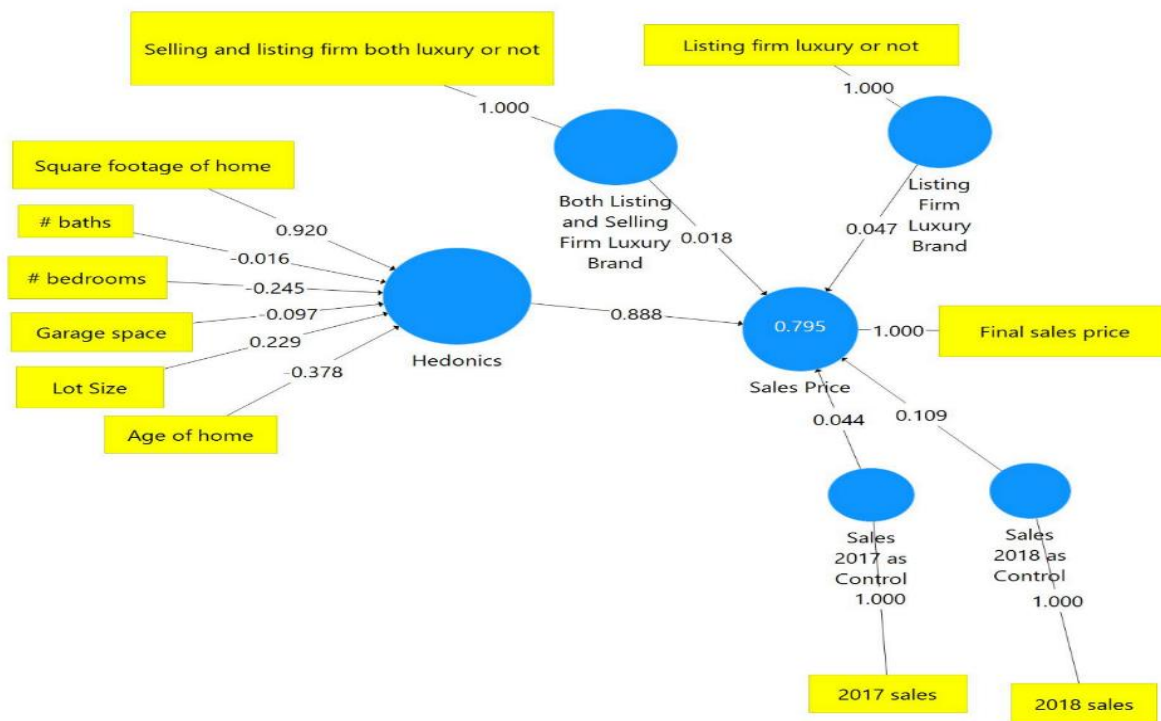


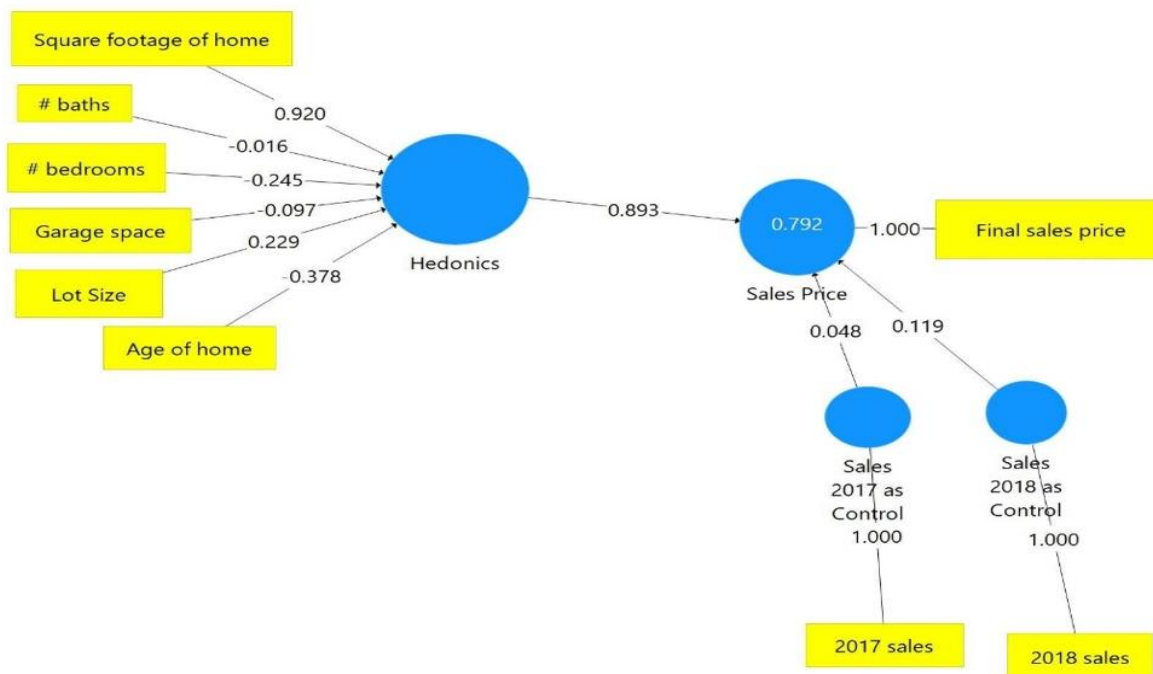
Table 8. T Statistics and P Value Results for Study 1

	T Statistics	P Values
<b>IV 2017 Sales</b>	0.722	0.471
<b>IV 2018 Sales</b>	2.197	0.028
<b>IV Listing Firm Luxury Brand</b>	1.070	0.285
<b>IV Both Listing and Selling Firm Luxury Brand</b>	0.358	0.720
<b>IV Hedonics</b>	32.040	0.000

*Hypothesis Testing for Study 1*

The two null hypotheses in the study were supported by the data. With a small causal coefficient of .047, H1 (i.e., that the listing firm luxury brand level broker will have no impact on the final sales price) was insignificant at a p-value of .285. With an even lower causal coefficient of .018, H2 (i.e., that the listing firm and selling firm by a luxury brand broker will have no impact on the final sales price) was insignificant at a p-value of .720.

As argued throughout above in this proposal, hedonic characteristics are, by contrast, powerful predictors of buyer perceptions of home value. Since the current work is focused on countering the branding literature as well as the common wisdom that branding in real estate residential sales might be a significant factor in buyer perceptions, no hypotheses regarding hedonics were offered. Nevertheless, the explained variance associated with hedonics was very persuasive at an  $R^2$  of .792, as shown in Figure 3. Comparing this to the .795 of the full model (Figure 2), means that the explained variance that is attributable to real estate luxury branding is a mere 0.3%. This result speaks very convincingly to the thesis that buyers are not influenced in any meaningful or practical way by luxury branding.

Figure 3.  $R^2$  sans Branding Effects for Study 1

### Testing for Endogeneity for Study 1

Endogeneity is often a threat to causality and internal validity in econometric data such as ours. The key issue is that the endogenous variables may be caused by factors unobserved in the model. One way this would occur, for instance, is that the records in the dataset are auto correlated and the residuals are not independent. To detect the threat of endogeneity bias that may be generated by other factors than the model itself, a Durbin Watson test was performed. (Davidson and MacKinnon, 1993). The Durbin-Watson (DW) test statistic tests the null hypothesis, thus determining whether the residuals from an ordinary least-squares regression are not autocorrelated against the alternative that the residuals follow an auto-regressive process. The Durbin-Watson statistic ranges from 0 to 4. A value near 2.0 indicates low levels of autocorrelation; a value moving toward 0

indicates positive autocorrelation; a value moving toward 4.0 indicates negative autocorrelation.

First, the DW test for autocorrelation between residuals (difference between the actual values and the predicted values) resulted in 2.078, which, according to the distributional table for this DW statistic, was not significant (with six predictors and a sample size of 96). To run this, Sales Price was regressed on the full model, including controls. To eliminate any *a-priori* auto correlation between error terms so that the data could be tested in this way for independent errors, the dataset was sorted to randomly order each observation.

Second, the Durbin-Watson-Hausmann (DWH) test was then run on residuals of IV's listing firm luxury brand, both listing and selling firm luxury brand, and hedonics to see if there were there were large gaps between presumably less efficient alternative model estimators and the consistency of the proposed model estimators. To create a single value in the dataset for IV hedonics, a PLS-weighted additive score was composed. To run the DWH test, a full alternative model of the main effects (listing as luxury, both listing and selling firm luxury and hedonics) including the three residuals was regressed on DV sales price (see Table 9 and 10). This test is basically asking whether the data fit the model being proposed by the researcher.



Table 9. DWH Test for Endogeneity for Study 1

<b>DWH test for endogeneity</b>					
<b>Coefficients</b>					
	Unstandardized Coefficients		Standardized Coefficients		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
<b>Constant</b>	805831.508	1946527.008		0.414	0.68
<b>Listing Firm Luxury Brand</b>	647479.417	839068.582	0.344	0.772	0.442
<b>Both Listing and Selling Firm Luxury Brand</b>	-162552.858	291166.129	-0.073	-0.558	0.578
<b>Hedonics Listing Firm Luxury residual</b>	156.594	284.926	0.277	0.55	0.584
<b>Both List and Selling Firm Luxury Brand residual</b>	-440581.576	1023190.206	-0.2	-0.431	0.668
<b>Hedonics residual</b>	-369121.709	862960.654	-0.078	-0.428	0.67
	311.816	288.779	0.546	1.08	0.283

DV: Sold Price

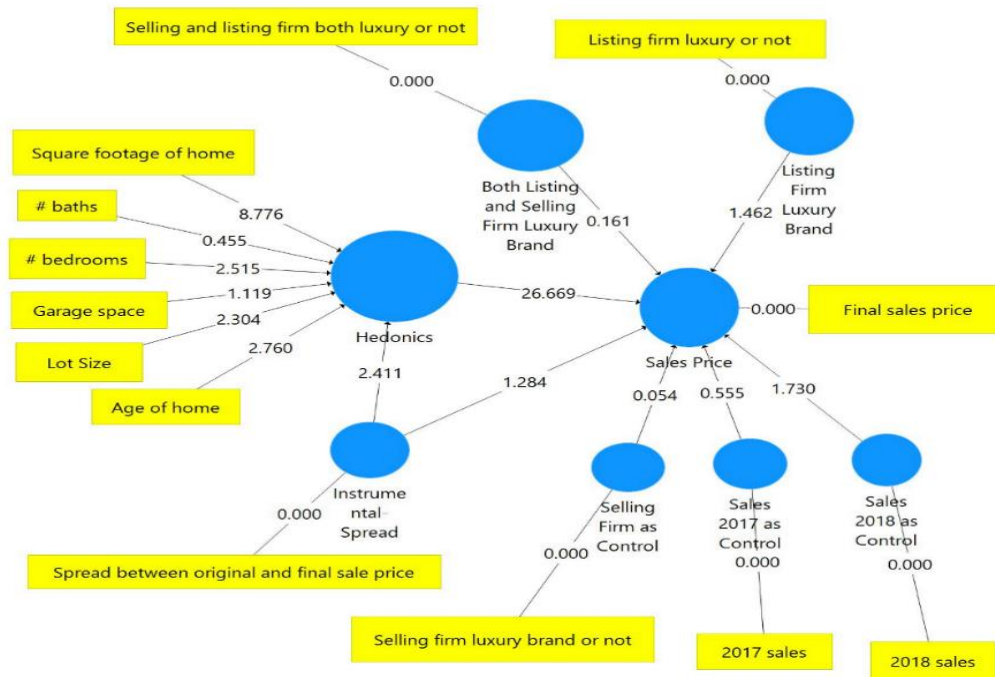
Table 10. DWH Residual Statistics for Study 1

<b>DWH test</b>					
<b>Residuals Statistics</b>					
	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
<b>Predicted Value</b>	(\$164,990.00)	\$4,140,647.75	\$2,094,723.14	\$774,147.44	96
<b>Residual</b>	(\$1,153,849.38)	\$1,354,425.38	\$0.00	\$507,380.19	96
<b>Std. Predicted Value</b>	-2.919	2.643	0	1	96
<b>Std. Residual</b>	-2.201	2.584	0	0.968	96

DV: Sold Price

In the results, none of the residuals generated a significant effect; therefore, the proposed model fits the data and endogeneity does not appear to be an issue.

Figure 4. Endogeneity Test with Instrumental Variable for Study 1



Last, a PLS calculation confirmed that the instrumental variable spread was not significantly correlated with the DV sales price while it was with significantly correlated with the Hedonics construct. In other words, Hedonics fully mediated the effects (see Figure 4) to final sales price. The instrumental variable analysis along with the first two analyses support the conclusion that there are no endogeneity issues with the model.

