

Consumers' Perceived Value of One Tambon One Product (OTOP) Thai Handicrafts Preserved Flowers in Glass Innovation in Relation to Decision-Making

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Abstract

The goals of this study are to enhance Thai handicrafts, especially, the preserved flowers in glass innovation as well as the OTOP brand by conducting a quantitative research to investigate this new market segment of the flower industry in Thailand for small enterprises or startups. The research's objectives are to examine the relationships between consumers' product perceived value and their decision-making to predict what the salient determinants with respect to the product perceived value dimensions influence consumers' decision-making to buy the preserved flower in glass innovation. Additionally, the comparisons of mean differences between the groups of purchase interest reasons, which reflect the decision-making styles, and each group dimension of product perceived value are investigated. A survey approach using a self-administered questionnaire was employed to collect data. The findings suggest that small enterprises should intensively focus on developing consumers' perceptions of the three aspects of product perceived value with respect to the quality value, the social value, and the convenience value. These dimensions of perceived value are indicated to be important factors for consumers' willingness to possess the preserved flowers in glass innovation products.

Keywords: Handicraft, Preserved Flowers, OTOP, Perceived Value, Decision-making, Small Enterprises, Startup, Thailand.

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1. Introduction

Environmental and social concerns have impacted the fresh flower sector and created considerable barriers for it (Grote, 1999). Some of the environmental concerns are related to the very large need of water and the use of pesticides in cultivation and plantation (Grote, 1999) and the deficiency of drinking water supply caused by it (Maharaj and Dorren, 1995). The social concerns include the deteriorating image of fresh flowers which is caused by the oppression of workers in the flower production process (Grote, 1999), and the impact of rigorous market accessibility (WTO, 1998). Consequently, the fresh flowers market is deemed to gradually encounter increasing obstacles in the future. Whereas, artificial flowers preserved flowers and greenery experience a growth trend. There appears to be a relatively high increase of demands for preserved flowers which have many applications, particularly, in interior decoration and floral arrangements (Verdissimo, 2015).

The awareness of preserved flowers is increasing. A few years ago, preserved flowers were largely unknown to a large portion of consumers in the global market (Vellekoop, 2018; Yingqing, 2016). With salient characteristics and versatile application, preserved flowers become increasingly recognized and are set to become entirely new market segmentation for the flower industry (Report Bazaar, 2018; Vellekoop, 2018).

Preserved flowers in glass are an innovative product with beauty and versatility. They are handicraft products that are made by hand with some assistance of equipment. The basis of the product is striking and often tropical flowers that are preserved through drying and then encased by glass. In this process, the natural beauty of the flowers is captured for eternity. There are almost unlimited possibilities on for these products. They can be utilitarian and functional as the paperweight shown in Figure 1. Preserved flowers in glass can also be used as a piece of jewelry or as creative decorative items in the home which is shown in Figure 2. But above its decorative qualities, it can also hold be used as cultural, traditional, religious, and social symbols that are full of

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meaning to its owners. In this versatility of the product lies untapped potential in terms of the cultural and economic noteworthiness (India-Craft, 2018).



Figure 1: Preserved Rose in Glass as Paper Weight
(Source: Dokkaew Florist)



Figure 2: Preserved Water Lily in Glass as creative decorative items
(Source: Dokkaew Florist)

In Thailand, the preserved flower in glass has gained recognition as a luxury innovative product with using state-of-art technology (Report Bazaar, 2018). They have been nominated to be awarded the four stars of the OTOP brand from the Thai handicrafts industry (ASTV Manager Online, 2009). The acronym OTOP stands for One *Tambon* One Product, with *tambon* being a sub-district. The OTOP program was launched by the Thai government in the early 2000s in order to stimulate the production of local products, often but not exclusively handicrafts. It aims to improve the economic situation of rural people as well as promote their wisdom and tradition through their products.

While the producers of preserved flowers in glass have a lot of skills in their craft, they lack understanding in both domestic and overseas markets as well as consumers' behavior in purchasing innovative handicraft products.

Producers do not have the expertise necessary in approaching the target markets and build awareness of their customer. These are the producers' weaknesses. These obstacles could be overcome by increasing product differentiation and awareness in consumers. Kotler (2000) suggests that increased product perceived value tends to favorably influence customers decisions' to choose that specific product. Patterson and Spreng (1997) assert that consumers who bought the product due to its perceived worth when rather than the monetary exchange experienced great satisfaction and purchasing retention. As can be seen from previous studies, the perceived value is deemed to be an important factor for consumers in their decision-making of products' preference choices (Bolton & Drew, 1991).

This study intends to study the relationships between consumers' perceived value factors and consumers' decision-making to predict their actual purchasing behavior of the preserved flowers in glass from small enterprises or startups. The businesses are small scale with up to 50 employees in the manufacturing sector and up to 15 for retailing sector. They also have lower revenue and profitability as well as fewer outlets and market areas (Ingram, 2018; Ministerial Regulation, 2002).

We applied the conceptual framework of the theory of planned behavior (TPB) formulated by Ajzen (1985) and the innovation and technology acceptance model (TAM theory) formulated by Davis, Bagozzi, and War Shaw (1989). Thereby, we incorporate different parts of both models in order to observe the theory testing of effecting foci. Additionally, the expectation theory in relation to consumers' perceived value that might impact on decision-making (Kim, Sumeet & Li, 2005), the model of consumer decision-making styles (Sproles & Kendall, 1986), and consumer decision-making style classifications (Quester et al., 2007; Shim, 1996) are included to formulate the conceptual framework for this study.

