

# 國家科學及技術委員會補助專題研究計畫報告

## 自我擴展 vs. 由衷感謝：驗證米其林餐廳顧客溢價購買意願的心理機制路徑

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本研究具有政策應用參考價值：否 是，建議提供機關  
(勾選「是」者，請列舉建議可提供施政參考之業務主管機關)  
本研究具影響公共利益之重大發現：否 是

中華民國 111 年 08 月 30 日

中文摘要：在自我擴展和社會交換理論的啟發下，我們提出了一個序列中介模型來研究顧客在米其林餐廳感知到的奢華價值如何透過自我擴展和顧客感謝轉化為支付溢價意願。從五家米其林星級餐廳收集數據，運用多元回歸分析來驗證我們的模型。我們發現，獨特、社會和功能價值是支付溢價意願的基本價值。相比之下，在考慮所有其他感知價值時，炫耀價值既沒有直接影響也沒有間接影響。此外，我們發現客戶的自我擴展和感謝是兩個重要的中介機制。享樂價值和支付溢價意願的關係只能透過自我擴展來中介，而獨特價值和支付溢價意願的關係只能透過顧客感謝來中介。從社會和功能價值中也發現了序列中介效果。

中文關鍵詞：自我擴展理論；社會交換理論；溢價購買意願；感謝；米其林餐廳

英文摘要：Enlightened from self-expansion and social exchange theories, we proposed a sequential mediation model to investigate how customers' perceived luxurious values at Michelin-starred restaurants could be translated into paying a price premium through self-expansion and customer gratitude. Data was collected from five Michelin-starred restaurants to verify our model using multivariate regression analysis with bootstrapping technique. We found that unique, social, and functional values were the essential values for willingness to pay a premium. In contrast, the conspicuous value had neither direct nor indirect effect when considering all the other perceived values. Also, we found that customer self-expansion and gratitude were two significant mediating mechanisms. The association of hedonic value and pay a price premium would be only mediated by self-expansion, whereas the association of unique value and pay for price premium would be only mediated by customer gratitude. The sequential mediation effect was also found from social and functional values.

英文關鍵詞：Self-expansion theory, Social exchange theory, Willingness to pay a price premium, Gratitude, Michelin-starred restaurants

## 行政院科技部補助專題研究計畫成果報告

自我擴展 vs. 由衷感謝：  
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## **Perceived luxurious values and pay a price premium for Michelin-starred restaurants: A sequential mediation model with self-expansion and customer gratitude**

### **Abstract**

Enlightened from self-expansion and social exchange theories, we proposed a sequential mediation model to investigate how customers' perceived luxurious values at Michelin-starred restaurants could be translated into paying a price premium through self-expansion and customer gratitude. Data was collected from five Michelin-starred restaurants to verify our model using multivariate regression analysis with bootstrapping technique. We found that unique, social, and functional values were the essential values for willingness to pay a premium. In contrast, the conspicuous value had neither direct nor indirect effect when considering all the other perceived values. Also, we found that customer self-expansion and gratitude were two significant mediating mechanisms. The association of hedonic value and pay a price premium would be only mediated by self-expansion, whereas the association of unique value and pay for price premium would be only mediated by customer gratitude. The sequential mediation effect was also found from social and functional values.

**Keywords:** self-expansion theory; social exchange theory; willingness to pay a price premium; gratitude; Michelin-starred restaurants

### **1. Introduction**

The Michelin Guides have attracted hospitality scholars to study luxury dining experiences in France (Batat, 2021), Spain (Castillo-Manzano et al., 2021), and Korea (Kiatkawsin & Han, 2019). However, knowledge gaps exist in how customers perceive the value of luxury at Michelin-starred restaurants and to how different luxurious value components affect their purchasing sentiments. Therefore, building upon on the self-expansion theory and social exchange theory, this study examines what luxurious values are effective in elevating customers' mental mechanisms. First, self-expansion theory is used to explain the intrinsic drives of individuals that influence the cognitive, emotional, and behavioral aspects of interpersonal intimacy (Aron & Aron, 1986). Customers become aware of opportunities for self-expansion when they interact with brands that offer new perspectives, new resources, and new identities (Reimann & Aron, 2009). Similarly, the more customers feel the value of the benefits of Michelin-starred restaurants, the more these will positively influence their self-expansion. Second, according to the reciprocity norm of social exchange theory (Gouldner, 1960), customers feel obliged to honor the benefits provided by the serving business. Customer gratitude refers to the positive emotions that occur when employees intentionally provide something of value to customers (Bartlett & DeSteno, 2006). The more Michelin-starred restaurants offer luxurious value that caters to their customers, the more they will generate customer gratitude (Palmatier et al., 2009).

We propose customers' willingness to pay a price premium as the outcome of perceived luxurious values at Michelin-starred restaurants. In the process of self-expansion, consumers are likely to invest more time, effort, and resources into the object of their affections (Gorlier & Michel, 2020) and are willing to pay higher prices for the brand (Thomson et al., 2005). Thus, customer self-expansion may act as an intermediary between luxurious value and willingness to pay at a premium. Additionally, customers' gratitude toward a Michelin-starred restaurant will generate a desire to reciprocate (Bartlett & DeSteno, 2006) and a willingness to pay at a premium (Raggio & Folse, 2009). We therefore explain that the value of luxury will, through self-expansion and gratitude, directly or indirectly influence the willingness of customers to pay a price premium.

This study selected well-known Michelin-starred restaurants in Taiwan to investigate how customers' perception of luxurious value influences their "willingness to pay a price premium" through the processes of customer self-expansion and customer gratitude. Taiwan has had the honor of being on the Michelin list since 2018. With restaurants featured in the 2018 Michelin Guide Taipei picking up 20 stars and 24 stars in 2019, and in 2020, a total of 30 stars across Taipei and Taichung (Michelin Guide Taiwan, 2020). The objectives of this study are as follows: (1) to understand and investigate the relationship between luxurious value and customers' willingness to pay a price premium, and (2) to develop and test a theoretical framework that uses customer self-expansion and customer gratitude as mediators.

## **2. Literature Review**

### **2.1 Perceived luxurious values at Michelin-starred restaurants**

Focusing on the conceptualization of brand luxury (e.g., Louis Vuitton and Cartier), Vigneron and Johnson (2004) identified the motivations and values behind customers' purchases of luxury goods based on price, social prestige, and personal self-awareness, distinguishing between "Interpersonal Values" and "Personal Values." "Interpersonal Values" refers to the perceived utility of a product or service that allows customers to gain recognition from a social group for its conspicuousness, uniqueness, and social value. "Personal Values" emphasize customers' personal orientation towards luxury consumption, such as functional value and hedonic value. The work of Vigneron and Johnson (2004) has over 2,000 Google Scholar citations in luxury studies. In line with Vigneron and Johnson (2004), we classify the luxurious values of Michelin-starred restaurants into five values, sorting into Interpersonal Values (unique value, conspicuous value, social value) and Personal Values (hedonic value, functional value). These five luxurious values are explained as follows:

(1) Unique value refers to the perceived exclusivity and scarcity of a product that enhances customers' desire or preference for the product (Verhallen, 1982). Luxury goods with scarcity can project a unique self-concept of the customer (Vigneron & Johnson, 2004). For customers, fine dining is about high-quality food, novelty, uniqueness, and the ability to spend at a higher price, and enjoying food in a restaurant helps to achieve reputation and status for customers (Bhaduri & Stanforth, 2016). In addition, fine dining restaurants provide a unique dining experience that leaves a positive impression in the minds of customers (Namkung & Jang, 2008).

(2) Conspicuous value refers to the spending of money to show that one has enough money to buy luxurious goods in order to gain status and impress others (Griskevicius et al., 2007). Through purchasing luxury goods, they express their affluent lifestyles or project their personal philosophies and orientations (Yang & Mattila, 2014). Although fine dining is not a tangible possession that can be easily priced, it is recognized as a symbol of success, just like other luxury items (Bhaduri & Stanforth, 2016).