Figure 5. Model Weights with Instrumental Variable (Spread) for Study 1

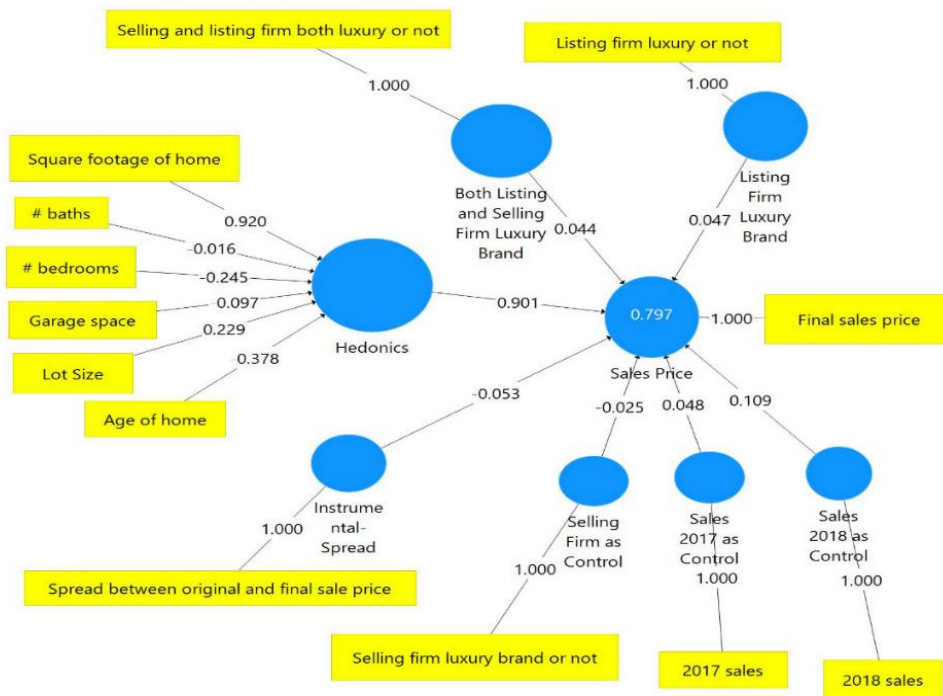


Figure 6. Model Weights without Instrumental Variable for Study 1

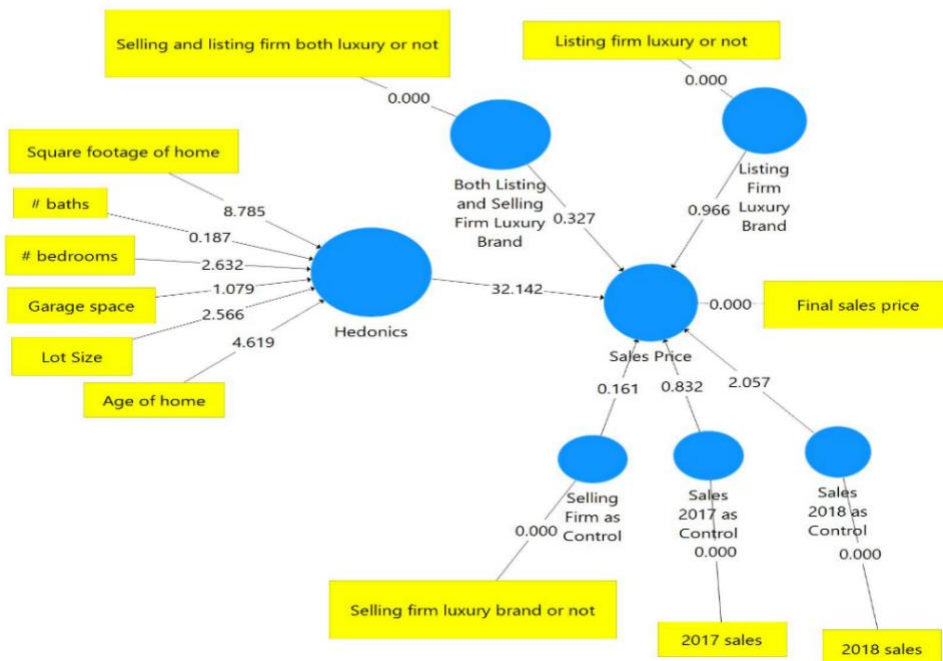


Table 11. Hypothesis Results for Study 1

H(sub x)	Hypothesis Description	Hypothesis Supported
H1s1.	Listings by luxury brand brokers return no premium on the final sales price.	√
H2s1.	Luxury brand brokers serving as both listing and selling agents return no premium on the final sales price.	√

According to the statistical analysis of Study 1 and noting the relatively small data sample from one geographical location, luxury brands as a listing service were not a significant predictor of sales price. In addition, the results indicated when both listing brokers and buying brokers were of luxury brands in a transaction, this is also described as dual agency, they made no significant impact to the sales price (see Table 8).

Consideration given to the fact that the median sales price for the Study 1 was \$2,000,000. Home sales in this price range commonly result in some discount from the original list price. The spread captured for both categories may seem not to be substantive because of the dollar amount of money such equates to relative to the average home's sales price. This could be explained as the luxury brands tending to overprice the home initially. This may be an effort to win the listing over other brokers competing with the idea in mind that the price can be reduced during the listing duration. Why a broker would overprice the home is unknown. Prior research noted in the literature review concludes that a home that is overpriced in its market can also have a possible negative effect overall. The original listing price impacts the number of days on the market, a time

related characteristic of the sale and the days on the market impacts the sales price of the home. An overpriced home commonly will have noted price reductions, and this can have a negative effect on a buyer's perceptions. Some buyers noticing a home's increased number of days on the market may conclude that something is wrong with the home because it hasn't sold yet.

However, an overpriced home and steep price reductions can also draw into question a home's quality in the mind of the buyer and this perception is much harder to quantify with this dataset. So, this question remains open. What we do know from the research is that the brand level of the listing firm does not significantly impact the sales price as other characteristics of home sales do. The lack of significance also implies that the brand effect is weak in that statistical power was sufficient to generalize to the population.

According to the observations and analysis of the data, the perceived value of a luxury brand real estate broker may be greater than the actual value observed in the final sales price. Therefore, luxury brokers did not provide an actual value greater than a non-luxury broker. The buyer may retain a perceived value of the luxury brand in their minds. The hedonic and social class research mentioned in Chapter 2 helps lay the foundation as to why and how the perception of the consumer will vary. Perceived value is difficult to quantify. If the buyer satisfies their psychological needs and personal social class identity by association with a luxury brand, then the perceived value may lie in their hedonic motivation and meeting their personal requirements for social status signaling.

## CHAPTER 4

### STUDY 2

In Study 2 of the thesis, we aim to achieve external validity as the study approach (model and methods) will be applied in a different location of like-quality properties within the same real estate market and time frame. External validity allows for the generalization and results of the study to better apply to unstudied settings, that is, “[e]xploring the causal knowledge to a new situation outside the prior research contexts” (Im and Straub, 2015, p. 44).

#### **Research Methodology for Study 2**

The second study follows the methodology and procedures of Study 1, a quantitative field study of the 2016-2018 real estate market in North Texas. The results of the study will be empirically analyzed to determine if luxury branding as a marketing characteristic of homes sales has an impact on a home’s value (value being determined by the final sales price). In the equation below, branding is captured in “other influencing

factors.” A second dependent variable for Time-on-the-Market has been included to facilitate deeper analysis.

$$\text{Home Sale Price} = f(\text{tangible and building characteristics, other influencing factors})$$

$$\text{Time on Market} = f(\text{tangible and building characteristics, other influencing factors})$$

The collected real estate data was categorized by characteristics existing in home sales and modeled in SmartPLS 3.3.7 statistical software using the hedonic model as a theoretical base. To minimize the problems of generalizing across territories and possibilities of errors and/or biases in hedonic modeling (Sirmans, Macphereson and Zeitz, 2005), it adheres to suggestions in the literature for targeting geographical location in the data collection. In the model creation, a smaller set of key variables (those characteristics that are costly to produce) were carefully chosen as suggested by Butler (1982). The three-year time period for the stratified sampling resulted in 101 observations.

The data source for Study 2 remains the same as in Study 1, that is, the MLS. In Study 2, the data was collected, and variables recorded allowing for further examination of the final impact on sales price and another form of value, time-on-the-market. The variable selection and coding procedure was repeated from Study 1 and analyzed with SmartPLS 3.3.7 software. Additional IV's include the brokerage brand level representing the buyer. In a real estate transaction, there are two sides to the transaction. The first study analyzed the effects of the seller's firm level as a luxury brand. Study 1 IV's include the luxury branding of both buyers' and sellers' brokerage firms. Study 2 IV's

include the seller's firm level as a luxury brand as well as the buyer's firm level as a luxury brand.

Whereas the theoretical logic for viewing home sales from the seller's perspective is not as clear as for the buyer, inarguably prospective sellers do search for a broker who can return the best value for their home. The question is an interesting empirical, if not theoretical question.

The additional DV time on market "TOM" is the total number of days from the initial listing date to the final sales date. A home that is overpriced at its time of initial listing will typically have a higher number of days with one or more price reductions as compared to other homes on the market. Past literature indicates that a home's physical characteristics also impact the number of days on the market. Thus, the time on market is found to affect the sales price but is co-determined by other predictors of sales price. Homes that are overpriced initially may have been suggested by the listing broker in an attempt to win the listing over another brokerage competing for the same listing. Therefore, this setting represents another instance where it is interesting in an empirical sense to ask whether it is advisable for sellers to choose a luxury brand agent to represent them.

If a home was purposefully overpriced by an agent as an attempt to win the business over is likely/possible, but sadly it is intractable to gather this information. However, if the overpriced home took longer to sell than those priced at market value, this will be revealed in the data analysis.

The proportion of initial listing price to final sales price also known as the instrumental variable "Spread." The spread, an instrumental variable in Study 2 is used in



testing for endogeneity. The addition of variables in the study expands the scope and allow us to analyze the most prominent characteristics that impact home sales prices besides also expanding the external validity of Study 1.

A robustness test was carried out in both Study 1 and Study 2 to compare variants of the definitions for luxury home classification threshold. This takes the form of a sensitivity analysis of the definition of luxury branding. A sliding benchmark starts with the top 10% of the sold homes within their respective markets to see if it meets the benchmark of 2.7 times greater than the average home sales price within its market. Additionally, the National Association of Realtors designated threshold of a national average luxury threshold perspective that any home valued at \$1,000,000 or more meets luxury criterion will also be analyzed. The national average can also be taken into consideration with the average home sold in the U.S. for a given year being “Y.” The criterion threshold for a luxury home will be based on the national average of a home’s value in the U.S. “Y” may likely comply with the suggested 2.7X multiple used in the study, but the analysis will exercise this assumption. Since we are analyzing branding effects on home sales prices and classifying the level of the brokerage brand as Luxury brand or non-luxury brand, the threshold for brokerage firms can be analyzed by the firm’s average sales price within the given market area and time period of the study.

## **Data Collection for Study 2**

The historical sales data was pulled from the Multiple Listing Service. The MLS Database has historical records with descriptive characteristics and market data pertaining

to legal identifiers for all real property. Following the guidelines set forth in Study 1, a stratified North Texas affluent community within the metropolitan area was selected.

### *Data Sample*

Study 2 is stratified geographically in the residential real estate market in Tarrant County Texas (the same county as Study 1) where all sales observations are in the same guard gated community known as Mira Vista in Southwest Fort Worth. As noted in Study 1, by stratifying the sample, all subjects have an equal benefit of home sale's locational characteristic's, previously determined factors known to impact a home's value in real estate research. These amenities included zip code, school zone, tax base and utility service providers, just to name a few (Chin et al, 2002; Monson, 2009). The subjects in the thesis experience the same locational effect such as distance to major highways, hospitals, airports, churches, and shopping.

Study 2 analyzes all past home sales from January 1, 2016 through December 31, 2018 for the community of Mira Vista, located in Tarrant County, Texas (see Table 12). The sales data for the given period was collected from the North Texas Real Estate Information Systems, "NTREIS", Multiple Listing Service, "MLS".

