

Full Length Research Paper

Relationship models of experience satisfaction in residential refurbishment

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Economic development and changing lifestyles have resulted in changes in residential living quality of consumers and increasing demand for residential interior refurbishment. There are different types of residential interior refurbishment services with the two most common types being self-design and hiring of contractors and designers for both design and construction. Different types of residential interior refurbishment may lead to different levels of consumer experience. In terms of evaluating the process of residential interior refurbishment and design from the perspective of consumers, neither domestic nor foreign studies have developed a relationship model of consumer experience. Thus, this study conducted convenience sampling among households in the Taipei metropolitan area that had undergone residential refurbishment in the past three years and collected a total of 601 valid questionnaires. The results suggest that among the relationships of satisfaction between the various types of residential refurbishment experiences, significant positive impact was found between intellectual experience and value experience, affective experience and value experience, intellectual experience and behavioral experience as well as sensory and affective experience.

Key words: Residential refurbishment, experience, satisfaction, contractor, designer.

INTRODUCTION

As quality of life has improved in recent years, consumers have paid more attention to residential quality. Under these circumstances, residential interior refurbishment projects have increased gradually, reflecting the changing demands of households. As a result, the importance of residential interior refurbishment has emerged in the real estate service industry. A customer-oriented relationship is often discovered in the process of housing refurbishment and design. Recent studies in refurbishment management have focused on the relationship between housing refurbishment contractors and customers (Holms, 2000). Researchers have begun discussing if service management in the housing refurbishment industry includes a customer-oriented value scope in order to confirm the content of housing refurbishment services. In addition, studies in interior

design have mostly focused on issues related to users and adopted empirical investigation to examine through quantitative methods, three major topics: demands of specific users, users' preferences and post-use evaluation. These studies have found that an individual's use of indoor space is an "individualized" behavior based on group or individual considerations. Designers should position this before their own preferences in design, so as to emphasize the rights of the final users of a space instead of the designer's tendency to dominate their private territories.

Along with changes in consumption habits, the process of economic development has brought about an age of experience economy (Pine and Gilmore, 1998, 1999). The arrival of the experience economy has resulted in an inevitable concurrent trend of studies on experience. Schmitt (1999a, b) proposed the complete concept of experiential marketing. Schmitt believed that the ultimate objective of experiential marketing is to create a beautiful, integrated consumer experience as well as add value for consumers. For example, a householder that opts for

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interior refurbishment not only enjoys the comfort, security, and sense of belonging of the residence, but also experiences the satisfaction and sense of achievement resulting from participation in design of the space during the process of refurbishment. This type of experience is an added value experience. Neither domestic nor foreign studies have attempted to understand and examine consumer behavior in interior refurbishment and design from the perspective of consumer experience. More specifically, no studies have revealed the contents of the consumer experience in residential refurbishment. However, the contents of this experience could be a valuable reference for practitioners in planning of marketing strategies for refurbishment and design. This study intends to discuss this important issue.

Egbu (1999) argued that different professional services for housing refurbishment attract different attitudes and consumption intentions. According to past survey, households in Taiwan usually adopt either of the two service types in residential interior refurbishment. The first service type is where householders entrust contractors who specialize in construction (such as carpenters and painters, referred to as contractors here). The other service type is that householders hire design firms to undertake both the design and construction part of interior refurbishment (such as interior design firms; referred to as designers here). Applying the concept of consumer experience to these two types of refurbishment service may lead to different experiential meanings and feelings towards services. However, related studies have not examined this topic in depth. The purpose of this study was to discover the structure of the relationship model of householders' consumer experiences in residential interior refurbishment under different refurbishment types from the consumer perspective, and to conduct a comparative analysis on consumer experiences and relationship models between the two aforementioned refurbishment types in order to examine the differences between them.

LITERATURE REVIEW

Housing refurbishment services

Past studies on interior refurbishment have mostly focused on the following issues: evaluation on demands and durations of housing refurbishment (Taylor, 1980; Flanagan et al., 1989; Pullar-Strecker, 1990; Aikivuori, 1996), housing refurbishment and cost evaluation (Brandt and Rasmussen, 2002), evaluation on the efficiency of housing refurbishment and re-utilization of spaces (Kaklauskas et al., 2005; Langston et al., 2007), evaluation on indicators of scale and prosperity of the housing refurbishment market (Reade, 2001; Baker et al., 1998), evaluation on service quality and customer satisfaction (Holm, 2000; Maloney, 2002), management

skills, knowledge, and performance evaluation in housing refurbishment services (Egbu, 1995, 1999; McKim et al., 2000). Mendelsohn (1977) was the first scholar who examined housing refurbishment behaviors, proposing that housing refurbishment is a type of behavior that combines both housing consumption and housing investment. The results of Mendelsohn's study suggested that refurbishment cost diminishes marginally as housing prices increase, and therefore, regular households are the main target of the refurbishment market. The process of housing refurbishment should be considered a service, or should present at least three to four common service characteristics (Holm, 2000). Holm defined the unique characteristics of refurbishment services and argued that refurbishment services are different from other tangible products; refurbishment services are intangible, heterogeneous, perishable, and inseparable.