(3) Social value refers to customers' desire to have a prestigious brand that meets the expectations of the reference group (Yang & Mattila, 2014). Customers' perception of the value of luxury goods is related to a number of social factors, including social status, achieving success, and people's desire to make an impression on others (Wiedmann et al., 2009). Customers usually feel privileged in a good dining environment because they are served well, and the dining atmosphere and style generally satisfy the need for self-respect (Yang & Mattila, 2014).

(4) Hedonic value refers to how emotionally pleasing the product and experience are to the customer. Such value is more subjective and personal because hedonic value is derived from the customer's need for fun and enjoyment rather than their involvement in the completion of the whole event (Yang & Mattila, 2014). Customers who buy luxury goods and services also want to see themselves as something special because these goods and services provide sensory pleasure, excitement, and inner enjoyment (Le Monkhouse et al., 2012). Studies have shown that fine dining restaurants create and induce other ineffable positive, emotional responses in customers that generate high levels of hedonism and drive them to spend money (Kiatkawsin & Han, 2019).

(5) Functional value refers to the core benefits that customers expect from the consumption of luxury brands (Wiedmann et al., 2009). The functional value of fine dining restaurants includes the food and beverages served and the service and interior design provided (Yang & Mattila, 2016). Studies have identified both tangible (food quality, taste, and consistency of menu items) and intangible (staff competence, wait-staff knowledge, restaurant atmosphere, and ambiance quality) aspects of functional value as important factors in luxury and fine dining environments (Wang & Chen, 2012).

## **2.2 Theoretical foundations**

### **2.2.1 Self-expansion theory**

Self-expansion theory is used to explain the intrinsic drives of individuals that influence the cognitive, emotional, and behavioral aspects of interpersonal intimacy (Aron & Aron, 1986). Self-expansion is centered on people's drive to expand themselves through the acquisition of identities, resources, and perspectives that help them achieve their goals in a series of expansion processes (Aron et al., 2001). The pursuit of self-expansion is driven by the individual's desire to increase potential self-efficacy, the ability to accomplish goals, and the desire to reduce boredom (Aron et al., 1998; Aron et al., 2013). In other words, it is for the purpose of exploration and self-improvement (Aron et al., 1992), meaning that the more the other person or brand is integrated into the individual's self-concept, the more it is connected to the self, i.e., when the customer interacts with the brand, new resources and perspectives become part of the individual's self-cognitive structure (Reimann & Aron, 2009). Based on the above, dining at Michelin-starred restaurants is an ideal setting for customers to exercise self-expansion. Perceived luxurious values at Michelin-starred restaurants would serve as drivers to assist customers' mental mechanism of self-expansion (de Kerviler & Rodriguez, 2019). Therefore, self-expansion theory is an ideal theoretical support for our research.

### **2.2.2 Social exchange theory**

According to the norm of reciprocity in social exchange theory (Gouldner, 1960), customers feel obliged to honor benefits provided by the serving business. In addition, customers may feel personally inadequate because of the help given by the employees of the serving business and therefore want to give back to said business. (Palmatier et al., 2009). Gouldner (1960) argued that gratitude is an important element in reciprocal relationships because people are grateful when they know they are receiving a special benefit, and they are grateful for the reciprocal behavior of others. Customer gratitude refers to the positive emotions that occur when employees intentionally provide something of value to customers (Bartlett & DeSteno, 2006; Palmatier et al., 2009). With our conceptualization of customer gratitude as a part of the mental mechanism caused by perceived at Michelin-starred restaurants, social exchange theory is also utilized as another theoretical support for our research. We argue the social exchange exists in customers' perceived luxurious values as a receiver in the exchange, as well as their willingness to pay a price premium as a giver in the exchange.

### **2.3 Hypotheses development**

Figure 1 shows the research framework. In hypotheses development: the first part refers to the theoretical foundations of luxurious value (Vigneron & Johnson, 2004), self-expansion theory (Aron & Aron, 1986), and social exchange (Gouldner, 1960) to infer that Michelin-starred restaurant customers will have their willingness to pay a price premium influenced by their perceptions of luxurious value, self-expansion, and customer gratitude. In the second part, referring to accounts of consumer behavior such as Gorlier and Michel (2020) and Feng et al. (2018), we infer that restaurant customers' perception of luxurious value affects their willingness to

pay a price premium through the mediating effects of self-expansion and customer gratitude. Hypotheses of the research framework are justified in following sections.

**<Please insert Figure 1 here>**

### **2.3.1 Luxurious value and willingness to pay a price premium**

Willingness to pay a price premium is defined as a customer's willingness to pay more for a particular brand of product than for similar products from other brands (Aaker, 1996). Customers are willing to pay a price premium when they perceive that the brand they love is of better quality and they find that it conforms with their ideal lifestyle (Swimberghe & Wooldridge, 2014). Most people consider Michelin-starred restaurants to be representative of high-end restaurants, and apart from functional benefits, customers mostly perceive intangible benefits (O'Cass & Frost, 2002). Unique value positively influences the willingness of customers to pay a price premium for a brand (Netemeyer et al., 2004), while social value is also an important indicator of that same willingness (Del Rio et al., 2001). Based on the above, we propose the following hypothesis:

H1: Customers' perceived luxurious value at Michelin-starred restaurants is positively related to their willingness to pay a price premium.

### **2.3.2 Luxurious value and self-expansion**

Customers become aware of opportunities for self-expansion when they interact with brands that offer new perspectives, new resources, and new identities (Reimann & Aron, 2009). By experiencing luxury brands, customers can access specific resources to facilitate their self-growth and development (de Kervilera & Rodriguez, 2019). In addition, luxury brands have the ability to provide novel and meaningful emotional experiences that enrich the customer's self-expansion and are powerful drivers for developing and nurturing relationships (de Kerviler & Rodriguez, 2019). In summary, the concept of self-enrichment can be triggered by enabling customers to experience luxurious value from Michelin-starred restaurants to obtain new identities, resources, or perspectives for the achievement of self-growth. Therefore, we propose:

H2a-H2e: Customers' perceived luxurious value (unique value, conspicuous value, social value, hedonic value, and functional value) at Michelin-starred restaurants is positively related to their self-expansion.

### **2.3.3 Luxurious values and customer gratitude**

Gratitude is the key driver that motivates people to reciprocate the rewards or benefits they receive (Frank, 2020). Service businesses offer economic benefits and personalized benefits through interactions with customers (Cropanzano & Mitchell, 2005), encouraging those customers to reward the businesses in the future in exchange for the benefits offered (Gouldner, 1960). More importantly, through reciprocal behaviors based on gratitude, customers act in accordance with their desire to reciprocate with serving businesses (Palmatier et al., 2009). As a result, the higher the level of economic benefit and personalized treatment that customers receive, the higher their level of gratitude will be. Therefore, we propose:

H3a-H3e: Customers' perceived luxurious value (unique value, conspicuous value, social value, hedonic value, and functional value) at Michelin-starred restaurants is positively related to customer gratitude.

#### **2.3.4 Self-expansion and customer gratitude**

Gratitude has been conceptualized as a positive emotion felt at a single point in time following a positive outcome brought about by another person (Bartlett & DeSteno, 2006). Indeed, the extent to which an individual is grateful for an action depends on the consideration and attention given to that individual by others (Algoe et al., 2008). Gratitude arises when people perceive that another person has taken care of them and has been helpful to enhancing their self-growth (Algoe, 2012). Meanwhile, empirical evidence has shown that self-growth may be a positive influence on gratitude (Zhang et al., 2017). Hospitality settings have been identified with chances for customers' self-expansion (e.g., Gorlier & Michel, 2020; Lee et al., 2019). Studies also found customers normally express gratitude toward great restaurant experiences (e.g., Frank, 2020). Therefore, this study concludes that the stronger the self-expansion of customers in Michelin-starred restaurants, the stronger the gratitude that will be generated toward those restaurants. Hence, we propose:

H4: Customers' self-expansion at Michelin-starred restaurants is positively related to customer gratitude.