Table 13. Geographically Data Sample for Study 2

<b>Mira Vista Subdivision Fort Worth, Tarrant County, Texas</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Total observations (number of sales)</b>	32	38	31
<b>Minimum sales price</b>	550000	435000	525000
<b>Maximum sales price</b>	1462500	1605322	1475000

<b>Average sales price</b>	861250	929872	904222
<b>Median sales price</b>	837500	867000	875000
<b>Average time on market</b>	153	133	71

Precisely 101 sales records were obtained for Mira Vista between 2016-2018; the property characteristics of each sales observation were recorded and categorized following the method used in Study 1. Study 2 recorded a few more observations than in Study 1. Moreover, as noted above, an additional DV of time on market was captured. TOM is mentioned in literature reviews as a factor known to impact the final sales price (Knight, 2002), but we are modeling it as a DV rather than a mediating variable for reasons of parsimony. Home characteristics are also known to impact the time on market shown in the number of days on market given a market in equilibrium.

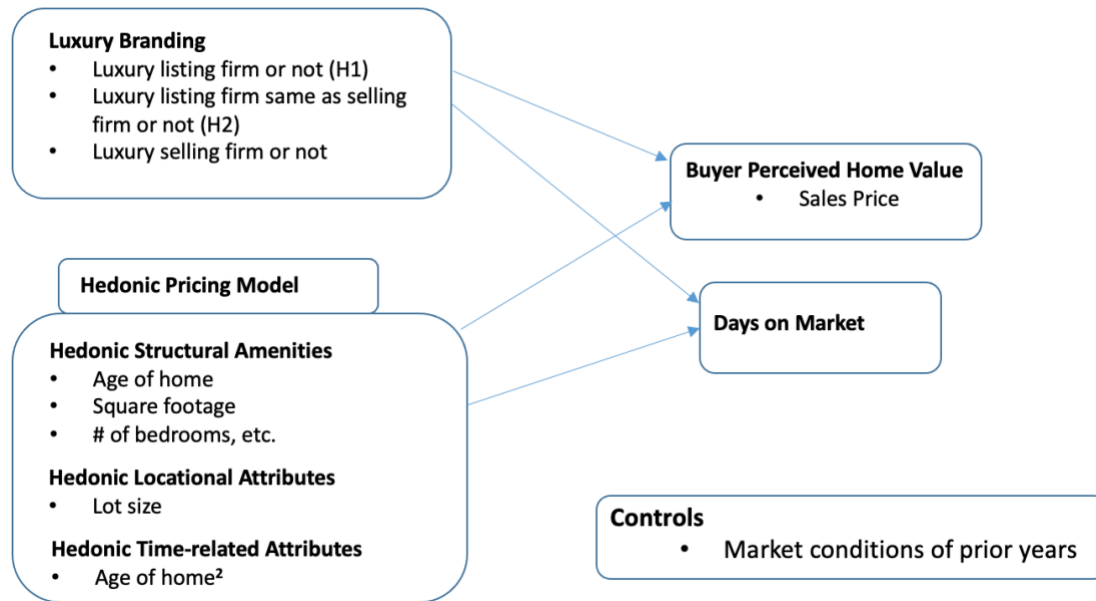
## Constructs and Measures for Study 2

Table 14. DVs and IVs for Study 2

<b>Theoretical Construct</b>	<b>Variable and Acronym</b>	<b>Theoretical Reasoning and Explanation of Operationalization</b>
<b>DV Buyer Perceived Home Value</b>	<i>Final Sales Price</i>	In real estate the value of the home with respect to the buyer is represented by its sales price. Expressed as dollars. The final sales price is determined by what a willing buyer and willing seller agree to. The agreed upon sales price will depend on both the buyer's and seller's perceptions of value and their negotiations.
<b>DV</b>	<i>TOM</i>	Time on Market is recorded as the number of days the home has been listed on the MLS until it is sold. Higher TOM may impact the final sales price negatively.
<b>IV Luxury Branding from Listing Brand</b>	<i>Listing Brokerage Firm Luxury Brand</i>	Listing brand level is a dummy variable equal to 1 for luxury brand broker's and 0 otherwise. Listing broker's represents seller's in a real estate transaction. Luxury brand listing brokers are defined by the premium that such brokerage

(Seller Perspective)		agent's list their properties. In this study a luxury brand had an average listed price of 2.7X higher than the average sales price in its county market.
<b>IV Luxury Branding from Buyers Brand</b>	<i>Buyer's Brokerage Firm Luxury Brand</i>	Buyer's brokerage brand level is a dummy variable equal to 1 for luxury brand brokers and 0 otherwise. Buyer's broker represents the buyer in a real estate transaction. Luxury brand buyer's brokers are defined by the premium that such brokerage agents list their properties. In this study a luxury brand had an average listed price of 2.7X higher than the average sales price in its county market.
<b>IV Hedonics</b>	<i>Total Square footage; SQFT</i>	Square footage is measured as the number of square feet of a home's living space. Homes offering a larger amount of square feet typically sell at higher sales price than smaller homes based upon the sellers and buyer's perceptions of value.
	<i># Bathrooms</i>	Full bathrooms are measured as the total number of full bathrooms a home has. Half bathrooms are measured as a decimal of the number of full baths. For example: a home with 4 full baths and 2 half baths will be measured as 4.2.
	<i># Bedrooms</i>	Bedrooms is measured as the total number of bedrooms a home has.
	<i>Lot size</i>	Lot size is measured as the total size of the lot in acres the home located on. Homes on larger lots typically sell at a higher sales price than those on smaller lots based upon the buyer and seller's perception of value.
	<i>Age</i>	Age is measured as the difference in years from the home's year of sale and the year it was built. Newer home's typically sell at a higher price (relative to the square feet) than older homes.
	<i>Garage</i>	Garage is measures as the total number of automobile spaces a home has. Homes offering more automobile spaces typically sell at a higher sales price when compared to other homes of similar characteristics.
	<i>Pool</i>	Pool is a dummy variable equal to 1 if the property has an inground gunnite pool, otherwise 0. Homes with pools in the geographically targeted area typically sell faster and a higher sales price than those comparable without.
<b>Instrumental Variable</b>	<i>Spread</i>	<i>Spread (Used to test for endogeneity in the results section)</i>  Spread is computed as the percentage difference between sales price and the original listed price. Under some market conditions, the spread can be related to the time on market. If luxury broker's list homes at relatively higher asking prices, then, the spread will be relatively higher for said brokers.
<b>Control Construct</b>	<b>Variable and Acronym</b>	<b>Reasoning behind Control</b>
<b>IV Market Characteristic 2017</b>	<i>Year of Sale; 2017</i>	Year of sale is a dummy variable equal to 1 if the home sold in 2017, otherwise 0. Homes that sold in 2017 had an average of 162 days on the market. It was about the same of the prior year, 2016 when the home's average was 161 days on market (see table 6).
<b>IV Market Characteristic 2018</b>	<i>Year of Sale; 2018</i>	Year of sale is a dummy variable equal to 1 if the home sold in 2018, otherwise 0. Home's that sold in 2018 had an average of 116 days on the market. In 2018, it took less time to sell a home in 2018 as compared to 2016 and 2017 that were used in this study (see table 6).

Figure 7. Research Model for Study 2



### Hypothesis Development for Study 2

The logic for also analyzing the impact of the seller’s choice of agency brand for their listing is partly to control for the unexplained variance in the dataset, but also to see if sellers are gaining a premium by choosing luxury-branded agents to list their properties. Also, for this reason “Time-on-the-Market” (TOM) has been added to particularly capture the phenomenon from the seller’s perspective. Sellers clearly want quick sales at a final sales price that they consider to be acceptable. In an equilibrium market, buyers may be somewhat indifferent to how long the property has been on the market unless this also is accompanied by a reduction in sales price, which is not information that is always available to them. If they are aware (or made aware) of price reductions, it may also raise doubts about the underlying home quality and hence their

perceived valuation of the property. So, TOM is a double-edged sword for buyers, but faster sales are generally seen as desirable by sellers.

Finally, the seller's choice of a luxury brand for their listing their property may, ironically, have an impact on the buyer's perception of the sales price. Buyer's may be willing to pay more if the property is listed by a luxury broker because they may perceive that the property is, indeed, worth more.

**H1s2. Listings by luxury brand brokers return no premium on the final sales price.**

Carrying this logic even further, the luxury selling firm might also be the listing firm, but, once again, this is almost an irrelevancy to a prospective buyer. There can be little attributed value to this agency-representation that compares favorably to the hedonic attributes of the home in and of itself. Therefore:

**H2s2. Listings by luxury brand firms return no less Time on Market than non-Luxury firms.**

It is logical to conclude that a when a seller lists their home for sales on the market, they desire the home to be sold in the least amount of time possible. Knight's 2002 research concludes that the longer a home sits on the market and its days accumulate, there will be a negative impact on the home's final sales price. Very little can be attributed to the speed of sale in regarding luxury agency-representation. If a home is overpriced in its market, it is likely to spend more time on the market than its competition. Homes that have been well maintained and renovated will spend less time on the market than those not. This furthers the idea that homes listed with a luxury brand do not have a shorter time on market than those listed with a non-luxury. The brand level makes no difference in how quickly a home will sell. This also supports the idea that a

buyer will purchase a home because of its attributes regardless the brand of the firm representing it.

## **Results and Analysis for Study 2**

### *Assessment of the Measurement Model for Study 2*

The formative indicators that attribute to the constructs in the study are not and should not be interchangeable; therefore little or no overlap should occur with low correlations, as noted in the Study 1 analysis. Their distribution should maximize the amount of variance in the latent factor according to Hair et al. (2017),

In determining whether the constructs can be formatively measured (Petter et al. 2007), we examined multicollinearity among the indicators through the Variance Inflation Factor (VIF) statistic. VIF values show how highly correlated the non-interchangeable indicators are. The VIF threshold suggested by Diamantopolous and Siguaw (2006) that if VIF is higher than 10, then multicollinearity can be a serious concern; however, with formative measures, multicollinearity presents even more of an issue. Therefore, in both Study 1 and Study 2 we favored the more stringent VIF benchmark suggested by Hair et al. (2011) that VIFs should be less than 5.0. The VIF factor statistics for this study were below this threshold, i.e., less than 5.0, and therefore multicollinearity was not a concern (see Table 15).

Table 15. VIF Statistics for Study 2

	VIF
# Garage	1.581
Age	1.089
Bath Total	2.174
Beds Total	2.043
Time On Market	1.000
Listing Brand Lvl Luxury	1.000
Lot Size	1.557
Pool	1.246
Sales Price	1.000
Selling Brand Lvl Luxury	1.000
Spread	1.000
YR 2017	1.000
YR 2018	1.000
Sq Ft	3.021

The weights of the formative indicators should be statistically significant (and in the right direction) in the bootstrapping, according to Cenfetelli and Basselier (2009). In this case, most were. They also argue that for purposes of content validity, critical in forming constructs from formative indicators, it is still desirable to retain the items that fall below the threshold. For this reason, the measurement model was not “purified” to strengthen the instrumentation (MacKenzie et al., 2009).

#### *Assessment of the Structural Model for Study Part 2*

Following the methodology and procedures of Study 1 but adding a few additional variables, Study 2 aims to determine if the listing brand and buyers brand level influences the home’s final sales price and days on market. It was hypothesized that a listing firm of a luxury brand level will not return a greater premium to the seller when



the home is sold, over those homes listed and sold by non-luxury brands. Additionally, it was hypothesized that the buyer's brokerage brand will not return a greater premium to the home value itself. Time on Market was thus added as an additional DV in Study 2 to see if it was impacted by the branding level of the listing and selling agency brands involved in the transaction.

Table 16 displays the p-values of the independent (and control) variables. With an alpha protection level of .05, a p-value less than 0.05 is a statistically significant predictor of DV final sales price and can be generalized to the population. Whereas higher p-values generally indicate weaker impacts from the IVs, unless the statistical power is at least at the conventional level of .8, we cannot conclude that the effect is real. The IV listing firm luxury brand level regressed on final sales price resulted in a p-value of 0.372 ( $p > 0.05$ ), therefore not significant. The path from IV hedonics to the DV sales price resulted in a p-value .000 ( $p < 0.05$ ), therefore significant hedonics regressed on DV time on market resulted in a p-value of 0.074 ( $p > 0.05$ ), therefore not significant. The IV path capturing buyer's firm level as luxury brand regressed on final sales price resulted in a p-value 0.353 ( $p > 0.05$ ), therefore not significant. The IV path from buyer's firm as luxury brand regressed on DV time on market resulted in a p-value of 0.182 ( $p > 0.05$ ) therefore not significant.