The decision-making process in the consumption of refurbishment services is a very complex process for householders. A consumer's decision carries high risk and stress. In short, both product design and construction services for interior refurbishment occur during the consumption process of households and take place in residential locations. As ordinary households have greatly different demands in interior refurbishment, service providers often need to provide a variety of "customized" refurbishment categories. The decision-making model for a household's consumption of refurbishment services in this study included not only confirmation of demand for refurbishment, searching for contractor information, deciding on contractors, and post-refurbishment evaluation on product satisfaction, but also the two stages of interior planning and design and construction.

Consumer experience concepts

Definition

In recent years, more and more consumers, business owners and scholars have realized the importance of the consumption experience. Most service industries have begun emphasizing the experiences and feelings of the consumer during the process of receiving product services. Business managers devote themselves to constructing an enjoyable and pleasant experience for each stage of the consumer's contact with the business. Scholars believe that experience is an economic product and consumer experience can be shaped by corporations. They have pointed out that economic focus in recent years has transferred to experience, corresponding to the rise of the service experience industry (Toffler, 1970; O'Sullivan and Spangler, 1998; Pine and Gilmore, 1998, 1999; Schmitt, 1999a, b). Since the consumption process of the customer is a complete experience, more and more marketing methods now focus on provision of an experience that "moves" the

consumer. In other words, the core concept is to construct a series of brand-new experiences for consumers and to emphasize the creation of diverse, experiential patterns. Abbott (1955) argued that the service executed by the product is a presentation that offers a consumer experience, and hence, what consumers really desire is a satisfying experience. These experiences, meanwhile, result from the various interactions between the inner world of the individual and the economic activities of the outer world. Holbrook and Hirschman (1982) believed that consumer experience is a combination of fantasy, feeling and entertainment. Lebergott (1993) proposed that the objective of economic activities of consumers in the 20th century was the experiences that resulted from the consumption activities, indicating that the activities of the experiential aspect are deeply rooted in general economic activities. Padgett and Douglas (1997) defined service experience as the perceptions, feelings and behavioral reactions that are incident to a certain consumption process, and therefore, the service experience of customers includes the behaviors, thinking and feelings that occur in the process of service consumption. Pine II and Gilmore (1998) further suggested the arrival of the age of the experience economy. Studies on experience have become an inevitable trend. Pine II and Gilmore (1999) also argued that experiences are filled with feelings, and are created from the unforgettable value created in a consumer's mind. Schmitt (1999a, b) considered that experience occurs in individual events in response to certain stimuli, including overall quality of life. They result from directly observing or participating in the events, which are usually induced instead of spontaneous and may be considered as having a complicated, embryonic structure. Schmitt (1999a, b) also suggested that consumer experience is a reaction to the feelings towards a product or service in the process of consumption. Five different consumer experience patterns or strategic experience models can be categorized, which are the theoretical foundation for experiential marketing. Menon et al. (2007) found in their study on the consumer experience of social forces that most experiential power exists in high-contact services that emphasize the social characteristics of consumers. For example, consumer knowledge may lead to greater experiential power. Consumers with greater power tend to have more individualized actions as well as expecting providers to focus on core services. Also, consumers with greater power are more likely to sense positive feelings, have less negative emotions and greater satisfaction than consumers with less power. This study applied the Strategic Experiential Modules proposed by Schmitt (1999a, b) to examine the experiential content and relationship model of the consumption process for housing refurbishment services of households under different refurbishment types. The marketing meaning formed by these experiential contents can provide the interior refurbishment and design industry with more

comprehensive and robust marketing strategies for housing refurbishment and design services. The details are presented as follows:

- 1) Sense (sensory experience): this refers to reactions resulting from the conscious processing of perceptive stimuli received by the five senses of human beings; sight, hearing, smell, taste and touch. In terms of interior refurbishment and design, memorable experiences that can stimulate the senses such as extensive indoor space, warm colors, gentle lighting and non-slippery floors can be obtained after the completion of refurbishment.
- 2) Feel (affective experience): this refers to targeting of customers' feelings and emotions, with the objective of creating affective experiences. The scope ranges from connecting with a brand with mild positive emotions to intense emotions of joy and pride (Schmitt, 1999a, b). As consumers accumulate more direct experiences, they are more likely to act out of a perception of a product, emotional reactions and future behavioral intentions, forming high consistency of attitude and behavior (Breckler and Wiggins, 1984). In terms of experiences in housing refurbishment and design, what feelings do consumers have when entering the hallway or living room of a house? For example, the feelings consumers have when experiencing a certain brand of lighting, or the feelings they experience when thinking of the product or brand even without being on the spot.
- 3) Think (intellectual experience): this mainly refers to experiences that encourage consumers to create perceptions and solve problems by creative methods. Schmitt (1999a, b) pointed out that the key to creative cognitive experiences is to inspire customers' creative thinking about a company or brand. The purpose of Think is to inspire customers' interests and participation through a sense of newness, leading to a concentration or dispersal of thinking. For example, the process of discussion with interior designers on spatial planning and design can inspire consumers' creative thinking, generate a sense of newness in interior refurbishment, induce their curiosity and encourage participation.
4. Act (behavioral experience): this result from the physical desires experienced by individuals or induced by the environment, lifestyles that individuals have accumulated over a long period of time and individuals' interactions with other individuals or groups. An action experience creates a consumer experience that is related to the body, long-term behavioral patterns and lifestyle, which also includes experiences in interacting with others. For instance, when consumers visit an on-site display home, they may be influenced by the layout inside the house or the furniture displayed and thus chooses which contractors to hire for their refurbishment or the brand of furniture to purchase.
- 5) Relate (relational experience): this comes from an individual's connections with other individuals, social communities (such as gender, occupation, ethnicity, and

lifestyle) and social entities (such as nation and culture) through purchasing and use of certain brands, and their acquisition of social recognition and a sense of belonging. In terms of consumption of interior refurbishment, sources of information on refurbishment design are usually influenced by friends and relatives or previous experiences, which further impact decisions on hiring of contractors.