The uses of TPB and TAM models have been combined to achieve the best possible outcome for this study. The study used TPB theory by focusing on the factor of perceived behavior control in terms of internal

factors (i.e. product knowledge or awareness) and external factors (i.e. facilitating conditions or convenience) that might influence behavior in purchased decision-making in the TPB model.

The researchers also employed TAM theory by applying the use of some effects in the TAM model to predict the innovation and technology acceptance in preserving the fresh flowers in glass. This observation will examine the relationships between the actual behavior in purchase decision-making and the behavior of innovation and technology acceptance with respect the preserved flowers in glass innovation by focusing on perceived usefulness and perceived ease of use that affect behavioral intention in accordance with the TAM model.

This study contributes to our knowledge of the relationship between perceived product values and customers decision-making processes. It will show that three out of four perceived values – quality value, social value and convenience value – to have a significant and positive relationship with customers purchase decision. The only perceived value that has no significant relationship with the purchase decision is the price value which indicates that customers are not price sensitive and willing to pay more for innovative and handmade products. This findings point out the effects of perceived value dimensions, particularly, the price value that might regulate in accordance with the product category or involvement and results into inconsistency with past studies. Further it was shown that, there was still limited differentiation in the products. We used the findings of this study to make recommendations to small enterprises and startups on how to better approach customers, expand the domestic and international market as well as to increase differentiation. Therefore, this study is not only building new knowledge but also benefits the producers of preserved flowers in glass.

2. Research Method

2.1 Data Collection

The main focus of the study is on the relationship between consumers' perceived value of the product and decision-making to predict what factors affect consumers' decision-making to purchase the preserved flower in glass innovation. Further, the study compares the differences between the groups' attitudes towards six purchase interest reasons and each dimension of the product's perceived value.

In addition, the researchers also look at samples' characteristics of consumer groups, reasons to purchase (or decision-making styles), and product attributes (product categories and types of flower) in order to receive further useful information for entrepreneurs.

A quantitative approach was taken for this study and a self-administered questionnaire was used as a research tool to collect data. The study employed the survey technique to approach the predominant consumers or end users of the preserved flowers in glass innovation market. The main consumers or end users in the current market are represented by the study's population which is comprised of working women who fall into the groups of general consumers, spa businesses, hotels, and tourists (ASTV manager online, 2009).

Based on this information, the study employed a probability sampling using a stratified random sampling technique to classify the different populations into different strata with the members for each being homogeneous (Zikmund & Babin, 2010; Aaker, Kumar, & Day, 2007). Therefore, the samples for this study are defined as working female consumers aged not less than 18 years who affiliate with 4 consumer groups (or 4 different strata) which consist of (1) individual or general consumer, (2) spa businesses, (3) hotels, and (4) tourists.

The sample size was calculated by using a formula for infinite population (or unknown population proportion) suggested in earlier research (McDaniel & Gates, 2010; Aaker et al., 2007). The sample size derived from the formula calculation is a minimum of 68 participants (90% of confidence level with 10% confidence interval, $P = 50\%$, and $Z = 1.645$). Due to the time, budgetary, and new emerging market segmentation constraints, this study collected a total sample of 120 participants. As mentioned above, stratified random sampling was used with subsequently disproportional stratified sampling by defining an equal group size for each stratum (Aaker et al., 2007). Hence, researchers collected data on 30 participants for each stratum. All participants live or stay in Bangkok, which is the capital city and a center for business in Thailand.

The data gathered during fieldwork was analyzed through a statistical software program. The researchers used descriptive statistical methods (i.e. frequency, percentage, mean, and standard deviation) and

inferential statistical methods (i.e. multiple regression, correlation coefficient, and ANOVA) for the data analysis.

2.2 Variables and Measurement

The main focus of this study is to find a relationship between the independent variables concerning the perceived value of the product and the dependent variable with respect to the decision-making. It was investigated whether the former impact the later. The researchers also observed the directions any relationship.

The criteria measurement of the perceived value was developed from the criteria items used in past research by Panthura (2013); Pihlstrom (2008); Kantamneni and Coulson (2005); Hall, Shaw, Lascheit, and Robertson (2000); Sweeney, Soutar, and Lester (1996). These criteria items for the perceived value of products are as follows:

- (1) Quality value (i.e. high quality of product, durability, product variety, beauty, scarceness, meaningfulness, or auspiciousness)
- (2) Price value (i.e. reasonable price, or worth);
- (3) Social value (i.e. community's production, social acceptance, or environmental concern, green product), and
- (4) Convenience value (i.e. easy care, easy and quick to buy from outlets, representative, or online).

Both independent and dependent variables were measured using an attitudinal rating scale, namely the Likert scale. This allows participants to rate their attitudes to the products value response on a scale from 1 (strongly disagree) to 5 (strongly agree). In regards to consumers' decision-making, participants were also asked to rate their likelihood to buy a specific product on a scale from 1 (strongly disagree) to 5 (strongly agree) (Aaker et al., 2007).