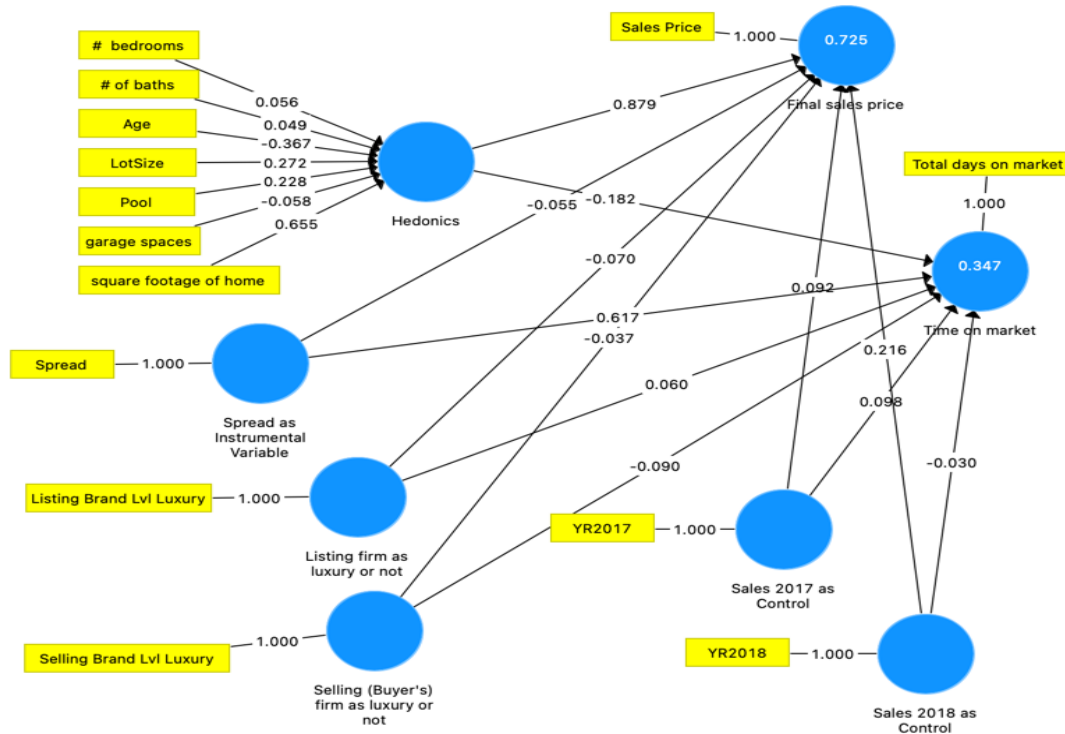
Control variables leading to home value were both non-significant and significant. The independent variable 2018 sales regressed on DV sales price resulted in a p-value 0.006 ( $p < 0.05$ ), therefore significant. The IV 2018 sales then regressed on DV time on market resulted in 0.779 ( $p > 0.05$ ), therefore not significant. The IV 2017 sales regressed on DV sales price resulted in a p-value 0.236 ( $p > 0.05$ ), therefore not significant. IV 2017

sales then regressed on DV time on market resulting in a p-value of 0.312 ( $p > 0.05$ ) therefore not significant. (See Table 16). Figure 8 presents a pictorial representation of the structural model estimates.

Table 16. R<sup>2</sup> and Adjusted R<sup>2</sup> Results for Study 2

	R Square	R Square Adjusted
DV Time On Market	0.347	0.309
DV Sales Price	0.725	0.698

Figure 8. Structural Model II Estimates for Study 2



To assess the strength of the overall model, we reference the  $R^2$  results in Table 15. Scholarly research suggest that  $R^2$  can be used as a rule of thumb to determine if a model is weak, moderate, or substantial. Weak would be 0.25 or below, moderate=0.50 and substantial would be 0.75 or greater (Hair et al., 2014). The resultant  $R^2$  supports a substantial explanatory power with 72.6% of homes sales price and 34.7% of the time on market being accounted for by the predictors in the model. The  $R^2$  results of time on the market slightly fall below the moderate threshold with 34.7% of the variance is explained by the factors used in the model. What is of relevance to this dissertation and as seen in the first study is that very little of this explained variance can be attributed to luxury branding (see more in-depth argumentation above).

#### *Hypothesis Testing for Study Part 2*

Table 17. T Statistics and P-Value Results for Study 2

	<b>T Statistics</b>	<b>P Values</b>
Buyer's Agency Brand Level →DV Time On Market	1.336	0.182
Buyer's Agency Brand Level →DV Sales Price	0.929	0.353
Hedonics →DV Time On Market	1.790	0.074
Hedonics →DV Sales Price	14.404	0.000
Listing Agency Brand Level →DV Time On Market	0.697	0.486
Listing Agency Brand Level →DV Sales Price	0.894	0.372
Year of Sale 2017 →DV Time On Market	1.012	0.312
Year of Sale 2017 →DV Sales Price	1.186	0.236
Year of sale 2018 →DV Time On Market	0.281	0.779
Year of sale 2018 →DV Sales Price	2.772	0.006

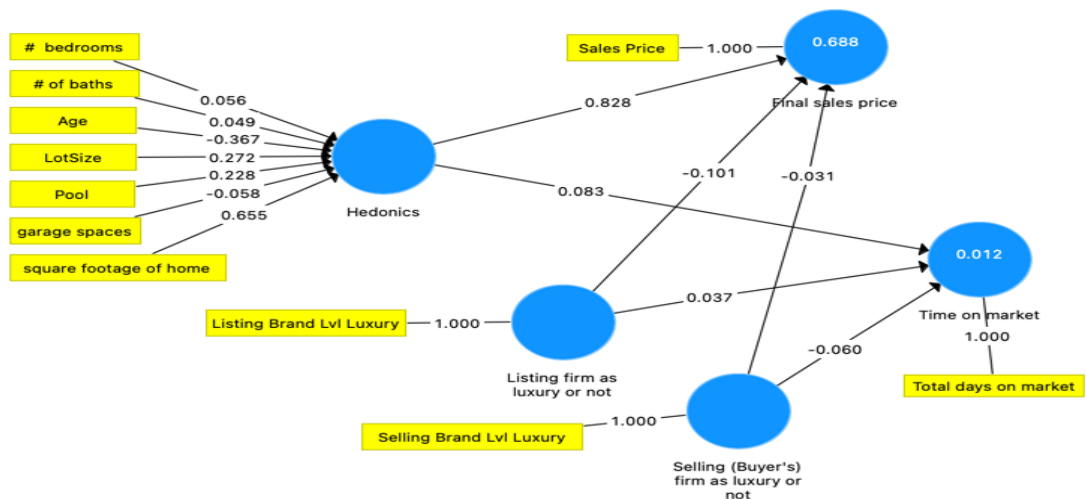
The 2 null hypotheses were supported and displayed in Table 18 below. The listing brand level was not a significant predictor of DV sales price or DV time on

market. The results of the analysis can be observed in Table 16 above. The IV hedonics which is made up of the physical characteristics of a home is a significant predictor of a DV sales price, but a not a significant predictor of DV time on market.

Table 18. Hypothesis Results for Study 2

H(sub x)	Hypothesis Description	Hypothesis Supported
H1s2.	Listings by luxury brand brokers return no premium on the final sales price.	√
H2s2.	Listings by luxury brand firms return no less Time on Market than non-Luxury firms	√

Figure 9. R<sup>2</sup> sans Branding Effects



The  $R^2$  resulted in very little variance explained as a predictor of DV. What is of relevance in the Figure 9 model is that branding seems to have little to no impact on sales price or time on market. This can be observed in the IV listing brand luxury and IV selling brand luxury in Figure 9 above. The result of  $R^2$  sans branding effect for DV sales price resulted in 0.688, and 0.012 for DV time on market.

#### *Testing for Endogeneity for Study 2*

Endogeneity is often a threat to causality and internal validity in econometric data such as ours. The key issue is that the endogenous variables may be caused by factors unobserved in the model. One way this would occur, for instance, is that the records in the dataset are auto correlated and the residuals are not independent. To detect the threat of endogeneity bias that may be generated by other factors than the model itself, a Durbin Watson test was performed. (Davidson and MacKinnon, 1993). The Durbin-Watson (DW) test statistic tests the null hypothesis, thus determining whether the residuals from an ordinary least-squares regression are not autocorrelated against the alternative that the residuals follow an auto-regressive process. The Durbin-Watson statistic ranges from 0 to 4. A value near 2.0 indicates low levels of autocorrelation; a value moving toward 0 indicates positive autocorrelation; a value moving toward 4.0 indicates negative autocorrelation.

The DW test for autocorrelation between residuals. It is difference between the actual values and the predicted values for DV sales price. The DW test resulted in 2.092. The DW test for the DV time on market resulted in 1.948. According to the distributional table for DW statistics, the results with six predictors and a sample size of 101 were not significant. To run this, DV Sales Price was regressed on the full model, including

controls and then after, the method was repeated with the second DV time on market. In addition, the dataset was sorted to randomly order each observation to eliminate any *a-priori* auto correlation between error terms so that the data could be tested in this way for independent errors.

Second, the Durbin-Watson-Hausmann (DWH) test was then run on residuals of IV listing firm luxury brand and IV selling (Buyer's brokerage) firm luxury brand, and IV hedonics to see if there were there were any significant gaps between presumably less efficient alternative model estimators and the consistency of the model II estimators. To create a single value in the dataset for Hedonics (combined all physical characteristics), a PLS-weighted additive score was composed. To run the DWH test, a full alternative model of the main effects of IV listing as luxury, and IV selling (Buyer's) firm luxury brand and IV hedonics including the three residuals was regressed on DV sales price (see Table 17). This test is often used in determining if the data used is a good fit for the model being proposed by the researcher.

Figure 10. Endogeneity Test with Instrumental Variable for Study 2

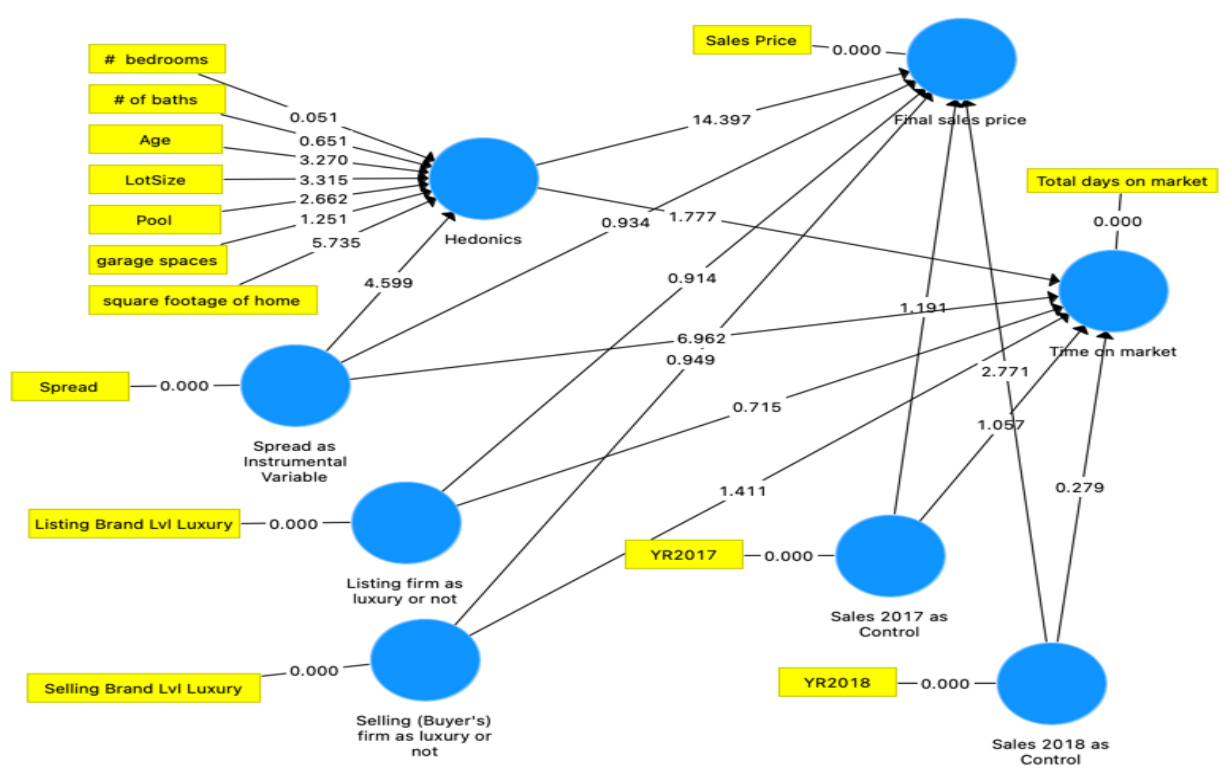
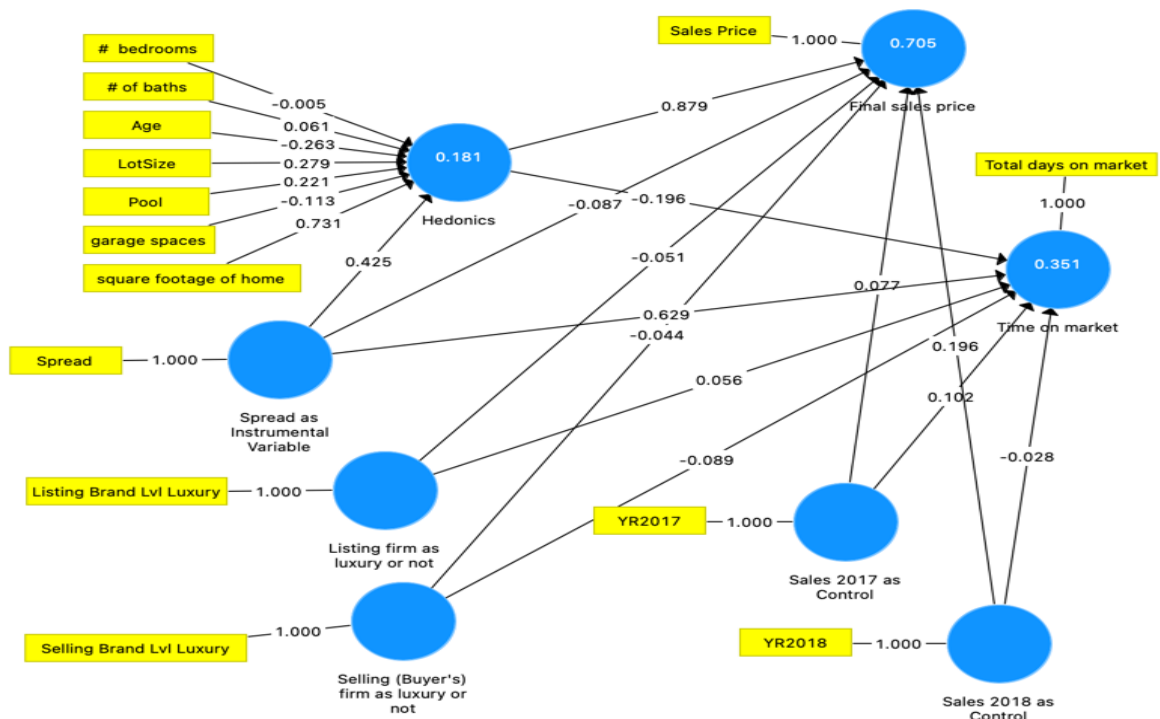