#### **2.3.5 Self-expansion, customer gratitude, and willingness to pay a price premium**

When a company's brand accurately reflects the customer's sense of self and sense of personal connection with the brand, that company will enjoy a strong competitive position (Chand & Fei, 2021). Customers who are close to a brand are not only recipients of the brand's resources, but also actively participate in their own investment in that brand's financial resources to demonstrate their

willingness to pay higher prices for it (Gorlier & Michel, 2020). Therefore, this study deduces that when customers have a sense of self-expansion in a Michelin-starred restaurant, they will be willing to purchase products/services at a price premium in that restaurant. On the other hand, customer gratitude plays an important role in building and maintaining social relationships through paying attention to our people (Algoe, 2012) and encouraging prosocial and affiliative behaviors among each other (Bartlett et al., 2011). Crucial to this experience of positive emotions is the recognition that others will act in kind out of concern for themselves (Algoe, 2012). Based on the above, we propose:

H5: Customers' self-expansion at Michelin-starred restaurants is positively related to their willingness to pay a price premium.

H6: Customers' gratitude at Michelin-starred restaurants is positively related to their willingness to pay a price premium.

### **2.3.6 Mediating effects of self-expansion and customer gratitude**

Integrating other people or brands into one's self-concept in order to gain new perspectives, resources, or identities can lead to a sense of self-growth (de Kerviler & Rodriguez, 2019). Self-expansion can be developed through novel, interesting, and challenging experiences (Mattingly & Lewandowski, 2014). Similarly, in the process of self-expansion, consumers are likely to invest more time, effort, and resources into the object of their affections (Gorlier & Michel, 2020) and are willing to pay higher prices for the brand (Thomson et al., 2005). Moreover, novel, emotionally engaging brand incentives can generate greater consumer self-expansion and more positive consumer behavior (Gorlier & Michel, 2020). Therefore, self-expansion plays an important role in bridging the luxurious value of the restaurant and willingness to pay a price premium. Therefore, we propose:

H7a: Customers' self-expansion at Michelin-starred restaurants mediates the relationship between their perceived luxurious values and their willingness to pay a price premium.

Efforts made by the serving business to provide high-value products/services elicit gratitude from customers (Palmatier et al., 2009). If a luxury restaurant provides its customers with a prestigious brand image, those customers will enhance their social status. Customers appreciate the emotional benefits of this enhanced status (Jin et al., 2018). In addition, restaurant staff take care of customers during service encounters, and customers may be grateful based on their emotional appreciation of the restaurant (Jin et al., 2018). Therefore, luxurious value can be considered as an antecedent variable of customer gratitude, as in the findings of Feng et al. (2018), who stated that three service emotional values such as surprise and sweetness perceived by customers in luxury hotels can enhance their gratitude and further willingness to pay price premiums. Hence, we propose:

H7b : Customers' gratitude at Michelin-starred restaurants mediates the relationship between their perceived luxurious values and their willingness to pay a price premium.

Luxury brands offer a unique brand experience that is more intense than that of non-luxury brands. Therefore, luxury brands should elicit a stronger influence than non-luxury brands, thus providing more opportunities for self-expansion (de Kerviler & Rodriguez, 2019). People with higher self-growth are willing to invest more energy in benefiting others to enhance their self-concept (Murray & Hazelwood, 2011) and enhance their perception of reciprocity (McCullough et al., 2001), and are more willing to show gratitude and appreciation for the kindness of others (Forest & Wood, 2012). Given the theory and empirical evidence above, we

theorize that customer perceived luxurious values are related to pay for a price premium through self-expansion first and then customer gratitude. Integrating the two models with mediation through self-expansion and with mediation through customer gratitude yields a three-path mediation model, depicted in Figure 1 (Hayes, 2009; O'Rourke & MacKinnon, 2015; Taylor et al., 2008). We tested whether self-expansion and customer gratitude sequentially mediate the relationship between customer perceived luxurious values and pay for a price premium, respectively. Taken together, we propose:

H7c : As a sequential mediation, customers' self-expansion mediates the relationship between their perceived luxurious value and customer gratitude, and then customer gratitude mediates the relationship between self-expansion and their willingness to pay a price premium.

### **3. Method**

#### **3.1 Data collection**

We selected eight Michelin-starred restaurants in Taiwan as case restaurants for data collection. The eight Michelin-starred restaurant holds one to three-star ratings. These restaurants provide different types of cuisines, including American, western, Japanese, Chinese, and French. Appendix 1 (in Data in Brief) lists the name, the Michelin-star, the cuisine types, number of responses, Tripadvisor scores, and multilevel code for each restaurant. In the beginning, we aimed to collect field samples right after customers' dining at the selected Michelin-starred restaurants but eventually, in vain. Owing to the experiential nature of our study, we are afraid that participants having dined more than one year ago cannot recall memory of the dining experiences. Therefore, to recruit eligible

participants, we limited the scope of the participants to those who have had dining experiences at the Michelin-starred restaurants within one year.

To ensure that participants had actual experiences, trained assistants visited Instagram of the eight selected restaurants and reviewed related hashtags. The assistants then approached customers who had recently posted photos or videos clips of the selected restaurants and asked for their willingness to participate in this study. Participants who were willing to join this study were provided with our online survey. We chose Instagram to collect empirical data because users having posted photos/videos are more likely to recall the memory of the dining experiences via the posted visual stimuli, i.e., the photos and hashtags.

A local convenience store gift card with a \$100 NTD value (= USD 3.6) as an incentive was given to each participant who had completed the online survey to increase the response rate. To increase the reliability and validity of the samples, the research team visited the selected restaurants in person to collect restaurant-specific questions as detective items for each restaurant. In the survey, one restaurant-specific multiple-choice question was included to detect respondents' actual experiences. For example, respondents of The Guest House were asked: "How do customers notify the service employee for having the check at The Guest House? (A) Ring the bell, (B) Wave hands, (C) Use the wooden block on the table". Only respondents with the correct answer (c) were kept; others were removed. Eventually, a total of 4,191 Instagram users were approached, and 485 responses were collected (response rate = 11.57 %). Among the 485 responses, seven responses with missing values, 23 responses with wrong answers to the restaurant-specific detective question, and 21 responses with random or non-variance answers (e.g., fill in all the same points) were removed, remaining 434 responses.

### **3.2 Participants**

A total of 434 participants were included in this study. Among all participants, 64.75% were female. Most participants held a bachelor (67.74%) or a graduate degree (29.95%). Participants' age ranged from 18 to above 65. Half participants were under the

range 25-34 years old (52.07%). The average spending per person fell in the range 1,501 to 4,500 NTD (35.71%). The occupations of the participants were mostly technicians, salespersons, or service employees (57.86%). Most of the participants visited the selected restaurant for the first time (60.83%), whereas some of them had dining experiences for once (18.2%) or twice (20.97%). The purpose of dining was mostly for friend reunion (58.54%) or family reunion (26.42%).

### **3.3 Measures**

Unless otherwise specified, all scales were measured using seven-point Likert scale ranged from 1 (strongly disagree) to 7 (strongly agree). Below, we specified the operational definitions and reliability of each scale. Unique value is defined as “the degree of the amazement of the dining experiences at Michelin-starred restaurants which are different from other restaurants in terms of services, dining atmosphere, and cuisine.” Four items were adapted from the authentic and emotional experience value subscales of Kim, Seo, and Nurhidayati (2019). Cronbach’s  $\alpha$  for unique value is .90. Conspicuous value is defined as “the degree of self-exhibition and prominence that customer perceive through dining at Michelin-starred restaurants.” We adopted the four items of conspicuous value scale from Shukla (2012). Cronbach’s  $\alpha$  for conspicuous value is .93. Social value refers to “the degree of in-group social status and a sense of belongings that customer perceived through dining at Michelin-starred restaurants.” Four items of status values were adapted from Eastman et al. (1999) and Yang and Mattila (2014). We adjusted the wordings of the items to better fit the study context. Cronbach’s  $\alpha$  for social value is .94.

Hedonic value is defined as “the degree of novelty and curiosity in cuisines and services that the customer perceived when dining at Michelin-starred restaurants.” Four items from Kiatkawsin and Han (2019) were adopted. Cronbach’s  $\alpha$  for social value is .93. Functional value is defined as “the degree of satisfaction of dining experiences of the Michelin-starred restaurant in terms of

decoration, atmosphere, cuisine, and services.” Three items were adopted from Yang and Mattila (2016). Cronbach’s  $\alpha$  for functional value is .77.