Consumer experience also includes consumer value because consumers tend to satisfy their pursuit of individual values through different social interactions and exchanges (Sheth et al., 1991; Mathwick et al., 2002). Consumer values are one part of an individual's values. When purchasing a certain product or brand, consumers take into consideration not only the actual effectiveness and value provided by the product, but also the symbolic values like the personality performance of the product and social status, and whether it satisfies a consumer's emotional needs and curiosity towards new objects (Kim et al., 2002). In terms of consumption of housing refurbishment, many individuals consider refurbishment costs as inferior only to the purchase cost of houses. According to Lien et al. (2009a) and Lien et al. (2009b), the perception of a value experience has great impact on most consumers as refurbishment costs are significantly higher than other products and account for a huge part of most people's incomes, highlighting the status of value experience in the experience model. Therefore, their study argued that value experience is a new experience different from the five strategic experience models proposed by Schmitt (1999a, b) in the process of housing refurbishment and design.

Relational influence of consumer experiences

Brakus et al. (2009) proposed a brand experience scale that satisfied psychometric standards of marketing, philosophy, cognitive science and practical management. According to the five experiential aspects of Sense, Feel, Think, Act, and Relate that have been proposed by previous studies, an exploratory study was conducted to examine if the brand experience scale and the five experiential aspects were consistent. After development of the scale, brand experience was categorized into four aspects: Sense, Feel, Act, and Think. Significant positive correlation was found between each aspect. Xu (2007) defined the experiential marketing factors as relational experience, behavioral experience, sensory experience, affective experience, and intellectual experience. The study suggested a significant positive correlation between these five factors and post-consumption behavior. Hsu and Ho (2006) developed a scale suitable for medical consumption experience based on the five models proposed by Schmitt (1999a) of Sense, Feel, Think, Act, and Relate. Their study showed a significant positive correlation between the individual aspects of Sense, Feel,

Think, Act, and Relate. Liu et al. (2006) pointed out that behavioral experiences result from the mutual impact and integration between ample sensory experiences, positive affective experiences and intellectual experiences. Based on the aforementioned studies, we established the following hypotheses:

H₁: Relate experience has a significant positive impact on Think experience.

H₂: Think experience has a significant positive impact on Sense experience.

H₃: Think experience has a significant positive impact on Act experience.

H₄: Feel experience has a significant positive impact on Think experience.

Chen et al. (2007) found that consumer experience had significant positive impact on experiential value, and the experiential quality (intellectual and relational experience) of tourists' visits to heritage sites had significant impact on their perceived values. Xu and Chen (2009) discovered that (1) Sensory, intellectual and relational experiences were positive factors of experiential value while affective experience had no positive impact on experiential value, and behavioral experience was a negative factor on experiential value; (2) Experiential value was a positive factor in satisfaction. According to the aforementioned studies, this study proposed the following hypothesis:

H₅: Think experience has a significant positive impact on value experiences.

Babin and Babin (2001) took female clothing consumers as study subjects and pointed out that the sense of excitement generated by joy and arousal significantly enhanced the hedonic value of consumers. Johnson and Sirikit (2002) suggested that consumers may determine quality of service from the performance of employees in customer interaction. Their study found that positive consumer emotions had a positive impact on experiential values. The study of Babin et al. (2005) on family-style chain restaurants showed that positive affection and hedonic value were positively correlated. Therefore, the following hypothesis was proposed:

H₆: Feel experience has a significant positive impact on value experiences.

Regarding emotional reactions, Schmitt (1999a, b) pointed out that sensory stimuli aim to create a pleasant tangible environment. Yoo et al. (1998) argued that the various features of a retail environment like product displays, arrangement of facilities and atmosphere may