The second focus was to investigate the differences among the six strata in regards to purchased interest reasons and each criterion of perceived value. The measurement of perceived value has been explained above. For purchased interest reasons, designated labeled categories that are known as nominal scale were used (Aaker et al., 2007). The study employed multiple-choice for the measurement to allow respondents to choose their preferred reason for purchasing items out of various alternatives (Zikmund & Babin, 2010). The designated labeled categories for the above mentioned variables are as follows:

- (1) High quality (i.e. durable);
- (2) Cheap price (i.e. discount or promotion);
- (3) OTOP brand (i.e. Thailand handicrafts or made in Thailand);
- (4) Popularity (i.e. fashionable or trendy);
- (5) Recreation (i.e. hedonistic, harmony or joyful); and
- (6) Unplanned or impulse purchase (i.e. sudden feeling, thought desire, or force).

Finally, the other focus for this research is to describe the samples' characteristics of both psychological factors (attitude of purchased interest reasons or decision-making styles) and external factors like the product attributes in terms of product category and type of flower (or raw material) preference. The measurement of psychological factors in relation to the reasons to purchase has been described above. External factors with regards to product attributes, the study assigned labeled categories or a nominal scale (Aaker et al., 2007) for the use of multiple-choice (Zikmund & Babin, 2010) as follows:

- Product category preference
 - (1) Preserved flowers in glass for home or office décor
 - (2) Souvenir (preserved flowers in small glass containers for any occasions such as weddings, anniversaries, or funerals).
- Flower species preference
 - (1) Water Lily;
 - (2) Rose;
 - (3) Orchids;
 - (4) Paphiopedilum (Lady's Slipper);
 - (5) Daffodil (Narcissus); and
 - (6) Make to Order (Customized to customer's specification)

2.3 Test of Validity and Reliability

The content validity was examined by using the Item-Objective Congruence Index (IOC) technique to ensure that participants would not feel confused and understood all of the content incorporated in the questionnaire well (Brown, 1996; Rovinelli & Hambleton, 1977).

In addition, the reliability test was implemented to check the quality of research instrument and variable measurement through a pilot-test with 36 respondents (9 samples for each stratum of consumer groups). The entire questionnaire was shown to be a reliable tool based on the Cronbach's Alpha being greater than 0.70 (Cronbach's Alpha = 0.711, $p < 0.05$, $n = 36$), which means that researchers can appropriately use it to collect data in the fieldwork (Bryman & Bell, 2015; George & Mallery, 2003).

Further, the measurement of the independent variables for the main focus demonstrated that the Cronbach's Alpha value of the overall product perceived value meets the criterion Cronbach's Alpha being greater than 0.70 (Cronbach's Alpha = 0.744, $p < 0.05$, $n = 36$). This result indicates that all four criteria items with respect to perceived quality value, perceived price value, perceived social value, and perceived convenience value are appropriate to measure product perceived value and can be reliably be used to collect data (Hair, Black, Babin, Anderson, & Tatham, 2006).

The IOC and reliability tests help to enlarge the internal validity of the study. Moreover, the study increased external validity by using colored pictures of existing products to introduce to the consumers during a process of data collection.

3. Results and Analysis

3.1 Sample Characteristics

The total sample amounts to 120 participants who are primary consumers of the preserved flowers in glass innovation market. These samples were classified into 4 consumer groups as demonstrated in Table 1. For each consumer group, we equally collected data from 30 respondents (25% of the total sample for each group).

Table 1: Characteristics of Samples (n = 120)

Consumer Group	Frequency	%
Individual/General	30	25.0
Spas	30	25.0
Hotels	30	25.0
Tourists	30	25.0
Total	120	100.0

3.2 Characteristics of Reasons to Purchase

The attitudes of consumers with respect to their reasons to purchase the preserved flowers in glass innovation indicate that consumers purchased a specific product because of its OTOP brand 34.2%, followed by high quality 24.2%, popularity 16.7%, and recreational reason 11.7% as demonstrated in Table 2.

Table 2: Characteristics of Reasons to Purchase (n = 120)

Reasons to Purchase	Consumer Group (n)				Total (n)	Percentage (%)
	Individual	Spas	Hotels	Tourists		
High quality	10	7	8	4	29	24.2
Cheap price	1	4	3	0	8	6.7
OTOP brand	7	6	12	16	41	34.2
Popularity	4	9	5	2	20	16.7
Recreation	6	3	1	4	14	11.7
Unplanned purchase	2	1	1	4	8	6.7
Total	30	30	30	30	120	100.0

3.3 Characteristics of Consumer Group Preference for Product Category

The preference choices of product categories with respect to the preserved flowers in glass and souvenir for each group of consumers (individual, spa, hotel, and tourist) are shown in Table 3. The findings show that the preserved flowers in glass product category is most favored by hotels, whereas, the preserved flowers in small container and souvenir product category is most preferred by spas.

Table 3: Characteristics of Consumer Group Preference on Product Category (n = 120)

Consumer Group	Product Category					
	Preserved Flowers in Glass		Souvenir		Total	
Affiliation	Frequency	%	Frequency	%	Frequency	%
Individual/General	15	23.4	15	26.8	30	25.0
Spas	14	21.9	16	28.6	30	25.0
Hotels	18	28.1	12	21.4	30	25.0
Tourists	17	26.6	13	23.2	30	25.0
Total	64	100.0	56	100.0	120	100.0

3.4 Characteristics of Consumer Group Preference for Flower Species

The descriptive results in relation to the preferred choice of each consumer group towards flower species point out that rose, orchids, and water lily are the three species most favored by consumers. The rose is the favorite of hotels and tourists. Orchids are the most selected by spas. The water lily is most liked by tourists and general consumers. Table 4 shows the results of this part of the study.