Self-expansion is operationalized as “the degree of motivation to increase resources, perspective, and identities in order to enhance ability to accomplish goals.” Seven items from self-expansion questionnaire of Aron et al. (2013) and Lee et al. (2019) were adapted. The original scale was used in (close) relationship science and was latter adapted in a tourist study (Lee et al., 2019). The wordings of the items were changed in this study to better fit the restaurant context. Cronbach’s  $\alpha$  for self-expansion is .93.

Customer gratitude is defined as “customers’ positive reciprocal intentions to the unexpected (or beyond expectation) services.” Five items from Palmatier et al. (2009) were adopted to measure customer gratitude. Cronbach’s  $\alpha$  for customer gratitude is .91.

Customers’ willingness to pay a price premium refers to “the customers’ intention to pay a higher price for the restaurant brand.” Three items from Buil et al. (2013) were adapted and we changed the wordings for restaurant context. Cronbach’s  $\alpha$  for willingness to pay a price premium is .94.

Additionally, we included questions related to customers’ dining experiences and demographic information. For the customer dining experiences, we surveyed (1) the dining frequency within 12 months, (2) purpose of visit, and (3) average spending (per person) at this restaurant. Customers’ gender, marital status, education, age, occupations, area of living, and disposable income were included in the survey.

### **3.4 Analytical approach**

All data were processed and analyzed within R platform for statistical computing (v. 4.0.3) (R Core Team, 2020). One significant contribution of this study is to validate the multidimensional measure of perceived values. We used *lavaan* and *semTools* packages in R to conduct confirmatory factor analysis (CFA) and to evaluate the reliability and validity of the scales (Jorgensen et al., 2018; Rosseel, 2012). Because the data of this study had a two-level hierarchical structure (i.e., customers nested within Michelin-starred restaurants), all hypotheses were tested by MLM using the restricted maximum-likelihood (REML) estimation method (Bates et al., 2014). MLM is a statistical method that allows researchers to examine multi-level relationships and simultaneously decompose the variances of the study variables into within-group and between-group components (Raudenbush & Bryk, 2002).

In view of the mediating hypotheses in our multilevel model, it requires estimating the indirect effects to confirm the significance of the hypotheses. We used Monte Carlo simulations (for 20,000 times) to estimate the confidence interval of the mediation effect because resampling bootstrapping method might be biased multilevel models (Bauer et al., 2006; Preacher & Selig, 2012). The *mediation* package using *lmer* objects (multilevel objects) was adopted to estimate the causal mediation analysis (Tingley et al., 2014). Eventually, we conducted the sequential mediation analysis using dual mediators to see whether sequential mediation was held. To confirm the estimation robustness, robust linear mixed modeling from *robustlmm* package (Koller, 2016).

## **4. Results**

### **4.1 Descriptive statistics**

Table 1 listed Means, standard deviations, correlations, and Cronbach's  $\alpha$  of the measurements. All variables indicated appropriate reliability. We found that the education level of customers was negatively related to hedonic value ( $r = -.12^*$ ), functional value ( $r = -.11^*$ ), self-expansion ( $r = -.16^{***}$ ), and gratitude ( $r = -.10^*$ ). Also, our data showed that customers' age was negatively

related to hedonic value ( $r = -.10^*$ ) and self-expansion ( $r = -.15^{**}$ ). These findings indicated customers' demographic data was a meaningful predictor to investigate customers' perceived values. Therefore, we included those demographic indicators in first and second level as control variables to better estimate the direct and indirect effects in multilevel model. Besides, the results showed low to moderate significant correlations among customers' perceived values.

<Please insert Table 1 here>

#### 4.2 Measurement validation

We conducted CFA to ensure the validity and reliability of the latent variables. Five perceived luxurious values, self-expansion, customer gratitude, and willingness to pay for a price premium with three to seven items were included in an eight-factor measurement model (i.e., unique, conspicuous, social, hedonic, functional value, self-expansion, customer gratitude, and willingness to pay for a price premium). The model showed acceptable fit statistics ( $\chi^2 = 2247.40$ ,  $df = 499$ ,  $p < .001$ ;  $CFI = .89$ ;  $TLI = .87$ ,  $RMSEA = .09$ ;  $SRMR = .07$ ) and all the factor loadings were highly significant ( $p < .01$ ). To ensure that the eight-factor model yields the best measurement model fit, a series of CFA model comparisons were conducted (see Appendix 2). The results show that the eight-factor model performs significantly much better than the seven-factor model ( $\Delta\chi^2 = 1370.01$ ,  $\Delta df = 7$ ,  $p < .00$ ), the six-factor model ( $\Delta\chi^2 = 1334.19$ ,  $\Delta df = 6$ ,  $p < .00$ ), the five-factor model ( $\Delta\chi^2 = 174.21$ ,  $\Delta df = 5$ ,  $p < .00$ ), the four-factor model ( $\Delta\chi^2 = 2030.01$ ,  $\Delta df = 4$ ,  $p < .00$ ), the three-factor model ( $\Delta\chi^2 = 257.47$ ,  $\Delta df = 3$ ,  $p < .00$ ), the two-factor model ( $\Delta\chi^2 = 695.75$ ,  $\Delta df = 2$ ,  $p < .00$ ), and the one-factor model ( $\Delta\chi^2 = 381.89$ ,  $\Delta df = 1$ ,  $p < .00$ ). Such results indicate the appropriateness of the eight-factor model.

To evaluate the measurement quality, we used composite reliability (*CR*) to assess the construct reliability and average variance extracted (*AVE*) to assess convergent and discriminant validity criteria using CFA (Hair et al., 2014). Table 2 illustrates the instrument validity and reliability. As shown, the composite reliability (*CR*) for each construct ranged from .78 to .94, all higher than the recommended threshold of .60 (Nunnally & Bernstein, 1994). The *AVE* of each construct exceeds the cut-off value of 0.5, demonstrating adequate construct validity because more than 50% variance is explained by the construct. Additionally, the *AVE* of each construct is higher than the shared variance (the square of the Pearson correlation), indicating appropriate discriminant validity (Fornell & Larcker, 1981). The results indicate satisfactory convergent and discriminant validity.

Due to the cross-sectional nature of data collection, Harmon's one factor single test is conducted to evaluate the likelihood of common method variance. All items are inputted into an exploratory factor analysis model using unrotated rotation. The results indicate five components and the first principal component accounts for 44% (lower than the suggested value 50%), indicating CMV may not be a serious problem.

**<Please insert Table 2 here>**

### **4.3 Preliminary MLM Analysis**

Null models in MLM produce ICC(1) estimations that indicate the proportion of between-group variance relative to total variance in individual-level dependent variables (James, 1982). In this study, the ICC(1) value was .04 for self-expansion ( $F_{(7,426)} = 3.354, p < .01$ ), .01 for customer gratitude ( $F_{(7,426)} = 1.384, p = .21$ ), and .02 for price premium ( $F_{(7,426)} = 2.316, p < .05$ ). The significant results for self-expansion and pay for a price premium revealed that group-level factors were meaningful for explaining

these two variables. Regarding customer gratitude, between-group variance was not significant, which means that customer gratitude was primarily influenced by individual-level factors. These results were consistent with the theoretical expectations of this study.

#### **4.4 Hypotheses testing: Main effects**

Due to the multivariate and multilevel nature of our data, we used multilevel analysis in *lme4* and *lmerTest* packages in R to estimate our model (Kuznetsova et al., 2017; Tingley et al., 2014). We first evaluated the direct effect of perceived luxurious values on customers' willingness to pay for a price premium. In view of the potential effects of demographic data and clustering effects, gender, education, age, visit frequency, time range (how long ago did the restaurant visit occur), family status, average cost of eat-out (ACE), and average monthly income (AMT) were also included as level 1 control variables whereas average cost in this restaurant per person (ACT) and restaurant Michelin-stars were controlled for level 2 predictors in multilevel model for a more accurate estimation. As shown in Table 3, in Model 1, unique value ( $r = .51^{***}$ ) and functional value ( $r = .42^{***}$ ) were significantly related to willingness to pay price premium. However, unique, social, and hedonic values had no direct effect on price premium after controlling first and second level variables. Therefore, H1 is partially supported.