Figure 11. Endogeneity Test with Instrumental Variable and Coefficients Shown



The DWH test results resulted in none of the residuals generated a significant effect; therefore, the model used for part 2 of the study fits the data and endogeneity does not appear to be an issue.

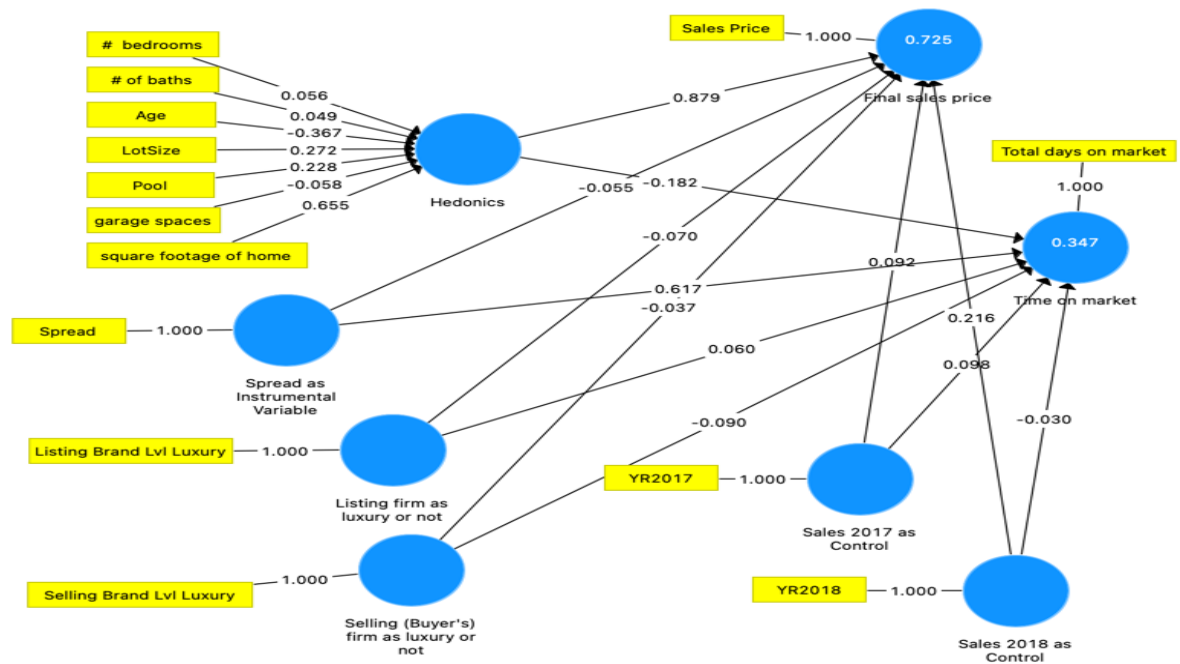


Table 19. DWH Residual Statistics for Study 2

<b>DWH test</b>					
<b>Residuals Statistics</b>					
	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
<b>Predicted Value</b>	476250	\$1397179	\$900257	\$193385	101
<b>Residual</b>	(\$391179)	\$426637	\$0.00	\$173396	101
<b>Std. Predicted Value</b>	-2.193	2.570	0	1	101
<b>Std. Residual</b>	-2.210	2.411	0	0.980	101
<b>DV: Sold Price</b>					

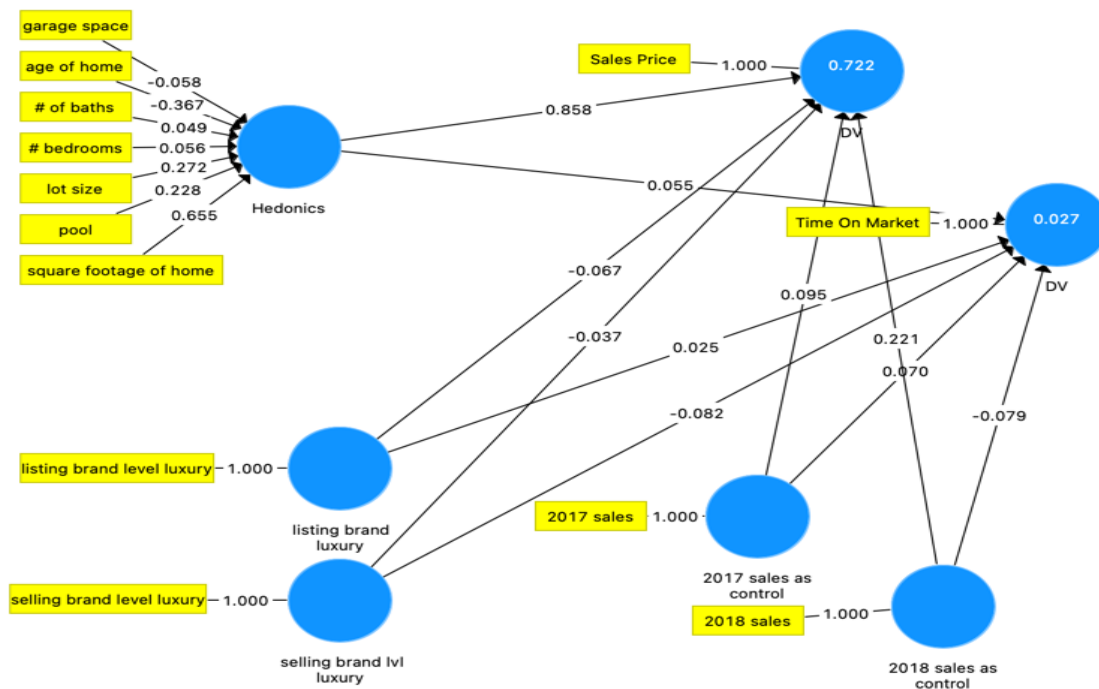
<b>DWH test</b>					
<b>Residuals Statistics</b>					
	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
<b>Predicted Value</b>	(97.18)	359.32	\$900257	99.052	101
<b>Residual</b>	(216.564)	445.684	\$0.00	112.925	101
<b>Std. Predicted Value</b>	-2.233	2.376	0	1	101
<b>Std. Residual</b>	-1.789	3.681	0	0.933	101
<b>DV: Time on Market</b>					

Figure 12. Instrumental Variable and Model II Weights for Study 2



The PLS calculation confirmed that the instrumental variable Spread was not significantly correlated with the DV sales price (See Figure 12), while it was with significantly correlated with the Hedonics construct. Figure 11 displays the weights and path coefficients showing Hedonics fully mediated the effects to final sales price. The instrumental variable spread was not significantly correlated with time on market. Hedonics fully mediated the effects of time on market. The instrumental variable analysis along with the prior two analyses support the conclusion that there are no endogeneity issues with the model.

Figure 13. Model II Weights without Instrumental Variable for Study 2



In the absence of the spread variable, the sales price DV remains mostly explained by the IV hedonics and the overall factors explain 72.2% of the variance. On the other hand, 34.7% of the time on market can be explained by the I spread. When removing spread as an indicator of time on market only 2% of its variance can be explained by the other predictors in the model. This means that the physical characteristics of a home account for more than 72% of its overall sales price. The overall number of days a home spend on the market from the time it is listed between the time it sells impacts the difference in final sales price from its original list price. Although the hedonics variables

used in model II Study 2 significantly impact a home's sales price, it had little effect in the time on the market.

Figure 14. Model II with Instrumental Variable Highlighted Path

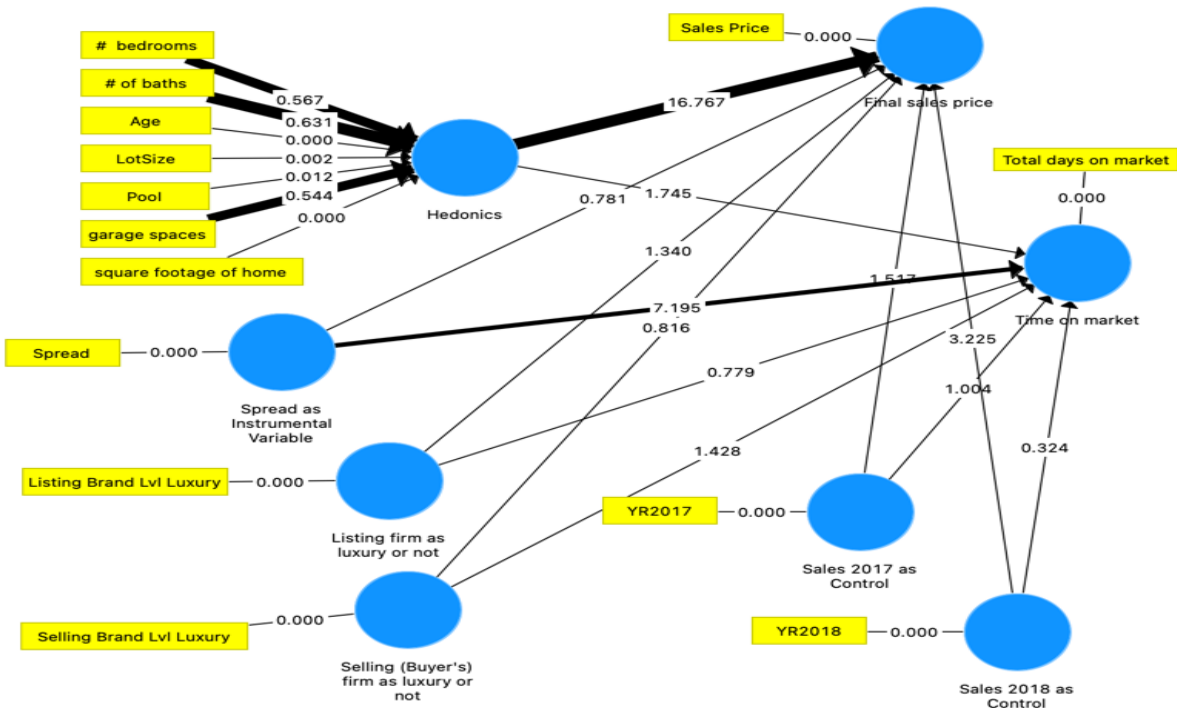


Figure 14 is a pictorial representation of the model showing the T values highlighted on the path. The spread variable explains about 34.7% of the DV time on the market. Logically, the longer a home sits on the market then more likely it is to experience price reductions or accept a lower price than that of its asking. The spread measured the percentage from original listing price to the final sales price. The overall explanatory variance in the DV time on market was very weak in the model in the

absence of the spread variable. Thus, all other variables were not significant predictors. The Spread variable accounting for 34.7% and it falls a little below the moderate threshold of 50% for  $R^2$ . This means there are other factors not included in this research model that would explain the other 64% of the variance in the spread. In general, this is useful information; however, the branding effects were of interest in this study and branding appears to have little to no impact on either final sales price nor time on the market.