Table 4: Characteristics of Consumer Group on Type of Flower Species (n = 120)

Consumer Group Affiliation	Types of Flower						
	Water Lily	Rose	Orchids	Lady's Slipper	Daffodil	Made to Order	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Individual/General	10 (37.0)	8 (17.4)	7 (23.3)	2 (66.7)	0 (0.0)	3 (30.0)	30 (25.0)
Spas	2 (7.4)	11 (23.9)	9 (30.0)	0 (0.0)	2 (50.0)	6 (60.0)	30 (25.0)
Hotels	3 (11.1)	15 (32.6)	8 (26.7)	1 (33.3)	2 (50.0)	1 (10.0)	30 (25.0)
Tourists	12 (44.4)	12 (26.1)	6 (20.0)	0 (0.0)	0 (0.0)	0 (0.0)	30 (25.0)
Total	27 (100.0)	46 (100.0)	30 (100.0)	3 (100.0)	4 (100.0)	10 (100.0)	120 (100.0)

3.5 Results of the Main Foci

The first primary focus for this study looked at the relationship between the perceived value dimensions and the decision-making. In addition, the study intends to predict what salient dimensions of product perceived value influencing decision-making in consumers' purchase behavior of the preserved flower in glass innovation. This primary focus is related to the hypothesis H₁ of this study. To test the hypothesis H₁, the null hypothesis was defined as follows:

Hypothesis H₀₁: None of the perceived value dimensions affects the consumers’ decision-making to purchase the preserved flower in glass innovation.

Hypothesis H₁: There are some dimensions of the perceived value that affects the consumers’ decision-making to purchase the preserved flower in glass innovation.

The hypothesis H₁ was tested by employing an inferential statistic technique, namely, multiple regression, to use for prediction in relation to the effects of the combination of independent variables that are inclined to impact the dependent variable (Kent, 2015). To implement the Multiple Regression technique, it is essential to check the prevalence of multicollinearity by observing the Tolerance and Variance Inflation Factor (VIF) values (Leech, Barrett, & Morgan, 2005).

The test of Tolerance reveals the Tolerance values are greater than a criterion value of 0.10 for all of the dimensions of perceived value ($F = 20.398, p < 0.01, df = 4, \text{Adjusted } R^2 = 0.395$), which mean there is no occurrence of multicollinearity (Lukas, Hair, Bush, & Ortinau, 2004). In addition, the test of VIF demonstrates that all of the independent variables with regard to the perceived value dimensions have VIF values lower than 10 of the criterion value ($F = 20.398, p < 0.01, df = 4, \text{Adjusted } R^2 = 0.395$). The results of the VIF test indicate that no multicollinearity existed for the focused aspect (Lind, Marchal, & Wathen, 2010; Lukas et al., 2004). Based on these outcomes of Tolerance and VIF value test, the researchers can employ multiple regression as the inferential statistic technique to test the hypothesis H₁. The results of multiple regression analysis are shown in Table 5.

Table 5: Results of Consumers’ Perceived Value of Product Affecting on Consumers’ Decision-Making

(n=120)				
Variables	Mean	S.D.	Customers’ Decision-Making	
Perceived Value				
- Quality Value	3.82	0.869	0.023**	
- Price Value	3.78	0.862	0.206	
- Social Value	3.75	0.946	0.033**	
- Convenience Value	3.58	1.097	0.000***	
Adjusted R ² value			0.395	
F-value			20.398***	

Note of Significance Level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

The findings of hypothesis H₁ testing are concluded in Table 5. The significant results contained in that table suggest that three dimensions of perceived value with regard to the quality value, social value, and convenience value affect consumers’ decision-making at p -value equaled to 0.023 ($t = 2.298, p < 0.05$), 0.033 ($t = 2.162, p < 0.05$), and 0.000 ($t = 4.886, p < 0.01$), respectively. The only insignificant result indicates that the perceived price value does not influence the dependent variable at a p -value of 0.206 ($t = 1.273$).

Subsequently, we conducted the correlation technique to examine the existence of relationships among those three significant dimensions of perceived value and consumers’ decision-making as well as the directions of their relationships if any. The findings show that all three significant criteria for product perceived value have positive relationships with the dependent variable, which is consumers’ decision-making. Those outcomes for the correlation value indicated at 0.424, 0.421, and 0.556 at a significant alpha level of 0.01 for the dimensions of quality value, social value, and convenience value, respectively as shown in Table 6.



Table 6: Correlation Results of the Effect of Perceived Value on the Consumers' Decision-Making

(n=120)

Affecting Perceived Value Dimensions	Pearson Correlation Value
Perceived Value	
- Quality Value	0.424***
- Social Value	0.421***
- Convenience Value	0.556***

Note of Significance Level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

As can be seen from the results above, the researchers can conclude that those outcomes reject the null hypothesis (hypothesis H_{01}) and support the hypothesis H_1 , which stated that “there are some dimensions of the perceived value that affects the consumers’ decision-making to purchase the preserved flower in glass innovation”. Those factors that affect customers’ decisions, the quality value, social value, and convenience value, also have a positive relationship with consumers’ decision-making in their purchase behavior towards the preserved flower in glass innovation.

In regard to the second focus, the study compared the mean differences between the purchase reasons and perceived value dimensions of each group of respondents. Hypothesis H_2 is associated with this second focus. The researchers assigned the null hypothesis (Hypothesis H_{02}) to be included in the procedure of hypothesis H_2 testing as follows:

Hypothesis H_{02} : There is no difference between the groups’ purchase reasons and the perceived value dimensions towards the preserved flowers in glass innovation.