**<Please insert Table 3 here>**

H2 and H3 postulates that customers' perceived luxurious values were positively related to self-expansion and gratitude respectively. Model 2 and 3 showed that social value ( $r = .12^{**}$ ), hedonic value ( $r = .41^{***}$ ), and functional value ( $r = .37^{***}$ ) predicted self-expansion, whereas unique value ( $r = .16^{**}$ ), social value ( $r = .13^{**}$ ), and functional value ( $r = .78^{***}$ ) predicted customer gratitude. H4 stated a positive association between customer self-expansion and customer gratitude. To control the effects of demographic data

and different perceived luxurious values, all those variables are included in Model 4. The results in Model 4 showed a significant positive relationship between self-expansion and customer gratitude ( $r = .20^{**}$ ). Therefore, H2 and H3 were partially supported whereas H4 was supported.

We hypothesized that customers' self-expansion and gratitude were positively related to willingness to pay premium (H5 and H6). We included control variables and the five luxurious perceived values as covariates into Model 5. Our multilevel model found that customer self-expansion ( $r = .33^{***}$ ) and customer gratitude ( $r = .35^{***}$ ) significantly predicted willingness to pay premium. It was worth noticing that the direct effect of customers' perceived unique value on willingness to pay premium was significant ( $r = .45^{***}$ ) even when self-expansion and gratitude were included in the model. This indicated that unique value may not directly come from the mechanism of self-expansion and gratitude.

#### **4.5 Hypotheses testing: Mediation analysis**

We proposed that the direct effect of customer perceived luxurious values would be mediated by customer self-expansion and customer gratitude. Given that we hypothesized dual mediators model, we included both mediators in the multilevel regression model and used Monte Carlo simulations to estimate the confidence interval. The results were summarized in Table 4.

**<Please insert Table 4 here>**

We first investigated the self-expansion mechanism on willingness to pay a price premium. Our data showed that the indirect effects of social value (95% confidence interval = [.005, .109]), hedonic value (95% CI = [.029, .312]), and functional value (95% CI

= [.021, .275]) were significant (did not include 0), whereas unique and conspicuous values were not. Therefore, H7a was partially supported. Next, our second mediating mechanism argued that the relationship between perceived luxurious value and willingness to pay a price premium will be mediated by customer gratitude. Our data found that only the indirect effect between functional value and pay for a price premium is mediated by customer gratitude (95% CI = [.159, .465]). Following this finding, H7b was partially supported.

#### **4.6 Hypotheses testing: Sequential mediation analysis**

Hypotheses 7a and 7b had found initial support from mediation analysis using Monte Carlo simulations. We then evaluated the sequential mediation analysis using two-step procedure. We organized the findings in Table 4 as well. First, we evaluated the indirect effect between perceived value and customer gratitude (see H7c-1 to H7c-5). Consistent with mediation analysis, we included all level 1 and level 2 control variables into our model as covariate and assigned self-expansion as mediator for 20,000 times Monte Carlo simulations. We found that the indirect effect between social, hedonic, and functional values and customer gratitude were statistically significant (95% CI = [.004, .046], [.024, .132], [.015, .113] respectively, do not include 0). Next, we estimated the full model by including both self-expansion and gratitude as sequential mediators (see H7c-6 to H7c-10). The results showed that the indirect effect of social value (95% CI = [.043, .326]) and functional value (95% CI = [.314, .926]) were significant. Combined the results of the first and the second stage, the sequential mediation hypothesis (H<sub>7c</sub>) was partially supported: social and functional value were mediated first by self-expansion and then by customer gratitude and thus led to willingness to pay a price premium. This finding indicated that when customer perceived social and functional values of fine dining experiences at the Michelin-starred restaurants, they would feel more knowledgeable, horizon-broadened, and self-worth and would be more likely to express their gratitude to service employees and service providers. Therefore, they would be willing to pay more for premium dining experiences (i.e., food, service, and environment).

#### **4.7 Model assumptions and robustness**

Before the multilevel modeling, a series of test were performed to check the linear assumptions. The multi-normality tests are performed using skewness and kurtosis (Chemingui & Ben lallouna, 2013; Kim, 2013). Our data meets the criteria: the values of skewness are between -0.21 to -1.12 (below suggested values +/- 2) and the values of kurtosis are between 1.44 and -0.79 (below suggested values +/- 7). We also examine the distribution of the residuals to ensure the underlying assumptions of multivariate regression analysis. A multiple linear regression is conducted using all predictors to obtain the residuals. A Durbin-Watson test indicates  $d$  statistics 2.12 ( $p = 0.26$ ), suggesting all observations and regression errors are statistically independent (Quinn & Keough, 2002). A non-constant variance score test is performed (Chi-square = 0.165,  $p = 0.68$ ), indicating the acceptance of  $H_0$  (homogeneity of variance). To detect the severity of multicollinearity issue, the variance inflation factor (VIF) statistics (the ratio of the variance of estimating some parameter in a model that includes multiple other terms by the variance of a model constructed using only one term) is used to detect the multicollinearity issue, as showed in Appendix 2, the VIF statistics for the six multilevel models were below 5, indicating low concerns of multicollinearity.

All fitted models reported here by and large satisfied the assumptions of linearity, and the residuals were near-normally distributed and homoscedastic. The residuals were also near-normally distributed across the levels of all predictor variables. Further, Q-Q plots indicated that the random effects were near-normally distributed for the models (see Appendix 3). We nonetheless re-ran our analyses using robust linear mixed modeling (Koller, 2016), but found no significant changes in the pattern of results across all fitted models.

#### **5. Discussion**

This study investigated the relationship between customer perceived luxurious values and willingness to pay a price premium at Michelin-starred restaurants and examined underlying psychological mechanisms (i.e., self-expansion, customer gratitude, and the sequential mediation). We found that customers' perceived unique, social, hedonic, and functional values contributed to price premium directly or indirectly. Among the five different values, we found unique (with direct and indirect effect), social (with indirect effect), hedonic (with indirect effect), and functional (with direct and indirect effect) values were most essential values for willingness to pay a price premium. This result indicated that Michelin-starred restaurant can offer (1) unique dishes, feature, service, and dining experiences, (2) heart-warming and face-gaining services that consider customers as honorable, respectable guests, and (3) aesthetic dining environment and deliciated fine dining.

Second, contrary to our hypothesis, we found that conspicuous value had neither direct nor indirect effect on willingness to pay a price premium when considering other perceived values. Although previous findings have found that customer may gain "high status" and exhibit "successful signal" through conspicuous consumption (Griskevicius et al., 2007; Yang & Mattila, 2014), our data found that conspicuous value had limited variance for price premium. This finding implied that it would be less likely to gain price premium services from customer if Michelin-starred restaurants appeal conspicuous value as main marketing appeal. Instead, managerial and top management team of Michelin-starred restaurants can make good use of unique, social, and functional values.

Third, we found the support of customer self-expansion and gratitude as important mediation mechanisms. We found that the relationship of hedonic value and social value and willing to pay a price premium would only be mediated by self-expansion, whereas the association of functional value and pay for price premium would be mediated by both self-expansion and customer gratitude. This result suggest that self-expansion and gratitude were two distinct routes to increase willingness to pay a price premium. Marketing practitioners can pay attention to which luxurious values they would like to provide and make good use of different tactics to appeal their customers.

Moreover, the sequential mediation effect was also found from unique, social, and functional values. When customer unique, social and hedonic values, customer felt higher self-growth (because of gaining more fine dining knowledge) and thus tended to express sincere gratitude to service providers and employees by paying for price premium. From other customer perceptions perspective, Hyun and Han (2015) have explored the social value and customer's willingness to pay a price premium but fail to find the relationship between social value and paying a price premium. Extending Hyun and Han's findings, our model found that social value led to willingness to pay a price premium through sequential mediator: self-expansion and customer gratitude. Our model complemented their findings by further understanding the underlying mechanism. Much to our knowledge, this is the first paper to investigate the underlying mechanisms for price premium literature. We enlightened from interpersonal relationship literature and social exchange perspective to highlight that underlying mechanism from customer perceived value to customer gratitude and price premium willingness.