## CHAPTER 5

### CONCLUSION

It is fair to say that a real estate transaction for one's primary home may be among the largest transactions an individual will experience. That is to say, they usually are infrequent. The sales process is complex and has many moving parts. It is understood that a high level of trust is involved for a seller to hire his/her broker to sell their home. Branding research helps explain the trust and market expertise that may be credited to a firm when their clients may be unfamiliar with the agent representing them (Anderson and Foc, 1998). For those sellers that were familiar with their agent, the sellers and buyer perceptions of the brand affiliate can strengthen their credibility in the market. This can partly explain the emotional satisfaction.

Rooted in hedonics, luxury consumption satisfies wants and desires as well as signals its takers' social class identity. With brand being an identity, symbol, or characteristic of its product, it is understandable that a buyer would likely believe that a luxury brand's home listing would meet the quality and expectations of its class. The product (home) characteristics each home is comprised of is thought to meet the

expectations of its buyer. This is not to say that there are not any characteristics that a buyer dislikes, but the buyer did purchase the home and there may have been enough tradeoffs to justify the purchase. It is important to understand that this study is looking at sales during a time of market equilibrium.

The second approach of this research expands on the hedonic consumer studies with luxury branding placed in a market equilibrium setting. First and foremost, the economic principle of supply and demand are the main explanation of price of a composite good, as explained in Chapter 2 of this study. For example, if there were a low supply and high demand for homes during the time period, then a hedonic behavioral consumer study should not be used. Although the foundational principles would still resonate, it would not explain what would actually be going on because ultimately it was a result of supply and demand. Buyers will sacrifice many desires and would likely purchase a home they otherwise would not when there is a shortage of homes available (Gilbert, 2013).

During the years of this study, there was equal supplier and buyer power in the market as seen in Table 5 for Study 1 and Table 12 for Study 2 displaying the figures for average days on market of the home sales in the study. The three-year market (2016-2018) for Westlake and Fort Worth (shown in Table's 5 and 12) explains how each home listed had fair market opportunities. This instantiates the economic principle in real estate that both buyers and sellers are price takers (Rosen, 1974).

From the information of luxury branding and consumer research in Chapter 2, it is another fair observation that luxury branding may behave differently in real estate services as opposed to other industries' goods and services. A luxury brand in real estate

does not inherently make the home worth more since it does not add value physically to the property. When comparing the luxury homes sales sold by luxury brands and non-luxury brands, there was little difference in our results in the North Texas real estate market. The scientific results through testing show that there is a slightly negative effect on price and time related characteristics for those that were sold by luxury brands. This is not to say that the seller obtaining the service of a luxury brand was not satisfied. The hedonic and luxury research explain a large part the psychological aspects and motivation behind their choice of brand. However, they should understand that it does not increase the actual, physical value of the asset. Thus, sellers might consider listing with a non-luxury brand, and it might slightly benefit them monetarily, but it would likely not actually make a notable difference, if these results held true in other localities. .

If the results here prove to be generalizable, a luxury brand firm should be cautious when selling their services in the market. The brand may have a higher market share of luxury homes in their locations; however, there is a possibility that they may not outperform their non-luxury competitors. The luxury brand firm's market share of luxury homes listings in this study was sizeable. The number of homes listed by luxury brokers during the study timeframe were notable and it is fair to conclude that branding (brand signaling, equity, image mentioned in Chapter 2) thus works in a practical sense. However, it may not have impact in an economic sense. Why people choose to have a luxury firm represent them is outside the scope of this study, but it is an interesting research question.

A buyer may choose one home over another because of its attributes and how they satisfy their wants, and/or desires. This is explained by hedonic motivation and theory by



arguing that a consumer will purchase a product because of its attributes and not because of the product alone (as expanded on in the Chapter 2 literature review of this study). According to branding research, a brand is a characteristic of its product. Further, a luxury brand is a characteristic of its product.

When a home is listed for sale on the market, a real estate firm is hired to sell the home. The firm brand when hired becomes a characteristic of the sale of the home. The research reported in this study of North Texas real estate markets infers that a real estate sales firm's branding may not make difference in the sales price of a home. Although there are several characteristics that are shown in the research to impact the overall sales price, luxury branding was not one of them. The research supports the notion that a home buyer will choose a home because of its physical characteristics regardless of the brand selling/listing it. Home buyers today have the information needed to make such decisions and can access the homes available for sale on the market through a simple Internet search. According to the 2019 consumer report from NAR, the majority of buyers select homes available on the market that they are interested in seeing through such Internet home searches (see Figure 16). A buyer may predetermine which target property they want before ever knowing what brand represents it in the market. With regard to the sale of the home, it may not make a difference which brand level the listing firm should be w/r/t receiving a higher price, having less time on the market, having better curb appeal, etc.

In reference to Study 1 and Study 2 of the results, there was less of a difference between the non-luxury brand's original list price and final sales price (captured in the spread variable) compared to the luxury brands. Can it be that, in some cases, luxury

brand agents may be overconfident when initially listing a home on the market by overpricing? The degree of overpricing has an overall negative impact w/r/t the days on the market and ultimately the final sales price. All in all, it is not desirable for the seller because they may experience price reductions and have to experience the stigma of their home being on the market for an inordinate number of days. Generally, buyers react badly when they see a home being on the market for an excessive period relative to others that have been sold in that same market. Many buyers perceive that the longer a home sits on the market, the more likely it is that there is something wrong with it. That coupled with large price reductions, some buyers may exclude it from their overall search in general. This is a frustrating outcome for a seller because they feel they have to overcome this bias somehow in their strategizing. It often results in taking the home off the market for a set period of time so the listing days on market will reset at zero when relisted. Not to mention that some sellers in this situation may elect to hire a different listing broker altogether.

Our research findings may be surprising to some. It would be interesting to know what potential sellers of luxury properties would think if made aware of these thesis results. Would they redirect their search efforts for an agent based on skills and actual performance regardless of brand? Would some be inclined to save a little money and hire a discounted or a flat fee broker? Would it impact their decision for representation in any way? These are all pertinent questions that arise from the study results.

## Study Limitations

The completed study is naturally subject to limitations. Limitations include the unknown agent's skill level beyond the mere licensing requirements necessary to practice real estate as this is not in the MLS dataset. It is also unknown as to what the negotiated listing commission percentage was between the listing broker and seller. A buying agency percentage compensation is offered and displayed thru the MLS by the listing broker to co-operating brokers (buyer's brokers). Even though, to date, the listing commission remains confidential among the listing brokerage and the seller, the buyer's agency commission offered by the selling broker appears in the MLS data. Additional limitations include why a seller chooses a luxury listing firm over a non-luxury brand. To date this has not been studied; however, it would be an interesting topic for future research.

There are many characteristics that make up a home and determine its value. It is nearly impossible to identify and study them all in a thesis such as this. Therefore, the most costly and difficult features to produce were gathered and used in Studies 1 and 2. Of the home sales collected in the datasets for both studies, it is unknown if some of the older home subjects were remodeled, updated and renovated. Among the IV Hedonics, the age of a home is shown to have a sizable impact on home sales. If a home is updated, it would most likely be more desirable and may explain a sale having fewer days on the market, as measured through Time on Market in Study 2.

An additional characteristic that is not accounted for is the type and age of the roof of each home. In particular, for example, that in the geographic location the subject were selected, the area is known to have inconsistent weather patterns. Thus, it is

anticipated they would experience significant hail or high wind storms over any given period of time. A roof is an insurable item and if damaged by a storm, homeowners' insurance may repair or replace it. That being said, when a buyer purchases a home, the home must be insurable. If a roof is damaged, it may be a condition of the sale that it must be repaired or replaced prior to it qualifying for new insurance. Many of the homes in the Studies 1 and 2 have experienced roof replacements. However, it is not accounted for in the data or prior studies. It remains unknown to what extent the age of roofs will impact a home's final sales price. This would be useful to consider in future studies.

## CHAPTER 6

### CONTRIBUTIONS AND SUGGESTED FUTURE RESEARCH

#### **Contribution**

If the results here in Study 1 and Study 2 generalize well, then the area of potential contribution of the research is not to branding theory *per se*, but does apply to streams of work studying luxury brands versus non-luxury brands. Practically speaking, the findings can benefit non-luxury real estate firms to use in marketing presentations to sellers. It would also be worth noting the non-luxury brokers that sold homes in the study not only performed slightly better, but they did so even with a lower market share than luxury brands.

The study may contribute to the knowledge base in real estate research, luxury marketing research, and luxury service industry research. It identifies marketing brand luxury level as a characteristic of a home sale. The study also establishes a metric of 2.7X the average market home sales price per market area to be used in determining if a home meets a luxury brand threshold criterion to be used with in a given local market. The

calculation is repeatable in different market because it is calculated from the market area's average home sale for the time-period they are calculating.

The research and findings of Study 1 and Study 2 build on prior scholarly real estate research that identified the value of international franchise firm versus independent listing firms. This study establishes branding level classifications of brokerage brands and tests their effects on real estate residential home value. The framework and parameters established in this research for defining luxury real estate firms may benefit future marketing research of real estate agency firms and may be useful in other service industry-related businesses.

The study may benefit broker practitioners in real estate. The overall finding of non-luxury and luxury brokers may find the results of Study 1 and Study 2 beneficial in their agent recruiting efforts (given the caveat of the thesis limitation in external validity). Luxury firms tend to have higher cost associated with their overhead in providing a physical office location and so on, thus resulting in higher fees passed on to their affiliated agents.

It is common that internationally well-known luxury brand franchise's charges a royalty percentage of each homes sales price to the affiliated agent and collected at the closing of a given property. Royalties are paid in addition to the agreed commission split and agent has with the brokerage firm. It is possible that recruiting agents might perhaps become a little more difficult if prospective agents realize that there may not be an additional value-added to the transaction via the luxury brand. Agents affiliated with luxury brands may find it interesting that the actual brand does not make much difference in overall impact. By the same token, non-luxury agencies may find that their recruiting

efforts could possibly become less onerous were it more widely known that branding may not be as important of a factor in final sales and value.

### **Suggested Future Research**

Suggested future research in luxury branding versus non-luxury branding might consider analyzing the difference in original listing price and the final sales price. Based on branding research in the study, luxury products seem to be priced higher than non-luxury. Knight's (2002) research found that overpricing a home when it goes on the market is costly and can impact other factors that are also simultaneously determining sales price. The difference in list-to-sales price can be measured as the spread between the two to see if luxury brands have a larger spread than nonluxury brands.

The current study was set in a stable market area between the years 2016 to 2018. As the research was being conducted, though, the COVID-19 pandemics swept across the globe. In the United States, many markets were affected by government mandated shutdowns and extended quarantine rules that were put into effect. The real estate market behaved much differently than market experts would have imagined. Real estate markets will vary by state, but in Texas the real estate market grew more than 40% in some areas according to Tierra Grande Research Center at Texas A&M University in College Station Texas. Property sales in the Texas A&M Research Center also reported that farm and ranch sector of the Texas real estate market soared 33% during COVID in 2020 over the previous year.

Other unpredicted market behaviors began to emerge and the inventory of homes for sale quickly dried up and multiple offers on homes in all price ranges resulted in a

significant increase in property values. The demand for homes in metropolitan areas of Texas outnumbered the supply and thus there was an almost overnight seller's market. Fortunately, the current study used data selection methods that remain accurate when there is supply and demand imbalance (Chin and Chau, 2003).

Future research may consider the restrictive geo-political climate in several states that contributed to the surge in the relocating population during and after the COVID 19 pandemic. Here again, does brand have an impact in this new setting? The Texas real estate market in general has experienced a relocation surge from other, more restrictive states, causing residents to move and settle in Texas. This also happened elsewhere across the US. It would also be interesting to look at the commercial corporation relocation during the same timeframe. Several major corporations moved headquarters to the Texas market during this time (i.e., Tesla). Would luxury brands be the preference for relocation agents within firms and will this choice lead to value?