Hypothesis H_2 : There is a difference between the groups’ purchase reasons and the perceived value dimensions towards the preserved flowers in glass innovation.

The inference statistical method, namely, an analysis of variance (ANOVA) was used to test the hypothesis H_2 . This analysis technique is deemed appropriate to conduct for comparison of the mean differences of more than two observed groups (Zikmund, 2003). Therefore, the researchers used the one-way ANOVA analysis to investigate whether the groups show significant differences in relation to the six purchased reasons (or decision-making styles) of consumers towards each dimension of product perceived value including the overall perceived value. The process of analysis assumed that all of each dimension of the product perceived value possesses an equal weight for this observation. The results of those group mean differences are demonstrated in Table 7.

The findings of the one-way ANOVA analysis show the only significant result for the dimension of the perceived price value from the test of group mean difference at p -value equaled to 0.041 ($F = 2.408, p < 0.05$) as indicated in Table 7. After the one-way ANOVA analysis found the significant difference for the group of perceived price value dimension among the six purchase reasons, the researchers continued conducting the test of homogeneity of variances in order to decide which method the study should subsequently employ to test the pairwise comparisons of means (Anderson, Sweeney, & Williams, 1999). This ongoing test of pairwise comparison examines the differences between pairs of purchase reasons.



Table 7: Test of Group Mean Difference of Consumers’ Purchase Reasons in Relation to Product Perceived Value (n = 120)

Perceived Value	Reasons to Purchase							F- value
	High Quality (Mean)	Cheap Price (Mean)	OTOP Brand (Mean)	Popularity (Mean)	Recreation (Mean)	Unplanned Purchase (Mean)	Significance	
Quality Value	3.86	3.38	3.83	3.65	4.14	3.88	0.435	0.978
Price Value	3.93	2.88	3.93	3.65	3.79	3.75	0.041**	2.408
Social Value	3.76	3.12	3.93	3.70	3.71	3.62	0.404	1.030
Convenience Value	3.79	3.62	3.71	3.60	3.14	2.88	0.206	1.467
Overall Value	3.84	3.25	3.85	3.65	3.70	3.53	0.232	1.394

Note of Significance Level: ** $p < 0.05$



The test for homogeneity of variance for the price value’s mean difference that showed significant results in the four groups of respondents indicates a non-significant result at a p -value of 0.800 ($p < 0.05$) and Levene Statistic equal to 0.467 at a significant alpha level of 0.05. This suggests that there is no difference of variance of data between groups. Based on this affirmation, the study subsequently carries out the least significant difference (LSD) method in the process of discerning whether differences occur between pairwise comparisons with regard to the pairs of purchase reasons. The outcomes of the pairwise comparison test using LSD are shown in Table 8.

Table 8: Pairwise Comparison (n = 120)

Reasons to Purchase	Mean	High Quality	Cheap Price	OTOP Brand	Popularity	Recreation	Unplanned Purchase
		3.93	2.88	3.93	3.65	3.79	3.75
High Quality	3.93	-	1.056**	0.004	0.281	0.145	0.181
Cheap Price	2.88		-	1.052**	0.775**	0.911**	0.875**
OTOP Brand	3.93			-	0.277	0.141	0.177
Popularity	3.65				-	0.136	0.100
Recreation	3.79					-	0.036
Unplanned Purchase	3.75						-

** The mean difference is significant at the 0.05 level

The results in Table 8 indicates that there are differences between the five pairs of purchased reasons shown in Table 9, 10, 11, 12, and 13. These findings can be interpreted as follows:

- (1) The group of consumers who purchased a specific product because of high quality has a greater awareness of perceived price value than the group of consumers who did purchase because of a cheap price (mean difference = 1.05, p -value = 1.056, $p < 0.05$, Table 9).
- (2) Consumers who purchased the product because of its OTOP brand appear to perceive the price value aspect more than a group of consumers who purchased the specific product in relation to a cheap price (mean difference = 1.05, p -value = 1.052, $p < 0.05$, Table 10).
- (3) Consumers’ buying due to popularity show a higher perception of price value than a group of customer buying due to a cheap price (mean difference = 0.77, p -value = 0.775, $p < 0.05$, Table 11).
- (4) The group of consumers buying out of recreational reasons display a higher perceived price value than the group of consumers buying out of cheap price (mean difference = 0.91, p -value = 0.911, $p < 0.05$, Table 12).
- (5) The group of consumers who make an impulse or unplanned purchase indicates a greater awareness of perceived price value than the group of customers who are buying due to a cheap price (mean difference = 0.87, p -value = 0.875, $p < 0.05$, Table 13).