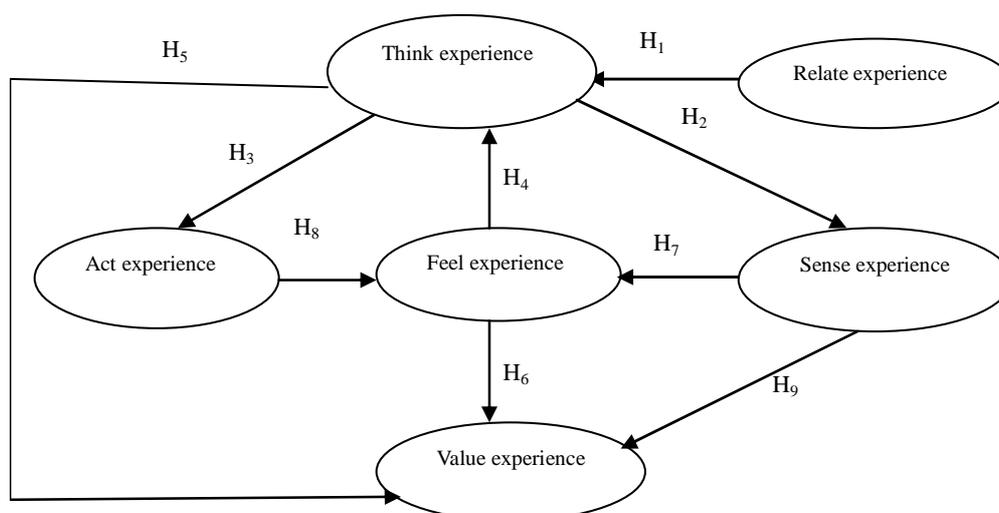


Figure 1. Research framework.

all induce customers' positive emotions inside a store. When a product is appealing and arouses the sensory interests of customers, it is more likely to generate positive emotions. Among the strategic experience models of Schmitt, sensory experience plays a critical role in visitors' emotions, followed by relational experience (Tsauro et al., 2006). Affection is considered the optimal method to determine the meanings of different environments and spaces to individuals; affections and emotions primarily occur within the positive experiences of physical senses in certain environments and spaces (Russell and Mehrabian, 1978; Liu et al., 2006). As a result, the following hypothesis was proposed:

H₇: Sense experience has a significant positive impact on Feel experience.

The goal of behavioral stimuli is to create a customer experience relevant to the body, long-term behavioral patterns and lifestyle (Schmitt, 1999a, b) that further inspire consumers to participate in certain activities, increase interactional experiences and change their individual lifestyles. As consumers' interpretation of the information has impact on their participation, interaction and behavioral changes, positive affective experiences are more likely to occur. Thus, behavioral experience has a positive impact on affective experience (Chao, 2003). Brakus et al. (2009) analyzed the relations among the aspects of brand experience and found a significant positive correlation between the affective and behavioral aspects. Therefore, the following hypothesis was proposed:

H₈: Act experience has significant positive impact on Feel experience.

Yeh and Chen (2006) pointed out in their study on recreational cycling that sensory experience had a positive effect on experiential value. Chen et al. (2007) suggested the positive effect of sensory perception on investment returns. Xu and Chen (2009) found that (1) Sensory, intellectual and relational experiences were positive factors in experiential value and (2) Experiential value was a positive factor in satisfaction. Therefore, the study proposed the following hypothesis:

H₉: Sense experience has a significant positive impact on Value experiences.

METHODS

Research framework

This study was based on Schmitt's (1999a, b) five aspects of consumer experience and the results of Lien et al. (2009a). It also drew on relevant domestic and foreign studies to examine the relations between aspects of consumer experience in housing refurbishment, namely, Sense, Feel, Think, Act, Relate, and Value under different refurbishment types. From this examination, we constructed a relationship model of the consumer experience. Based on the aforementioned hypotheses, the research framework was constructed. Figure 1 presents the research framework of this study.

Research subject and sampling

This study adopted a quantitative questionnaire survey. Convenience sampling was conducted among households in the Taipei metropolitan area who had commissioned refurbishment work within the last three years. A total of 53 questionnaires were collected from the pre-test. Correlation analysis on the question items, exploratory factor analysis (EFA), reliability and validity analysis were carried out in order to eliminate inappropriate

Table 1. Indicators for goodness-of-fit of structural model on satisfaction with interior refurbishment designers.

Indicator for goodness-of-fit	Ideal standard	Result
χ^2 (df)	The smaller the better	394.83(242)
χ^2 /df	<3	1.63
GFI	>0.9	0.85
RMSEA	<0.08	0.06
SRMR	<0.05	0.06
NNFI	>0.9	0.91
CFI	>0.9	0.92

question items before the formal survey. When conducting an analysis of the structural equation model (SEM), Rigdon (2005) suggested a minimum of 150 valid samples while Mueller (1997) considered 200 samples as better. In order to improve the effectiveness of the samples, this study collected a total of 719 samples, including 601 valid questionnaires, with a valid questionnaire rate of 83.6%.

Data analysis

This study adopted the SEM as the analytical tool to verify each research hypothesis discussed. The objective was to understand the relationships between the six aspects of consumer experience in housing refurbishment, which were Sense, Feel, Think, Act, and Relate and Value.

RESULTS

Reliability and validity test

This study adopted confirmatory factor analysis (CFA) to verify the reliability and validity of the self-developed scale on consumer experience in interior refurbishment. The results suggested satisfactory reliability in all the observable and latent variables on the scales concerning householders' satisfaction with both designers and contractors in their interior refurbishment experiences. In terms of convergent validity, the results showed that the values of factor loading of all observable variables on their individual latent variables were larger than 0.45, the threshold proposed by Jöreskog and Sörbom (1992). This indicates that all observable variables were able to reflect the constructed latent variables; that is, the scale had satisfactory convergent validity. In terms of discriminant validity, the Chi-square deviations between all aspects of the interior refurbishment experience reached a significant level, indicating satisfactory discriminant validity of the scale. In addition, satisfactory goodness-of-fit was found on both the measuring model and the structural model of the scale for satisfaction with interior refurbishment experiences in terms of various indicators. The aforementioned results suggest that the six aspects of consumer experience in interior refurbishment that

were constructed in the study, that is, Sense, Feel, Think, Act, Relate, and Value, have rather stable structures in the scale on householders' degree of satisfaction with interior refurbishment experiences.