Another aspect of studies that goes beyond brand might consider the value-add of an agent as a brand extension. Scholars could look at the agent as another branding attribute and the perceived value of the agent due to their actual experience and or personal networks. A brokerage firm stands to gain a greater monetary benefit from their affiliated agents rather than the brokerage agent so the question is contentious. A brokerage can gain in reputation and market share from a highly respected, productive agent. The value of an agents' network and social environment should be taken into account because in most cases the consumer is engaging an agent, they are familiar with or referred to from a past client.



Further exploration might consider: Is the agent agnostic to the brand they are affiliated with? A real estate agent will self-select into whatever brand they identify with. Can the consumer selection of a listing firm be attributed to the agent working within the firm and not the brand? Real estate sales in affluent areas may be a result of the actual agent and not the brand they are affiliated with.

During the data collection process of this study and while coding the luxury listing firms, several agents in the dataset listed and sold the same properties over and over again. A few of the noted agents had also changed their sponsoring brokerage firm during the three-year time period. Their production remained steady and no significance in gain or loss to the agent production was seen. This would result in the brokerage firms market share increasing with the gain of the agent production and a decline for the brokerage firms that loses the agent. The agents noted to have moved within the three years of the study went from one internationally recognized franchised luxury brand to a smaller local market boutique luxury brand. Are such individual characteristics key to understanding the residential real estate market?

Future research may thus consider the value brought to the sale by the agent. After all, an agent adds intrinsic value due to their background, expertise and network. Because real estate markets are very localized, an agent turned broker may brand themselves and have no need to affiliate with a well-known or global luxury brand. Work in this needs to continue if we are to bring more rigor to the study of real estate, an area that represents a huge segment of a society's overall economy.

Hedonic models have been used in real estate research for decades and are an effective way to capture influences and effects on a sizable amount of sales data such as

those displayed throughout this thesis. The overall findings revealed in Study 1 and Study 2, keeping in mind the locality of the study dataset, bring to light aspects of branding theory that do not hold up in real estate, especially that of luxury branding services. It is evidence that consumer motivations and drivers in services have a lessened effect on decisions to purchase the product itself regardless of their perception of the brand. This benefits the knowledge base in branding and luxury marketing research.

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## APPENDIX A

### **Background of the Real Estate Industry**

The real estate industry is a major component of the US national economy. The industry has become a more mature and professionally recognized mature industry in the past decade. Real estate agent entering the field are virtually unhindered as the barriers to entry for agents are extremely low. A formal education or a college degree are not required, for example. Agents complete real estate courses followed by a licensing exam given by the state in which they seek to practice. To give further clarity for the current study, the broker represents a seller by “listing” their property and this broker is associated with a brokerage firm (namely, the broker of record) having a certain reputation or “brand.” In that these are both major aspects of this study, it is important to next explain the relationship between broker agents and firms.

All licensed real estate agents must be sponsored by a broker of record through the broker’s real estate firm in order to be eligible to practice real estate and earn commissions. A broker of record is the firm with which agents seek to affiliate. Such firms can be independent or franchised, but the key is that they sponsor one or more licensed agents. A real estate broker may act as a solo operator (i.e., a sole proprietorship) and not sponsor additional agents as all.

Either way brokers take on the real estate brand that is attributed to a firm in the local market. Real estate agents self-select into a brokerage firm of their choosing (or, at times, are actively recruited) and then have sponsorship with that firm. As independent

contractors of their sponsoring broker, agents have agency authority that allows them to represent buyers and sellers in the real estate residential market. The agent then acts on the brokers' behalf to represent buyers and seller in the market. When an agent represents a client, an agency connection is made between the broker and the client. The agent is thus representing the client on behalf of the brokerage firm and the client relationship ultimately belongs to the brokerage firm.

When an agent lists a home for sale on the market, the listing belongs to the brokerage firm. With given authority, the agent will negotiate terms and compensation with the seller for the sale of the property on behalf of the brokerage firm. The agent contractually obligates the brokerage firm to perform the duties set out in the listing agreement. When a commission is earned and paid according to contractual terms set forth in an agreement, the brokerage firm is the only one that can receive the commission on behalf of the agent. An agent receives compensation directly from the broker.

There are many different types of compensation structures that can arise between the brokerage firm and their affiliates. Some structures are based strictly on commission splits between agent and firm and others are annual set fees, royalties, and errors and omissions insurance. An agents' experience and past production are taken into account when a compensation structure is agreed upon. Because an agent is an independent contractor and may leave the firm at any given time, if the agent leaves the firm, the agent's listing or listings procured might not leave be transferrable since they are technically owned by the brokerage firm.

There are larger business structures that help to organize the industry and make it theoretically more efficient. For one, the National Association of Realtors (NAR) is the

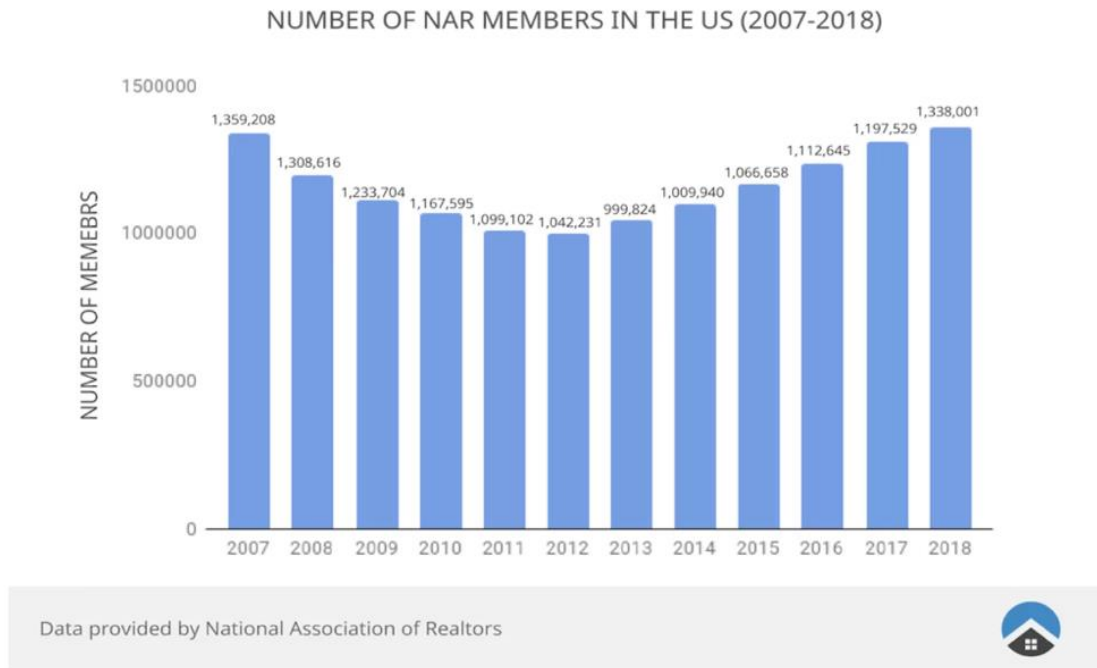
largest trade organization in the U.S. It was established to standardize practices in the industry. The term “realtor,” for example, is a registered trademark of NAR. All Realtors are licensed agents, but not all licensed agents are realtors. For an agent to be able to call themselves a realtor, they must be a member of NAR (NAR, 2018;2020). The Multiple Listing Service or MLS<sup>6</sup> is a product of NAR and is offered to agents through the board of realtors of which their broker is a member with which they have membership.

NAR also reports on industry activity. A recent 2020 NAR industry analysis says that there are 106,548 real estate brokerage firms operating in the United States (NAR, 2021) with approximately 119.7 million occupied housing units in the United States (NAR, 2018). An estimated 5.64 million existing homes were sold in the U.S. in 2020 (NAR, 2021). Real estate has always been competitive, but noticeably it has increased within the last ten years. The exhibit below shows the real estate agent membership base of active agents year-over-year from 2007-2018, with its lowest membership occurring in 2012. Since 2012, the agent membership count has grown more than 530K. Between 2018 -2021, NAR’s realtor membership increased from 1,338,001 to 1,534,008 (NAR 2021). See Figure 15.

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<sup>6</sup> MLS is nowadays an online, searchable service that shows which residential properties are for sale or under contract. It carries voluminous information about the hedonic characteristics alluded to above. It also has extensive information about representatives such as listing brokerage and agents as well as valuations such as listing price, days on market, and so forth.

Figure 15. Changes in Agents Entering the Market



(NAR, 2021)

In the last few decades, the Internet has made it possible for consumers to access actual property market information with ease whereas in the past information about homes for sale was only available through a real estate agent affiliated with the MLS. This technology disruption has forced many real estate brokerage firms to reinvent themselves and redefine their value propositions in order to sustain themselves into the future. Finally, the composition of brokerage firms in the US include flat fee and limited services, discount brokerage, and traditional and luxury brokerage firms, resulting in a highly competitive landscape of firms from which a seller can choose.

How does the term “luxury” play out in real estate marketing situations? The term “luxury” is a very loose and perhaps a much-overused term in many industries, not just real estate. In real estate marketing, the phrase “luxury home,” for example, is grossly over- and mis-used in many listing descriptions, becoming so common as to lose its meaning. In the historical past in real estate, there was no basis for such inflated rhetoric in residential listings, but this has changed. As seen in the luxury branding research and hedonic consumer behavior work, it is evident that there are no clear boundaries to definitively operationalizing “luxury.”

That being noted, many times there are similar over-the-top marketing efforts that can be deceptive. Described as giving an extravagant opinion or exaggerating the quality of something that can lead to misrepresentation, puffing, in real estate, is prohibited because it can be used in efforts to attract or lure a buyer into purchasing a particular property. If puffing is used by an agent or a seller in a material misrepresentation, then it qualifies as fraudulent. Real estate agents are schooled in the dangers of exaggeration and misrepresentation. Real estate listing descriptions should therefore be free from exaggeration or misrepresentation. Yet the need still exists to define and establish parameters that would qualify properties to meet a luxury status in real estate. Similarly, parameters could also be set to determine whether a real estate firm’s brand meets criteria to allow it to be classified as a luxury brokerage. So there is some uncertainty residing in the industry surrounding such omnipresent terms as “luxury.”

Most residential brokerage firms, no matter brand, utilize the same resources when it comes to listing properties for sale. The MLS is used by most agents and brokerage firms in the residential sector. In short, the MLS is the same for all. It does not

discriminate on the basis of brokerage brand level or type of brokerage. It allows real estate agents to list their clients' homes for sale as well as giving access to all current and past market data relating to real estate. Real estate agents mostly self-select into a brokerage firm and the brand carried by that firm. Available resources needed to list and sell in the market are accessible to all agents actively licensed thru the MLS. Thus, any agent from any brokerage firm can bring a buyer and sell any property listed on the MLS. In fact, legislation is in place throughout the U.S. to protect brokers from being boycotted by competitors in the field.

#### *Real Estate Brokerage Services*

Licensed real estate agents can sell a property of any category within their affiliated market. These agents are known as the listing agent. The buyers' agent, researches and finds homes for their buyer clients, agnostic to a home's listing brokerage brand. Because real estate agents mostly self-select into a brokerage firm, it is difficult to determine the level of knowledge and experience of each individual agent

All real estate brokerage firms in a local market, whether they are: (1) individual, small Mom and Pop operations, (2) regional, or (3) national franchises can be fitted into a brand level category. It is widely understood that brokerage firms differ in their business and revenue models. Most agents affiliated with brokerages are independent contractors. An array of broker – agent compensation structures exist within brokerage firms. Prior researchers have suggested that agent compensation be considered when measuring the profitability and sales performance of a firm. This research does not extend in the arena of broker profits or agent performance, rather it seeks to understand if the broker firm at a

luxury level performs greater and provides a higher return to sellers than their competitors in a lower brand level.

Brokerage brand levels, on the other hand, can be categorized as: (1) low, i.e., flat fee or discount; (2) middle, i.e., traditional; and (3) high, i.e., luxury brokerage firms. Each category appeals to a different social class of consumers in that purchasing power is highly related to home listing and final sales pricing. A flat fee brokerage brand will list a property for sale for a period of time at a fixed price paid upfront. This type of service usually provides the minimal services to the seller that the state licensing organization will allow. In a flat fee listing, the burden and expense of marketing and its activities lie with the seller. Marketing activities include such things as, staging, photography, room measurements, property descriptions, signage, holding open houses and schedule showings with buyers and their agents. The property is listed in MLS for the contracted term and the broker and/or agent most likely will never visit the property in person. Listing fees typically range from \$500 - \$1500 for a listing and a buyers agency fee as a percentage of the sales price if another broker procures a buyer. The buyer's agent commission, commonly 2% - 3%, paid when the property closes and buyers funds are received. This is an economical way for a seller to sell their home on the market by reaching the maximum number of prospective buyers through the MLS service area.