Table 9: Pairwise Comparison of Means between High Quality and Cheap Price Purchase Reasons

Multiple Comparisons (LSD) (n = 120)

Purchase Reason Dimension	High Quality	Cheap Price	Mean Difference	Significance
Perceived Price Value	3.93	2.88	1.05	1.056**

Note of Significance Level: ** $p < 0.05$

Table 10: Pairwise Comparison of Means between OTOP Brand and Cheap Price Purchase Reasons

Multiple Comparisons (LSD) (n = 120)

Purchase Reason Dimension	OTOP Brand	Cheap Price	Mean Difference	Significance
Perceived Price Value	3.93	2.88	1.05	1.052**

Note of Significance Level: ** $p < 0.05$

Table 11: Pairwise Comparison of Means between Popularity and Cheap Price Purchase Reasons

Multiple Comparisons (LSD) (n = 120)

Purchase Reason Dimension	Popularity	Cheap Price	Mean Difference	Significance
Perceived Price Value	3.65	2.88	0.77	0.775**

Note of Significance Level: ** $p < 0.05$

Table 12: Pairwise Comparison of Means between Recreation and Cheap Price Purchase Reasons

Multiple Comparisons (LSD) (n = 120)

Purchase Reason Dimension	Recreation	Cheap Price	Mean Difference	Significance
Perceived Price Value	3.79	2.88	0.91	0.911**

Note of Significance Level: ** $p < 0.05$



Table 13: Pairwise Comparison of Means between Unplanned and Cheap Price Purchase Reasons

Multiple Comparisons (LSD)

(n = 120)

Dimension \ Purchase Reason	Unplanned Purchase	Cheap Price	Mean Difference	Significance
Perceived Price Value	3.75	2.88	0.87	0.875**

Note of Significance Level: ** $p < 0.05$

The above findings that show a significant result with respect to the perceived price value (Table 7) and identify the occurrence of mean differences of 5 pairwise comparisons (Table 8 to 13), lend partial support to hypothesis H₂. Hypothesis H₂ was initially claimed that “there is a difference between the groups’ purchase reasons and the perceived value dimensions towards the preserved flowers in glass innovation”. Further interpretation and inference of these findings will be thoroughly considered in the following section with regard to managerial implication.

4. Discussion and Managerial Implication

The evidence derived from the data analysis, particularly in the first main focus area, suggest that consumers positively rely on the three dimensions of product perceived value which consist of the quality value, social value, and convenience value when they decide to purchase Thai handicrafts like the preserved flowers in glass innovation. These three dimensions of product perceived value are key factors that entrepreneurs should consider and pay more attention to, in order to create a greater value for each dimension. This will help to capture consumers’ satisfaction and ultimately lead to a decision to purchase the product.

The only insignificant dimension was found to be the perceived price value. This non-significant result asserts that the perceived price value factor does not affect consumers’ decision-making for the preserved flowers in glass product. This evidence is not consistent with the findings of Bridges, Richard, and Yim (2006) who investigated across four product categories, and argued that price influences consumers’ purchase decision-making more than social factor (i.e. image, or brand) and service factor (i.e. excellent service, or convenience).

However, this contradiction may be explained by the circumstance that consumers recognize the preserved flowers in glass innovation as handicraft. The price of handicrafts is perceived by consumers as depending on product value (Foskett & Hemsley-Brown, 2001), design, creativity, innovation, product attributes, rare flowers or materials (Wiboonpongse, Sriboonchitta, & Chaovanapoonphol, 2007), the difficulty of production, high quality of craftsmanship, labor costs, intellectual property, brand, image, and more. Thus, consumers accept a higher price, are not very sensitive in regards to price changes. This makes the perceived price value into an insignificant factor when it comes to making a decision to purchase preserved flowers in glass.

To sum up, entrepreneurs can set a higher markup price for a handicraft or handmade products that are still appropriate for the costs of goods sold as these offer more benefits or value to consumers (Kotler, 1999). In addition, marketers or entrepreneurs should be aware of product categories when they set the price or select a suitable price strategy for implementation in the market for that product.

The second focus in which we examined the mean differences between the six purchased reasons and the customer group’s perceived value dimensions. This observation identifies that there is only one significant difference between consumers’ purchased reasons and their perceptions towards product value. The only dimension with significant difference is that of perceived price value. This means groups of consumers who have different reasons to purchase the preserved flowers in glass would have different attitudes towards the perceived price value. Especially, consumers who would purchase the product because of satisfaction with its quality and brand name appear to have a greater mean score value for perceived price value than other groups of consumers (Table 7).



When buying a product, consumers usually compare its price to its visible attributes (i.e. type of flower, expensive packaging, creative design, and famous brand) and its quality (Barker & Angelopulo, 2005). On this basis, they estimate whether the product is reasonably priced or worthy of possession. This explains the differences in perceptions towards price value among the group with various purchase reasons.

For the other three dimensions, quality value, social value, and convenience value, non-significant results for the test of group mean difference were found. This situation can be explained with the initial thought of consumers who may perceive handicrafts, such as the preserved flowers in glass, and other quality handmade products in relation with its production that relies on experience or expertise workmanship to produce the quality.

In addition, handicrafts generally perceive to be socially and environmentally conscious in both production and durability. They are conceived to be products made by the communities or tribes, as innovations and as products that will last through the ages. Most handicrafts are also perceived as environmentally friendly products or green products that can be reused or recycled, and thus help to maintain the global environment. These common properties of handicrafts are more often than not perceived and well recognized by consumers as the basis of benefit or fundamental value of handicraft products. The general occurrence of such assumptions may result in the lack of differences in customers' perception of these three aspects, namely, quality value, social value, and convenience value.

These above results serve as indicators that can help to point out improvements to those small enterprises or startups that still have not put enough effort in creating differentiation for their preserved flowers in glass products. Therefore, those firms should enhance their products differentiation in regards to customers' perceptions towards quality value, social value, and convenience value.