Hypothesis verification

Verification of model hypotheses on degree of satisfaction with designers in consumer experiences in interior refurbishment

In order to prevent an over-complicated model structure, this study adopted the parcel method. According to Kim (2000), the parcel method has the following advantages: (1) prevents the occurrence of unexplainable factors; (2) provides a more effective method of estimation for continuous data; (3) provides a more stable model; and (4) results in higher reliability of each indicator and a more decisive result. Therefore, the study only selected the three question items with the highest factor loading among the latent variables as the latent variable measurements. Kline et al. (2000) also applied this method to the analysis of a structural model. Table 1 shows that the structural model on satisfaction with interior refurbishment experiences presented satisfactory goodness-of-fit in terms of every indicator. Therefore, the relationships between path structures of each aspect were further examined. The path relationships between each aspect were estimated through the structural model (Table 2). As presented in Figure 2, the nine hypotheses of the research model were verified using standardized regression coefficient. Four paths among them achieved significance level of $\alpha=0.001$, one path achieved significance level of $\alpha=0.01$ while four paths did not achieve significance level. Paths that achieved level of significance were respectively: aspect of sense \rightarrow aspect of feel ($\beta=1.28$), aspect of feel \rightarrow aspect of think ($\beta=1.29$), aspect of feel \rightarrow aspect of value ($\beta=0.39$), aspect of think \rightarrow aspect of act ($\beta=0.78$), and aspect of think \rightarrow aspect of value ($\beta=0.40$). Paths that did not achieve level of significance included: aspect of sense \rightarrow

aspect of value ($\beta=0.13$), aspect of think \rightarrow aspect of
sense ($\beta=-1.53$), aspect of act \rightarrow aspect of feel ($\beta=-0.25$),

Table 2. Path relationships of satisfaction with interior refurbishment designers.

Relation between variables	Estimation of parameter	SD	t-value	Standardized coefficient	Symbol of hypothesis	Result of verification
Aspect of sense → aspect of feel	1.01	0.22	4.52***	1.28	+	Supported
Aspect of sense → aspect of value	0.14	0.11	1.34	0.13	+	Not supported
Aspect of feel → aspect of think	1.61	0.44	3.66***	1.29	+	Supported
Aspect of feel experience → aspect of value experience	0.54	0.18	3.06**	0.39	+	Supported
Aspect of think → aspect of sensory experience	-1.57	0.99	-1.59	-1.53	+	Not supported
Aspect of think → aspect of act	0.65	0.11	5.83***	0.78	+	Supported
Aspect of think → aspect of value experience	0.45	0.11	4.00***	0.40	+	Supported
Aspect of act → aspect of feel experience	-0.24	0.16	-1.51	-0.25	+	Not supported
Aspect of relate experience → aspect of think	-0.17	0.21	-0.81	-0.18	+	Not supported

|T-value| ≥ 1.96, achieving a significance level of 0.05 is marked by *; |T-value| ≥ 2.58, achieving a significance level of 0.01 is marked by **; |T-value| ≥ 3.29, achieving a significance level of 0.001 is marked by ***.

In the research hypotheses, "+" suggested the path had positive impact while "-" suggested negative impact.

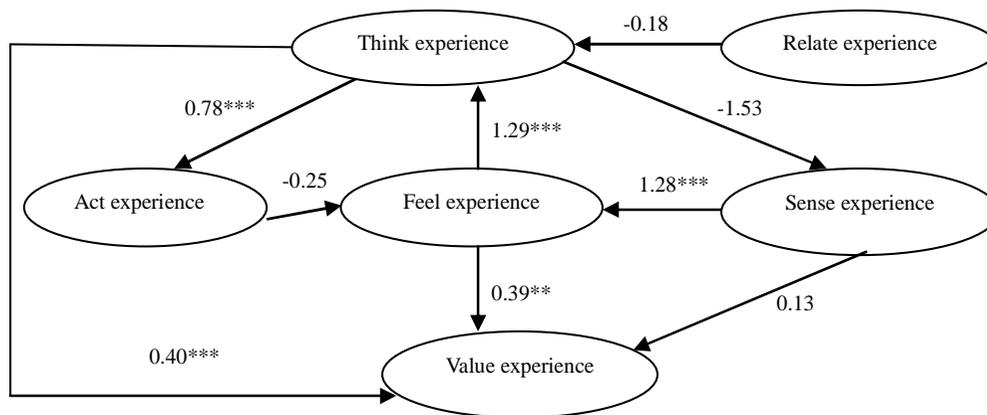


Figure 2. Path relationships of satisfaction with interior refurbishment designers.

and aspect of relate → aspect of think (β=-0.18). With regards to the path relationships of a research model, Bollen (1989) suggested that researchers should not only emphasize its direct

effects but also the indirect effects and the total effects. The total effect is the sum of the direct effects of all latent independent variables on latent dependent variables and the indirect effects of

different latent independent variables on latent variables. We collected the direct effects, indirect effects and total effects of each aspect, as shown in Table 3. Table 3 shows that 25 of the total effect

Table 3. Indirect, direct and, total effects of satisfaction with interior refurbishment designers.