### **5.1 Theoretical implications**

First, although previous studies have investigated the antecedents of pay a price premium from a variety of perspectives (Kiatkawsin & Han, 2019; Nyffenegger et al., 2015), few studies explored comprehensive customer perceived values at Michelin-starred restaurants (Batat, 2021; Castillo-Manzano et al., 2021). This paper contributed to fine dining literature by integrating different significant luxurious values in terms of unique, conspicuous, social, hedonic, functional values. Our validated perceived luxurious values scale can be used to understand which kind of customer values was more essential for high-end restaurants. For example, future studies can utilize our scale to identify the relationship between luxurious values and restaurant brand management, service encounters, and cross-cultural service delivery.

Second, our study showed how customers' expanded self could be transformed into pay for a price premium. Nyffenegger et al. (2015) had previously found that when customers felt self-congruent with the brand, higher brand relationship quality would form between the customers and the brand. Thus, customers tend to pay a price premium for the brand. Their model stresses how the "similarities" between the customer-self and the brand can lead to paying a price premium. As expressed by self-expansion theory (Aron et al., 2013), we proposed that customer perceived luxurious values could expand customer self (feel an increase in physical and social resources, perspectives, and identities). Customers high in self-expansion are less self-serving and would be more likely to include others in their "self" (i.e., the service providers and service employees in this study) (Gorlier & Michel, 2020). Therefore, we also postulated that self-expansion increased customer gratitude toward the food, service, and the employees. Our model found empirical support that when customers felt high in social, hedonic, and functional values, customers felt more self-expanded and were more likely to thank the service and the employees through paying a price premium. The result implied that customers are willing to give more (to the restaurant) not just at the moment of feeling the same (self-congruence) but also at the moment of feeling the wow (self-expansion).

Third, our model demonstrates how luxurious values increase pay a price premium through customer gratitude. With the growing interests of customer gratitude (Bock et al., 2021; Kim & Qu, 2020), several studies aim to understand the underlying process (Wetzel et al., 2014). Consistent with Wetzel et al. (2014), we found that when customers were provided with core benefit provision (functional value), preferred treatment (unique values), and status elevation (social values), customers expressed more gratitude toward service employees and provider, and were willing to pay more price. Beyond the Wetzel's model, we further unlatched the psychological process between the service provision and customer gratitude. To be more specific, we found that self-expansion partially mediated the relationship. This finding goes beyond SOR (Stimulus-Organization-Response) model by adding the interpersonal dynamics factor (i.e., self-expansion) into the model.

## 5.2 Practical implications

Among the five different values, we found unique, social, and functional values were the essential values for willingness to pay for premium (with direct effect). High-end restaurants can apply those values to create corresponding services and initiatives for better service experiences. Our model found that unique value is the most significant value among the five. Fine dining restaurants could offer distinct and remarkable dishes, features, services for unexpected dining experiences. For example, restaurants can make good use of the various cooking methods to create remarkable tastes of food, such as fermentation, oil soak, sous vide. Customers may feel “wow” when having the out-of-imagination taste. Moreover, the fine-dining restaurant can take proactive consideration for specific customers by providing “caring” services, such as serving tender meats for the elderly and the children. Also, the restaurant can give more customer autonomy to the food choice. Take dessert as an example, customers would feel the unique experiences if they are allowed to create their dessert combo.

In addition, our model showed that it is also essential to provide customer social value (status attainment). The restaurant can deliver heart-warming and face-gaining services to make customers feel special, honorable, and respectable. Service employees could implicitly observe the dining process and take initiative to solve customers’ problem. For example, providing a shawl for female customers when they feel cold; preparing special drinks or handmade cards to customers during their special moments; taking Polaroid photos for customers in memory of their special moments; guiding customers from their table to the front gate before and after their dining.

Our study also illustrated that the significance of functional value in fine-dining restaurants. It implies the need for an aesthetic dining environment and delicatious fine dining. The restaurant could decorate the dining environment based on seasons. For example, fresh flowers (floriculture), landscape, potted plants (horticulture), and candles could be used for table setting, whereas arts or

paintings on the wall can reflect the sense of season. In addition to visual attraction, restaurants can make good use of other senses, such as smell. Restaurants could burn the incense sticks or cones at the entrance to spread the elegant fragrance so that customers could enjoy the smell on the table. Moreover, specifically settled tableware that fits the cuisine topics could represent consistent aesthetics of the dining experiences. At the end of the service, the restaurant can provide dedicatedly crafted snacks or drinks as specific gifts so that customers can extend the service experiences at home.

### **5.3 Limitations and future research**

This study has some limitations. First, research had showed that culture and socio-developmental factors that may influence customers' luxurious consumption. The research context of this study (i.e., Taiwan) is developed states in East Asian. Future studies can further explore the cultural differences between east and west in terms of customers' luxurious values, emotional and cognitive appraisal, and behavioral intervention in fine-dining restaurants. Second, in this study, pay a price premium is measured by participants' willingness rather than actual actions. In future research design, researchers may conduct onsite longitudinal data collection to capture customers' real behaviors on pay a price premium at Michelin-starred restaurants. Third, we showed that self-expansion and customer gratitude as sequential mediators of paying for price premium. Although empirical support was found in our data, the cross-sectional nature of data collection may pose a threat to the causal inference. We suggest future studies to explore such underlying mechanisms using experiment to test the sequential mediating effect. Fourth, we must admit that our samples are imperfect and maybe somehow biased due to the selection criteria and the low response rate. Consumers who did not have Instagram accounts, who were not motivated to post photos/video clips, who set Instagram as private accounts, and who did not agree to participate were excluded from this study. However, great efforts were made to collect empirical data to verify the proposed hypotheses as possible. We encourage future studies to replicate the research findings from a variety of Michelin-starred restaurants and around the world to

increase generalizability. Fifth, future studies are suggested to add customer satisfaction in analyzing customers' attitudes toward Michelin-starred restaurants.

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Figure 1. Theoretical framework of this study