Preserved flowers in glass have recently become a new market segment in Thailand. Thus, entrepreneurs or marketers should increase consumers' awareness in regard to the product and its qualities, such as durability, product variety, beauty, rarity, meaningfulness, or auspiciousness. Marketers also should differentiate their product by identifying that the preserved flowers are as natural as fresh flowers but more sophisticated, durable, and underwent state-of-art production technology (Report Bazzar, 2018). Consumers can still feel that the flowers are natural, not artificial. These practices would help to differentiate the preserved flowers in glass innovation from other competitors or substitutes. It would also create a unique identity for that product. As a result, consumers increasingly would perceive the preserved flowers to be outstanding, high quality of products that differ from the fresh and artificial flower markets.

In regard to the perceived social value, firms should also attempt to create greater differentiation, in particular, in terms of green product, popularity, and OTOP brand. Consumers' perceptions of product value, particular in its social value should be driven by marketing strategies to add value to this new market segment that has seen increasing demand and popularity for decorations and innovative gifts or souvenirs (Vellekoop, 2018).

Marketers should more than ever point out the advantages of green products that can help to preserve the world's environment (Suki, 2016). Firms might allow consumers to participate in corporate social responsibility (CSR) programs. These can help to enhance the positive image of a brand and firm as well as build stronger relationships between the business to consumers (B2C) and business to business (B2B). These two kinds of businesses are growing within in the preserved flowers market (Vellekoop, 2018).

The Thai government should also enhance OTOP brands and Thai identities (i.e. rare Thai flowers, specific flower for the Thai Royal Family, Made in Thailand label). This would support the preserved flower market within the country and expand it to overseas due to the leverages in demand thus created (Report Bazzar, 2018; Vellekoop, 2018; TNEWS, 2017; Verdissimo, 2015).

The government should increase the promotion of OTOP brands by emphasizing its nature as a community production, educating the population about the product and its benefits, creating product awareness. In this way, Thai handicraft can fulfill its potential. Furthermore, the government ought to cultivate good moral values of the population in relation to supporting Thai handicraft products, especially, the increasingly pervasive new market segment of preserved flowers in glass innovation. These practices would increase the awareness and the perceived social value of the product in consumers.

There is also no difference between the customer groups with different purchase reasons in regards to the perceived convenience value. Thus, marketers should increase the convenience for consumers. Product



convenience value can be created by identifying the benefits of convenience in relation to the product, such as the advantage of not having to change the flowers frequently as opposed to fresh flowers. In addition, marketers might accelerate the development of distribution channels that are currently seen as lacking in the market. They should expand their outlets, market intermediaries (i.e. representatives, agents, retailers), and online channel to facilitate convenience for consumers in easily purchasing the preserved flowers in glass innovation. These tactics would help to increase and differentiate convenience value for the product.

It is important to be noted that the findings derived from the two main foci appear to contradict each other. We found the groups of customers with different purchase reasons did not perceive the three dimensions of product values differently. Nevertheless, the same three perceived value aspects significantly impact on consumers' decision-making. This can be explained by the following theories.

Bolton and Drew (1991) assert that the perceived value is an important factor influencing consumers' decision-making. Perceived values have positive relationships with consumers' evaluation of product value that can cause purchase intention (Dodds, Monroe, & Grewal, 1991) and can predict the purchase retention (Parasuraman & Grewal, 2000) in consumers' decision-making process. Based on past studies, it is anticipated that high perceived value would influence consumers' to purchase a product.

As can be seen from the outcomes of the two main foci, various consumer groups do not have different perceptions of some dimensions of product perceived value for the preserved flowers product, which means that those dimensions do not have significant and strong potential for the perceived value determinant. However, perceived value does impact on decision-making. This can be because (1) the high value of mean scores for the insignificant three dimensions of perceived value may lead to significant effect on consumers' decision-making and (2) within the procedure of purchased decision-making, a situation may emerge that could interfere with that process and change a decision or end the process at anytime (Lamb, Hair, & McDaniel, 2011). Such situations include stimuli (i.e. marketing mix), any bad situations (i.e. unemployment, negative feedbacks) (Kotler, Burton, Deans, Brown, & Armstrong, 2013), or consumers' having a second thought and thoroughly consider exactly is an important factor for them which can impact on their decision-making.

Based on these theories, the study can infer that the process of perception of value is different and apart from the decision-making procedure. This also explains how consumers do not perceive the three value dimensions differently, yet these dimensions of perceived values significantly affect consumers' decision-making. Therefore, the apparently contradicting results of the two main foci are no inconsistency.

The findings of this study imply that entrepreneurs of small enterprises or startups should concentrate on increasing and creating a positive perception of their product value. This is particularly the case for the dimensions of quality value, social value, and convenience value since these factors were found to significantly influence consumers' decision-making in a positive way. Thus, an improvement of these aspects would drive consumers to increasingly make the decisions to buy preserved flower products. In addition, firms do not need to worry too much in respects to a higher price of the product because the consumers understand and accept that the good quality of a handcraft product comes with its price. The findings of this study and some useful suggestions are summarized in Table 14.