A traditional brokerage has a variety marketing resources and activities available although the cost is usually the responsibility of the listing agent facilitating the transaction. The agent organizes showings, provide guidance and market expertise throughout the selling process. The listing agent represents the seller and communicates with other agents on their behalf. A traditional brokerage listing commission ranges from

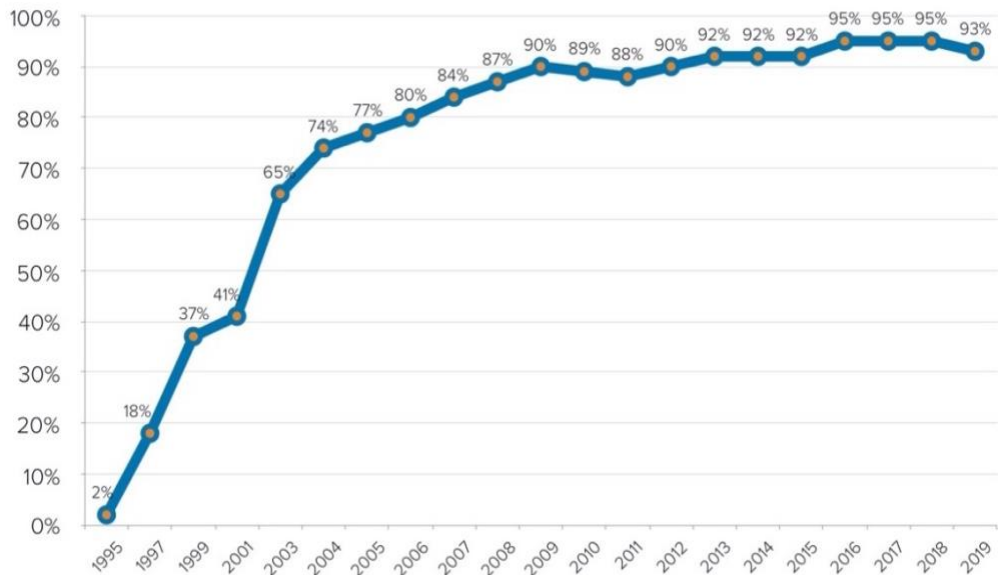


5% - 6%, whereas they typically agree to split the commission with another broker if they bring the buyer.

*Real Estate Information Asymmetry Gap Is Closing*

Housing information is not transparent with asymmetry occurring between agents and clients. (Kurlat and Strobebel, 2015). Prior to the internet of all things' real estate, consumers relied on agents in the market as their access to information. It was merely impossible for consumers to obtain market information of current and past sales without the use of a local real estate agent. Because home values are based on sales comparison theory, the sales data information is crucial for one trying to establish the value of their property if they were trying to sell it on their own. Consumers trying to sell their home need the market channel and network probable buyers in which their property could be offered for on the market.

Figure 16. Internet Use in the Home Search Process for U.S. Consumers. 1995 - 2019



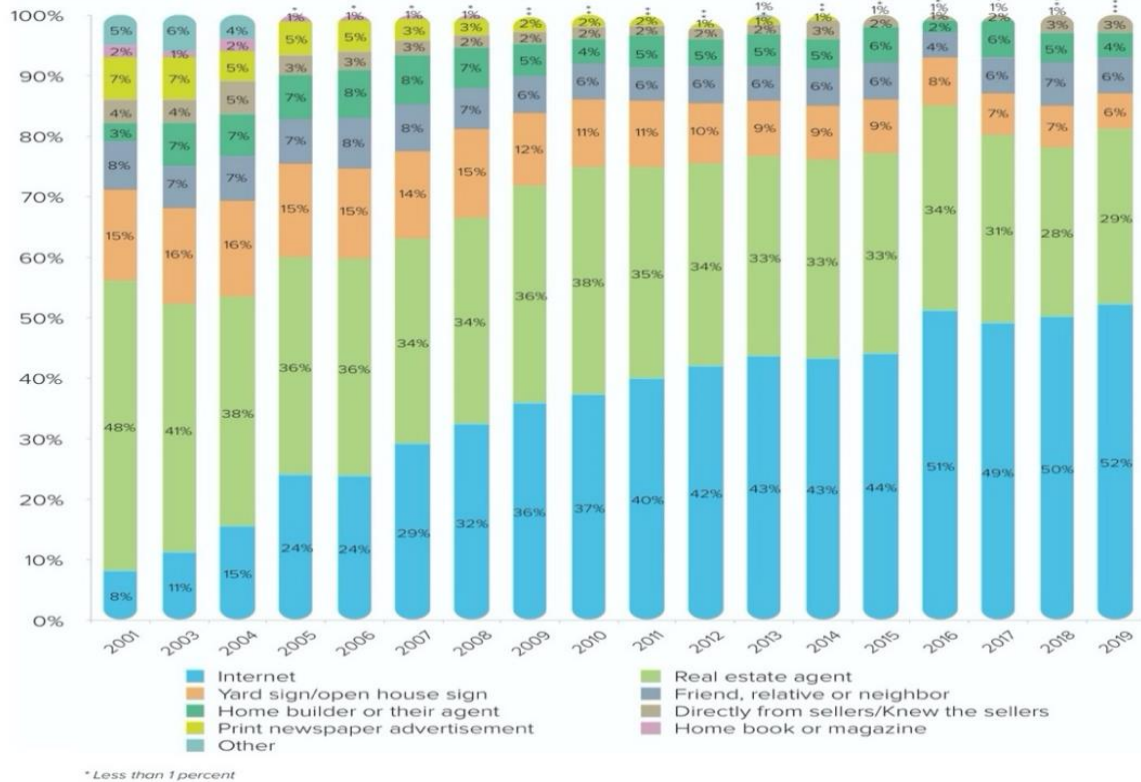
Percentage Distribution

(NAR 2019)

Since the early 2000's, real estate technology companies have entered the industry as a third-party source for information. This disruption redirected the flow of market information by allowing the consumer to access sales information directly thru the third party as an alternative to the MLS without the use of an agent. The MLS was the only large-scale real property sales primary data source. Access to the MLS was not available to the public, only licensed active realtors were able to access information to consumers. Information that was once out of reach for the public, was made available with the help of companies such as Zillow, Trulia and Homes.com, just to name a few. Information such as active sales on market, homes that have sold, sales price and the number of days the property was on market were made available to the public almost overnight.

Consumers seeking housing research no longer had to rely on the local agent to give them the information. Other companies have followed suit since Zillow and additional market metrics useful to consumers are available now as well. To date consumers are restricted from using the full access to the MLS as real estate agent practitioners are. But all in all, with the information available thru alternate sources such as Zillow and others alike, they may not have need to. With the access to information readily available with the stroke of a few keys on a smart phone or a computer, consumers have become more educated and accustomed to researching information relating to their needs before seeking the help of a real estate broker. Thus, they have become more informed of their local real estate market. Service expectations of agents from consumers has changed now that market information is easily available. Consumers began searching for homes themselves.

Figure 17. 2001-2019 How U.S. Consumers Found the Home They Purchased



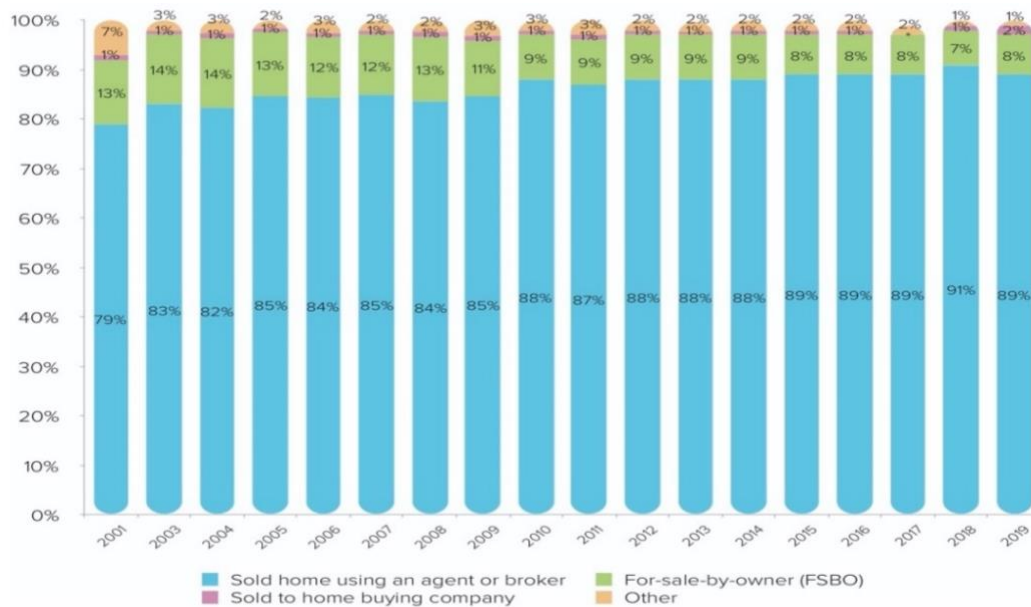
Percentage distribution

(NAR, 2019)

A 2004 study by Meyers and Crowston posed the question: Will the estate agent survive? Observing the significant growth of technology and its use in reducing the informational asymmetry, they questioned the future role of the estate agency practices in constructing the market and mediating home sales. The research hypothesized futures for the real estate agency industry now that technology was changing the relationship dynamics between buyers, vendors, and market intermediaries (Meyers and Crowston, 2004). Since the question was posed, the interaction between buyers and vendors has changed, however real estate agents have remained involved in transactions. The

percentage of homes that sell with use of a real estate agency has remained constant overtime. Below in Figure 13 is a percentage distribution of home sellers in the United States and the method they used to sell their home between 2001 to 2019. Consumers using real estate agency has increased over time. In 2019, 89% of home sellers used a real estate broker as compared to 79% in 2001. NAR, (2019)

Figure 18. 2001–2019 Methods Consumers Used to Sell Their Home in The U.S.



Percentage distribution.

(NAR, 2019)

There has always been a percentage of homeowners that will sell their home without the use of a real estate broker. In 2001 about 21% of sellers sold their home direct to consumer but over time that has decreased to 11% as shown in 2019.

Figure 19. How Home Sellers in the U.S. in 2019 Choose Their Agent

	ALL SELLERS	FIRST-TIME SELLER	REPEAT SELLER
Referred by (or is) a friend, neighbor or relative	39%	46%	38%
Used agent previously to buy or sell a home	27%	23%	30%
Personal contact by agent (telephone, email, etc.)	5%	5%	5%
Internet website (without a specific reference)	4%	3%	5%
Visited an open house and met agent	3%	3%	3%
Referred by another real estate or broker	3%	3%	3%
Saw contact information on For Sale/Open House sign	2%	1%	2%
Referred through employer or relocation company	2%	4%	2%
Direct mail (newsletter, flyer, postcard, etc.)	1%	1%	2%
Walked into or called office and agent was on duty	1%	1%	1%
Crowdsourcing through social media/knew the person through social media	1%	1%	*
Newspaper, Yellow pages or home book ad	*	*	*
Advertising specialty (calendar, magnet, etc.)	*	*	*
Saw the person's social media page without a connection	*	*	*
Other	10%	10%	9%

Percentage distribution

(NAR, 2019)

## APPENDIX B

Figure 20. Real Estate Firms Category Level Table by Dunning et al. (2019) P. 856

	Term	Typical services
New	Remote only	Website, email and phone only based service to clients. The vendor obtains the photographs and property descriptions independently, is likely to determine the asking price and undertake viewings and negotiations directly with potential buyers. Indicative fee range: 0.2–0.5%
Traditional	Remote plus	The agency has a public office or meets clients in person. Vendors may provide photographs and property descriptions, but these may also be undertaken by the agent or other professional. The business is likely to provide advice on the asking price of the property, although the actual price will be determined by the vendor. The business may undertake viewings and negotiations on behalf of the vendor. Indicative fee range: 1–2.5%
	Service plus	The agency is likely to have a high street office and advertise properties across a range of media in a bespoke package. The agent offers extensive contact with the vendor and seeks extensive contact with potential buyers. They focus on both advertising and negotiation. Through the advertising stage they may make substantial alterations to the presentation of the property (e.g. for replacing carpets, loaning furniture, introducing emotive smells (e.g. freshly brewed coffee)), often called staging. Indicative fee range: 2.5–4.5%