Latent variable	Latent dependent variable	Indirect effects		Direct effects		Total effects	
Sense	Sense	-0.67		NA		-0.67	
	Feel	-0.95		1.28	(***)	0.34	(***)
	Think	0.44	(***)	NA		0.44	(***)
	Act	0.34	(***)	NA		0.34	(***)
	Value	0.22	(***)	0.13		0.35	(***)
Feel	Sense	-0.52		NA		-0.52	
	Feel	-0.74		NA		-0.74	
	Think	-0.95		1.29	(***)	0.34	(***)
	Act	0.27	(***)	NA		0.27	(***)
	Value	-0.22	(***)	0.39	(**)	0.17	(***)
Think	Sense	1.13		-1.53		-0.40	
	Feel	-0.57		NA		-0.57	
	Think	-0.74		NA		-0.74	
	Act	-0.58		0.78	(***)	0.21	(***)
	Value	-0.58		0.40	(***)	-0.17	(***)
Act	Sense	0.13		NA		0.13	
	Feel	0.18		-0.25		-0.07	
	Think	-0.08		NA		-0.08	
	Act	-0.07		NA		-0.07	
	Value	-0.04		NA		-0.04	
Relate	Sense	-0.85		NA		0.52	
	Feel	0.57		NA		0.57	
	Think	0.73		-0.18		0.55	
	Act	0.43		NA		0.43	
	Value	0.51		NA		0.51	

resulted from the five latent variables of satisfaction with interior refurbishment experiences, with nine of them being significant. Among them, Sense had the greatest total effect on think (0.44***). On the other hand, among the 25 indirect effects, five were significant. Sense had the greatest total effect on Think (0.44***).

Verification of model hypotheses on satisfaction with contractors in interior refurbishment consumer experiences

In order to prevent an over-complicated model, this study adopted the parcel method, selecting only the three question items with the highest factor loading among the latent variables as the measurement of the latent variables. Kline et al. (2000) in their study also applied this method to the analysis of a structural model. Table 4 shows that the structural model on satisfaction with interior refurbishment experiences presented satisfactory

goodness-of-fit in terms of every indicator. Therefore, the relationships between path structures of each aspect were further examined. The path relation between each aspect was estimated through the structural model (Table 5). As presented in Figure 3, the nine hypotheses of the research model were verified using a standardized regression coefficient. Five paths among them achieved significance level of $\alpha=0.001$, one path achieved significance level of $\alpha=0.01$ while three paths did not achieve significance level. Paths that achieved level of significance were respectively: aspect of sense \rightarrow aspect of feel ($\beta=1.29$), aspect of feel \rightarrow aspect of value ($\beta=0.48$), aspect of think \rightarrow aspect of sense ($\beta=1.96$), aspect of think \rightarrow aspect of act ($\beta=0.73$), aspect of think \rightarrow aspect of value experience ($\beta=0.34$), and aspect of act \rightarrow aspect of feel ($\beta=0.31$). Meanwhile, paths that did not achieve level of significance included: aspect of sense \rightarrow aspect of value ($\beta=0.11$), aspect of affective experience \rightarrow aspect of think ($\beta=-98.30$), and aspect of relate \rightarrow aspect of think ($\beta= 64.71$). This study compiled the

Table 4. Indicators for goodness-of-fit of structural model on satisfaction with interior refurbishment contractors.

Indicator for goodness-of-fit	Ideal standard	Result
$\chi^2(df)$	The smaller the better	479.65(242)
χ^2/df	<3	1.98
GFI	>0.9	0.91
RMSEA	<0.08	0.05
SRMR	<0.05	0.03
NNFI	>0.9	0.94
CFI	>0.9	0.95

Table 5. Path relationships of satisfaction with interior refurbishment contractors.

Relation between variables	Estimation of parameter	SD	T- value	Standardized coefficient	Symbol of hypothesis	Result of verification
Aspect of sense → aspect of feel	1.09	0.13	8.59***	1.29	+	Supported
Aspect of sense → aspect of value	0.09	0.06	1.63	0.11	+	Not supported
Aspect of feel → aspect of think	-112.47	107.02	-1.05	-98.30	+	Not supported
Aspect of feel → aspect of value	0.47	0.08	6.16***	0.48	+	Supported
Aspect of think → aspect of sense	2.02	0.31	6.43***	1.96	+	Supported
Aspect of think → aspect of act	0.57	0.07	8.48***	0.73	+	Supported
Aspect of think → aspect of value	0.29	0.06	5.10***	0.34	+	Supported
Aspect of act → aspect of feel	0.35	0.12	2.90**	0.31	+	Supported
Aspect of relate → aspect of think	70.78	66.67	1.06	64.71	+	Not supported

|T-value| \geq 1.96, achieving significance level of 0.05 was marked by *; |T-value| \geq 2.58, achieving significance level of 0.01 was marked by **; |T-value| \geq 3.29, achieving significance level of 0.001 was marked by ***. In the research hypotheses, "+"suggested the path had positive impact while "-"suggested negative impact.

indirect effects, direct effects, and total effects of each aspect, as presented in Table 6. Table 6 shows that 25 total effects resulted from the five latent variables of satisfaction with contractors, with eight of them being significant. Among them, sensory experience had the greatest total effect on affective experience (0.01***) while affective experience had the weakest effect on value experience (-0.20***). At the same time, among the 25 indirect effects, three were significant.