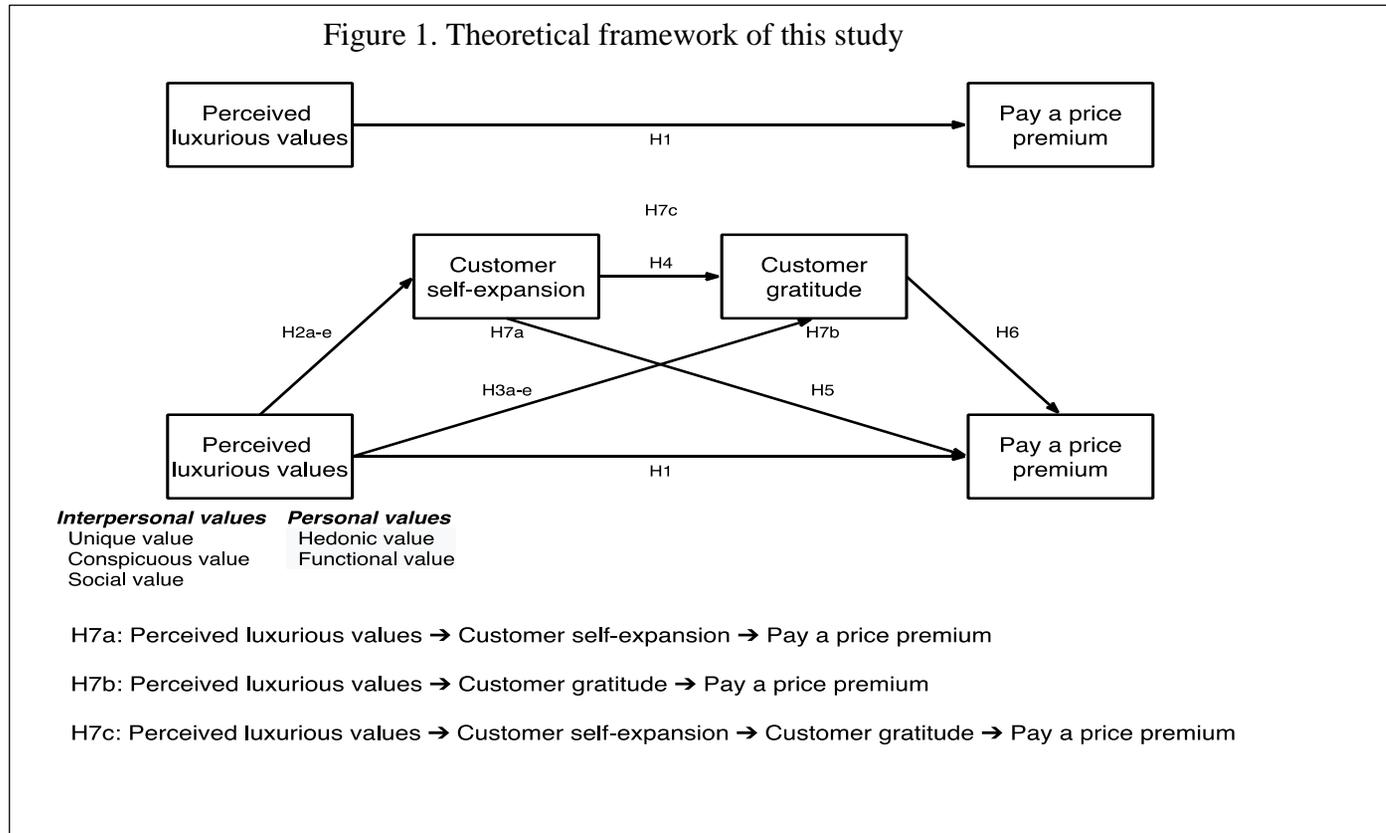


Table 1. Mean, SD, Skewness, Kurtosis , and Pearson's Correlations

	Mean	SD	SK	KU	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	1.65	.48	-.62	-1.62	—																
2. Education	2.28	.50	.42	-.56	.00	—															
3. Age	2.38	.93	1.15	2.37	-.11*	.11*	—														
4. Visit frequency	1.90	1.18	1.32	1.29	.04	-.01	.15#	—													
5. Time range	1.60	.81	.85	-.96	.03	-.07	.11*	-.09	—												
6. Family status	1.49	.78	1.16	-.36	-.01	.12#	.49^	.09	.09	—											
7. ACE	3.55	1.77	.64	-.61	-.01	.15#	.10*	.35^	-.12*	.09	—										
8. ACT	3.14	1.20	1.20	2.27	.01	.02	-.09	.07	-.23^	-.01	.30^	—									
9. AMT	4.47	1.69	-.15	-.61	-.22^	.20^	.34^	.19^	-.09	.14#	.37^	.10*	—								
10.Unique value	5.73	1.15	-1.14	1.49	.01	-.09	-.06	.02	-.06	-.05	-.10*	.08	-.03	(.90)							
11. Conspicuous value	4.39	1.64	-.31	-.67	.02	-.09	-.01	.02	-.05	.01	-.09	.03	-.01	.33^	(.93)						
12. Social value	4.16	1.69	-.20	-.74	.03	-.08	-.01	.04	-.06	.01	-.05	.06	.01	.28^	.86^	(.94)					
13. Hedonic value	5.41	1.41	-.95	.34	-.02	-.12*	-.10*	-.09	-.04	-.09	-.11*	.10*	-.07	.69^	.50^	.48^	(.93)				
14. Functional value	5.87	1.00	-1.08	1.35	-.02	-.11*	-.08	-.01	-.03	-.11*	-.10*	.06	.00	.70^	.37^	.32^	.68^	(.77)			
15. Self-expansion	5.17	1.21	-.66	.31	-.01	-.16^	-.15#	-.06	-.05	-.10*	-.15**	.12*	-.07	.60^	.45^	.45^	.76^	.69^	(.93)		
16. Gratitude	5.68	1.20	-1.09	1.16	-.03	-.10*	-.04	.02	-.02	-.06	-.05	.06	-.01	.52^	.27^	.28^	.45^	.67^	.54^	(.91)	
17. Price premium	4.33	1.77	-.31	-.78	-.01	-.07	-.03	.09	-.07	.01	.06	.10*	.05	.54^	.25^	.26^	.46^	.51^	.51^	.51^	(.94)

Note: \*  $p < .05$ , #  $p < .01$ , ^  $p < .001$ ; Gender (1= male; 2= female); Family status (1 = single; 2= married without children; 3 = married with children); Time range (how long ago did the restaurant visit occur: 1= within three months; 2=between three to six months; 3 = between six to twelve months); AMT = average monthly income (1= No income; 2= 1-20,000 NTD; 3= 20,001-40,000 NTD; 4= 40,001-60,000 NTD; 5= 60,001-80,000 NTD; 6= 80,001-100,000 NTD; 7= above 100,001 NTD); SK = Skewness; KU = Kurtosis; ACE= Average cost of eat-out (1= below 5000 NTD; 2= 5001-10000 NTD; 3= 10001-15000 NTD; 4= 15001-20000 NTD; 5= 20001-25000 NTD; 6= 25001~30000 NTD;7= above 30001 NTD); ACT = average cost in this restaurant per person (1= below 1500 NTD; 2= 1,501-3,000 NTD; 3= 3,001-4,500 NTD; 4= 4,501-6,000 NTD; 5= 6,001-7,500 NTD; 6= 7,501~9,000 NTD; 7= 9,001-10,500 NTD; 8= above 10,501 NTD)

Table 2. Factor loadings of confirmatory factor analysis

Construct / Item	Std. Est.	SE	z	95% CI	
				Lower	Upper
<b>Unique value (CR = .91; AVE = .72)</b>					
This restaurant offers unique foods.	.75	.05	17.82	.76	.95
This restaurant offers something different, a novel experience.	.86	.05	21.91	1.03	1.24
This restaurant makes me feel amazed.	.92	.05	24.79	1.21	1.41
This restaurant has distinct regional characteristics and atmosphere.	.81	.05	20.27	.97	1.18
<b>Conspicuous value (CR = .94; AVE = .79)</b>					
Dining at this restaurant indicates a symbol of achievement.	.86	.07	22.36	1.40	1.67
Dining at this restaurant indicates a symbol of wealth.	.92	.07	24.89	1.53	1.79
Dining at this restaurant indicates a symbol of prestige.	.95	.06	26.53	1.58	1.83
Dining at this restaurant attracts attention.	.81	.07	20.48	1.32	1.60
<b>Social value (CR = .94; AVE = .80)</b>					
Dining at this restaurant increases others' evaluation on me.	.90	.07	24.21	1.53	1.80
Dining at this restaurant makes good impression on others.	.88	.07	23.09	1.45	1.72
Dining at this restaurant makes me feel that acceptable in my work circle.	.88	.07	23.17	1.46	1.74
Dining at this restaurant makes me socially recognized.	.91	.07	24.29	1.53	1.80
<b>Hedonic value (CR = .93; AVE = .77)</b>					
Dining at this restaurants offers new experiences.	.86	.06	22.21	1.18	1.41
Dining at this restaurants satisfies my sense of curiosity.	.88	.05	22.92	1.13	1.35
I like to dine at this restaurant for the novelty of the experience.	.87	.06	22.48	1.29	1.54
I feel like I'm exploring new worlds when I dine at this restaurant.	.90	.06	24.13	1.37	1.61
<b>Functional value (CR = .78; AVE = .54)</b>					
This restaurant is aesthetically appealing	.70	.06	16.20	.85	1.08
This restaurants' dishes are sophisticated	.75	.04	17.76	.70	.87