Think had the greatest indirect effect on affective experience (0.01***) while Think had the weakest indirect effect on value experience (-0.33**).

DISCUSSION

As different types of consumer experience may induce different psychological reactions in consumers, the effectiveness of behavioral

intentions caused by different psychological reactions also varies. In terms of intensity of consumer experience, the study found significant positive impact of sensory experience on affective experience regardless of consumer choice of designers or contractors for interior refurbishment. That is, without respect to choice of contractors or designers, the higher the sensory satisfaction with completion of refurbishment, the more likely consumer satisfaction from internal emotions can

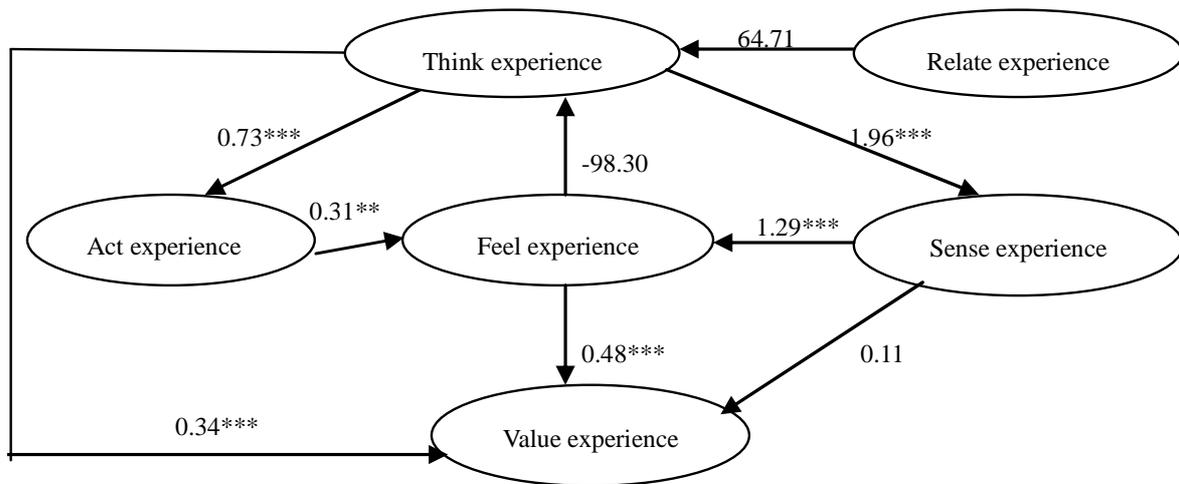


Figure 3. Path relationships of satisfaction with interior refurbishment contractors.

Table 6. Indirect, direct, and total effects of satisfaction with interior refurbishment contractors.

Latent variable	Latent independent variable	Indirect effect		Direct effect		Total effect	
Sense	Sense	-0.92		NA		-0.92	
	Feel	-1.28		1.29	(***)	0.01	(***)
	Think	-0.34		NA		-0.34	
	Act	-0.47		NA		-0.47	
	Value	-0.26	(***)	0.11		-0.15	(***)
Feel	Sense	-0.71		NA		-0.71	
	Feel	-1.00		NA		-1.00	
	Think	-0.27		NA		-0.27	
	Act	97.94		-98.30		-0.36	
	Value	-0.68		0.48	(***)	-0.20	(***)
Think	Sense	-1.95		1.96	(***)	0.01	(***)
	Feel	0.01	(**)	NA		0.01	(**)
	Think	-0.73		0.73	(***)	0.00	(***)
	Act	-1.00		NA		-1.00	
	Value	-0.33	(**)	0.34	(***)	0.01	(**)
Act	Sense	-0.22		NA		-0.22	
	Feel	-0.31		0.31	(**)	0.00	(**)
	Think	-0.08		NA		-0.08	
	Act	-0.11		NA		-0.11	
	Value	-0.06		NA		-0.06	
Relate	Sense	1.20		NA		0.40	
	Feel	0.65		NA		0.65	
	Think	0.45		NA		0.45	
	Act	-64.10		64.71		0.61	
	Value	0.56		NA		0.56	

NA, Suggests that no data can be obtained from the path analysis; *, suggests significance level of $\alpha=0.05$; **, suggests significance level of $\alpha=0.01$; ***, suggests significance level of $\alpha=0.001$.

be generated. In addition, in terms of consumer satisfaction with either designers or contractors, affective experience had significant positive impact on value experience, indicating that when consumers perceive greater satisfaction, they are more likely to consider their investment or time spent as valuable. Furthermore, regardless of consumer choice of designers or contractors, intellectual experience always had a significant positive impact on satisfaction with behavioral experience, indicating that during both self-planning and cooperation with designers, the more ideas consumers have regarding the refurbishment project, the more effort they are willing to devote to actions. By contrast, when consumers discuss their ideas with designers and become more active during the discussions, their satisfaction should be significantly positively impacted. Finally, regardless of consumers' choice of designers or contractors, intellectual experience always had significant positive impact on satisfaction with value experience. That is, while a consumer may entrust contractors or designers with their interior refurbishment, if the consumer has collected information and accumulated ideas regarding the refurbishment, the consumer will have invested something of themselves in the refurbishment process, resulting in a strong sense of expectation towards the results. As a result, they find the hiring of contractors and designers to be valuable, which further increases their satisfaction with their refurbishment experience.

Affective experience was found to have a significant positive impact on satisfaction with intellectual experience when consumers hire designers. This indicates that during discussion with designers, if designers can present a consumer's internal emotional demands and satisfy them, consumers are able to generate more creativity or ideas for the reference of designers. Meanwhile, designers can also create a greater sense of newness in their interior refurbishment by adopting consumer's opinions, so that both consumers and designers experience a sense of participation, resulting in a significant positive impact on satisfaction. At the same time, significant positive impact of intellectual experience on satisfaction with sensory experience was found when consumers hired contractors alone for interior refurbishment. This suggests that as consumers entrust contractors with the construction of their own refurbishment design blueprints, they experience great satisfaction in terms of sensory experience when their designs are realized at the completion of refurbishment, which leads to significant positive impact.

In addition, the results for consumer satisfaction in interior refurbishment experiences with designers or contractors found no significant positive impact on sensory experience and of relational experience on value experience and intellectual experience, respectively. This study defined sensory experience as a consumer's perceptual experiences and value experience as a

consumer's pursuit of individual values through different social interactions and exchanges. However, from the perspective of consumers, when individuals undergo profound sensory experiences, they may gradually find the money they paid and personal experiences to not be directly proportional. Accordingly, sensory experience had no significant positive impact on value experience. Relational experience in this study referred to situations where consumers' sources of information on refurbishment design are recommendations from relatives and friends or from previous experiences, utilized in making a decision on the firms responsible for refurbishment. Intellectual experience referred to the situation in which consumers' creative thinking and the sense of newness of interior designs adopted are aroused by discussions during their own interior planning or in their co-planning with designers. If consumers have collected more information in advance or received recommendations from relatives and friends, they are less likely to avoid discussions with designers or contractors on further planning and are likely to have more opinions and ideas for the interior refurbishment. As a result, no significant positive impact of relational experience was found on satisfaction with intellectual experience in both the designer and contractor choice scenarios.

The analysis of consumer selection of designers for refurbishment showed no significant positive impact of intellectual experience on sensory experience. Regarding this result, we believe that in a situation where consumers discuss their concepts and ideas for the refurbishment with designers, when consumers find the outcome different from their original design after a period of sensory experience, their sensory experiences may become more and more dissatisfactory. As a result, the study found no significant positive impact of intellectual experience on satisfaction with designers from sensory experiences. In addition, we also found no significant impact of behavioral experience on satisfaction with affective experience when consumers hire designers. In this study, behavioral experience of consumers referred to external experiences resulting from interactions with designers, while affective experience referred to consumers' internal affections and emotions towards the outcome of interior refurbishment. When the results of discussions with designers are not fully present in the completed refurbishment, consumers are dissatisfied with the affective experience. Therefore, no significant impact of behavioral experience was found on satisfaction with affective experience when consumers hire designers.

Meanwhile, the analysis on consumers' selection of contractors showed no significant positive impact of affective experience on intellectual experience. When consumers' internal emotions towards the outcome of refurbishment are different from the previously collected information and their own ideas and self-planning, consumers sense a serious gap in their affective experience. As a result, no significant positive impact of

affective experience on intellectual experience was found in the study when consumers hire contractors.

Conclusion

The study shows that the different types of interior refurbishment chosen by consumers' impact consumption experience and satisfaction. This result serves as an important reference for industries involved in housing refurbishment and design as well as future housing refurbishment and design projects of consumers. The results will also assist related industries to improve or address the problems they face, to meet consumer requirements and enhance satisfaction levels.

In recent years, as the quality of the outdoor environment deteriorates, standards and expectations for quality of indoor living environments have risen. Also, changes in periodicity, contemporaneity, and value of lifestyles have resulted in increasing demand for interior refurbishment services. As we only focused on householders in the Taipei metropolitan area with experience of housing refurbishment in the last three years, we recommend for future studies to expand this research scope, conducting studies on different regions and comparing differences. Because housing refurbishment is a heterogeneous product, it varies over time or in accordance with different service providers. Continuing consumer experiences can contribute to the provision of more comprehensive housing refurbishment services, achieving a win-win situation for both consumers and providers of housing refurbishment services. The study suggests that future studies should conduct longitudinal surveys to further examine how consumer experience outcomes change over time. In addition, consumers of housing refurbishment services usually need to be more highly involved and have greater trust in service providers. However, this study did not include psychological factors of personal characteristics and learning ability in the analysis. Thus, future studies can examine these variables, so as to reflect individual psychological characteristics on consumer experiences.

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