The service provided in this restaurant is attentive	.77	.05	18.36	.81	1.00
<b>Self-expansion (CR = .93; AVE = .65)</b>					
I felt an increase in my ability to taste.	.79	.05	19.71	.93	1.13
When I was in the meal, I felt a broader horizon of delicacy.	.88	.05	23.14	1.07	1.26
I felt that I learned new things in the meal.	.89	.05	23.50	1.16	1.37
This meal increased my knowledge.	.85	.06	22.00	1.16	1.38
I felt a greater awareness of delicacy.	.89	.05	23.72	1.14	1.35
I felt that I added some positive values to myself.	.79	.06	19.51	1.05	1.28
I had a better understanding of who I am.	.58	.08	12.93	.85	1.15
<b>Customer gratitude (CR = .89; AVE = .62)</b>					
I felt grateful for the service provision of service employees.	.90	.05	24.17	1.01	1.18
I felt appreciative of the performance of service employees during the service.	.94	.05	26.02	1.13	1.31
I felt thankful for the proper service procedure of the restaurant.	.94	.04	25.84	1.05	1.22
Owing to service employees' efforts, the restaurant has more opportunities to sell other service products.	.66	.07	15.22	.89	1.15
I am grateful for service employees' assistance, so I also consider other value-added products.	.62	.07	14.14	.90	1.20
<b>Price premium (CR = .94; AVE = .84)</b>					
Even if the price of this restaurant would have to go up quite a bit, I would still consider buying it.	.85	.07	21.98	1.43	1.71
I am willing to pay a higher price to enjoy the brand of this restaurant than for other brands.	.95	.07	26.45	1.63	1.89
I am willing to pay a lot more for the brand of this restaurant than for other brands.	.94	.07	25.84	1.66	1.94

Note: CR = composite reliability, AVE = average variance extracted; CI = confidence interval; *p* values for all items are <.001; Model goodness of fit statistics:  $\chi^2 = 2247.40$ , *df* = 499, *p* < .001; CFI = .89; TLI = .87, RMSEA = .09; SRMR = .07

Table 3. Results of multilevel modeling analyses for paying for a price premium

<i>Predictors</i>	<b>Model 1</b>		<b>Model 2</b>		<b>Model 3</b>		<b>Model 4</b>		<b>Model 5</b>	
	Price Premium		Self-Expansion		Customer gratitude		Customer gratitude		Price Premium	
	<i>b</i>	<i>SE</i>								
(Intercept)	-2.03	.79	1.04	.43	1.51*	.66	1.30*	.64	-2.84***	.77
<b>Control variables</b>										
Gender	-.05	.15	-.02	.08	-.10	.09	-.09	.09	-.01	.14
Education	-.12	.15	-.14	.07	-.07	.09	-.04	.09	-.05	.14
Age	-.07	.09	-.12**	.05	-.01	.06	.01	.06	-.03	.09
Visit frequency	.07	.06	.02	.03	.00	.04	.00	.04	.07	.06
Time range	-.03	.09	-.03	.05	-.02	.06	-.01	.06	-.02	.09
Family status	.16	.10	.06	.05	.02	.06	.01	.06	.14	.10
ACE	.09	.05	-.05*	.02	.02	.03	.03	.03	.09*	.05
AMT	.03	.05	.01	.02	-.03	.03	-.03	.03	.03	.05
Stars <sub>between</sub>	-.04	.11	.00	.07	-.06	.12	-.06	.12	-.01	.10
ACT <sub>between</sub>	.07	.14	.03	.09	-.15	.15	-.16	.14	.10	.14
<b>Independent variables</b>										
Unique value	.51***	.09	.00	.05	.16**	.06	.16**	.06	.45***	.09
Conspicuous value	-.08	.09	-.05	.04	-.10	.05	-.09	.05	-.03	.08
Social value	.14	.08	.12**	.04	.13**	.05	.11*	.05	.05	.08
Hedonic value	.07	.08	.41***	.04	-.09	.05	-.17**	.06	-.04	.09
Functional value	.42***	.11	.37***	.05	.78***	.07	.71***	.07	.03	.12
<b>Mediators</b>										
Self-expansion							.20**	.06	.33***	.09
Customer gratitude									.35***	.08
<b>Random Effects</b>										
$\sigma^2$	2.06		.52		.75		.74		1.90	
$\tau_{00}$	.00 <sub>res_code</sub>		.01 <sub>res_code</sub>		.04 <sub>res_code</sub>		.03 <sub>res_code</sub>		.00 <sub>res_code</sub>	
Marginal $R^2$	.35		.65		.47		.48		.41	

Note: n = 434 at Level 1; n = 8 at Level 2. Unstandardized coefficients are reported. We did not include random slope effect because the model cannot converge due to model complexity

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 4. Results of testing mediation and sequential mediation effects

Mediating path	Estimate	95% CI		<i>p</i>
		Lower	Upper	
H7a-1: Unique value → Self-expansion → Price premium	-.003	-.048	.043	.853
H7a-2: Conspicuous value → Self-expansion → Price premium	-.020	-.076	.027	.363
H7a-3: Social value → Self-expansion → Price premium	.047	.005	.109	.024*
H7a-4: Hedonic value → Self-expansion → Price premium	.162	.029	.312	.017*
H7a-5: Functional value → Self-expansion → Price premium	.139	.021	.275	.018*
H7b-1: Unique value → Customer gratitude → Price premium	.051	-.026	.140	.196
H7b-2: Conspicuous value → Customer gratitude → Price premium	-.023	-.087	.035	.455
H7b-3: Social value → Customer gratitude → Price premium	.040	-.012	.101	.140
H7b-4: Hedonic value → Customer gratitude → Price premium	-.037	-.141	.057	.432
H7b-5: Functional value → Customer gratitude → Price premium	.301	.159	.465	<.001***
H7c-1: Unique value → Self-expansion → Customer gratitude	.001	-.018	.021	.873
H7c-2: Conspicuous value → Self-expansion → Customer gratitude	-.008	-.031	.012	.412
H7c-3: Social value → Self-expansion → Customer gratitude	.022	.004	.046	.007**
H7c-4: Hedonic value → Self-expansion → Customer gratitude	.074	.024	.132	.003**
H7c-5: Functional value → Self-expansion → Customer gratitude	.060	.015	.113	.006**
H7c-6: Unique value → Self-expansion → Customer gratitude → Price premium	.188	.023	.394	.024*
H7c-7: Conspicuous value → Self-expansion → Customer gratitude → Price premium	.078	-.035	.213	.188
H7c-8: Social value → Self-expansion → Customer gratitude → Price premium	.169	.043	.326	.006**
H7c-9: Hedonic value → Self-expansion → Customer gratitude → Price premium	.012	-.161	.186	.885
H7c-10: Functional value → Self-expansion → Customer gratitude → Price premium	.598	.314	.926	<.001***

Note: The Confidence Interval was estimated using Monte Carlo (Quasi-Bayesian) simulations for 20,000 times.

110年度專題研究計畫成果彙整表

計畫主持人：劉瓊如		計畫編號：110-2410-H-415-025-			
計畫名稱：自我擴展 vs. 由衷感謝：驗證米其林餐廳顧客溢價購買意願的心理機制路徑					
成果項目		量化	單位	質化 (說明：各成果項目請附佐證資料或細項說明，如期刊名稱、年份、卷期、起訖頁數、證號...等)	
國內	學術性論文	期刊論文	0	篇	
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	0	篇	
		其他	0	篇	
國外	學術性論文	期刊論文	1	篇	Chyong-Ru Liu, Tonny Menglun Kuo, Yao-Chin Wang, Ya-Ju Shen, Shan-Pei Chen, Jia-Wen Hong. (2022) Perceived luxurious values and pay a price premium for Michelin-starred restaurants: A sequential mediation model with self-expansion and customer gratitude. International Journal of Hospitality Management, 103, 103185. (SSCI). Impact Factor: 9.237 (MOST 110-2410-H-415-025 -)
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	0	篇	
		其他	0	篇	
參與計畫人力	本國籍	大專生	2	人次	學習網路問卷調查技能
		碩士生	6		學習網路問卷調查技能、統計軟體應用及統計成果撰擬
		博士生	1		學習研究文獻及成果資料撰擬
		博士級研究人員	0		
		專任人員	0		
	非本國籍	大專生	0		
		碩士生	0		
		博士生	0		
		博士級研究人員	0		
		專任人員	0		
其他成果					

(無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)