Table 14: Summaries of the Outcomes of the study

Findings	Level of Influence	Suggestions and Implications
<p><u>The first main focus:</u></p> <ul style="list-style-type: none"> • Product perceived value with respect to the quality value, social value, and convenience value dimensions significant and positively affect consumers’ decision-making in purchasing the preserved flowers in glass innovation (Table 5 and 6). 	<p>Sig.</p>	<ul style="list-style-type: none"> • Entrepreneurs should employ marketing strategies to promote the three dimensions of perceived value as follows: <ul style="list-style-type: none"> □ Perceived Quality Value <ul style="list-style-type: none"> - Increase quality of the product <ul style="list-style-type: none"> ○ High quality of the product ○ Durability or other functional value ○ Product variety ○ Can keep their beauty and naturalness ○ Rarity ○ Meaningfulness ○ Auspiciousness - Create product differentiation <ul style="list-style-type: none"> ○ Create product identity or uniqueness ○ Preserved from real fresh flowers ○ More sophisticated than fresh flowers and long-lasting ○ Use state-of-art technology to produce ○ Can preserve flower texture and soft natural touch. ○ Various applications of preserved flowers or made to order ○ Promote the product’s application as innovative gifts, souvenirs, and long-term decoration ○ Can create and change styles or designs (i.e. colors, effects) for a specific event. - Promote product attributes <ul style="list-style-type: none"> ○ Provide several product categories such as preserved flowers in glass (the most popular product category, <i>See: Table 3</i>) for home or office décor and souvenirs (preserved flowers in small glass containers for weddings, anniversaries, or funerals) with different styles, colors, and innovative designs. ○ Provide choices of flower species for selection. Most popular



		<p>flowers, as indicated in this study, are roses, orchids, and water lilies, respectively (Table 4).</p> <ul style="list-style-type: none"> □ Perceived Social Value <ul style="list-style-type: none"> - Brand building / Create brand awareness - Promote and differentiate Thai identity <ul style="list-style-type: none"> ○ Promote rare Thai flowers ○ Promote Country-of-Origin or Made in Thailand label ○ Promote yellow color for the Thai Royal Family ○ Promote Thai local lifestyle through innovative products and designs - Create awareness in relation to the benefits of green products - Promote eco-labeling □ Perceived Convenience Value <ul style="list-style-type: none"> - Promote product properties in relation to easy use and care - Increase distribution channels and availability <ul style="list-style-type: none"> ○ Expand target market for domestic and overseas markets <ul style="list-style-type: none"> ▪ <i>Domestic market</i>: increase outlets, stores and branches within the country ▪ <i>Overseas markets</i>: firms can plan to penetrate into the European markets, the United States (North America), Asia-Pacific, Middle East, and Asia ○ Extend selling client group channels (i.e. hospital, stores)
<ul style="list-style-type: none"> • Perceived price value is the only dimension that not influences consumers' decision-making to purchase the specific product (Table 5). 	<p>Non-Sig.</p>	<ul style="list-style-type: none"> • Price is not a significant determinant that consumers rely on in their decision to buy the specific handicraft. • Consumers are deemed to have the willingness to accept and pay a high price for a high quality and specific handicraft. • A firm can set up a relatively high price fitting with its product to gain positive profit or conduct the price skimming strategy to initially observe the market opportunity.



<p><u>The second main focus:</u></p> <ul style="list-style-type: none"> • Different group of buying-reasons consumers significantly perceived only one dimension of product value with respect to the price value differently (Table 7). 	<p>Sig.</p>	<ul style="list-style-type: none"> • The outcomes indicate the highest mean score value for consumers who buy the specific product due to its high quality and OTOP brand. • Marketers can intensively focus and marking up a rising price for the following two types of consumers: <ul style="list-style-type: none"> □ A group of utilitarian decision-making styles For instance, consumers who possess high quality reason for purchasing that can be most found from the general consumers (Table 2); and □ A group of social or conspicuous decision-making styles For example, consumers who buy a specific Thai handicraft because of OTOP brand, this decision-making behavior is mostly portrayed in the group of consumers such as hotels and tourists, respectively (Table 2).
<ul style="list-style-type: none"> • The groups with different purchase reasons perceive the other three dimensions of perceived value with regard to the quality value, social value, and convenience value including the aspect of overall perceived value not differently (Table 7). 	<p>Non-Sig.</p>	<ul style="list-style-type: none"> • This result suggests that there is a weak point in relation to the preserved flowers in glass innovation with respect to some product perceived value dimensions of consumers for the existing market. • This emergence would enable a serious impediment for the progress in increasing sales volumes for that specific handicraft. • Firms should pay more attention and use any suitable marketing activities to increase consumers' perceptions in terms of quality value, social value, and convenience value as these three compositions of perceived value factor play an important role to affect consumers' preference choice for the preserved flowers market.



<p><u>The other focuses:</u></p> <ul style="list-style-type: none"> The majority of consumers who are willing to buy preserved flowers in glass products were shown to be consumers who buy due to its OTOP brand, high quality, and popularity respectively (Table 2). 	<p>n/a</p>	<ul style="list-style-type: none"> Small enterprises should concentrate on consumers with social or conspicuous decision-making styles as a major target group, particularly, tourists, hotels, and spas. Additionally, a minor target group is deemed to be the utilitarian group that is associated with high quality purchase reasons, which was found to be mainly individual or general consumers. However, the researchers suggest that firms should increasingly realize and give priority to a greater focus on decision-making styles of consumers than the selling target group channels (i.e. individual, spa, hotel, and tourist) due to the implemented chance of use. Since a contact person with a different decision-making style in different target group channels would be a possible existence. As a consequence, firms may wish to employ a different approach that is related to their decision-making style for a specific target consumer group. For instance, firms should promote high quality of products and outstanding attributes, reasonable pricing or other benefits to the utilitarian decision-making style of consumers.
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5. Limitations and Future Research

In this study, we have experienced some methodological limitations. Typically, research comparing variables will benefit from the test of comparisons to find relationships between variables by means of the Chi-Square Test in accordance with a Pearson Method and Fisher's Exact Test. We have initially looked at the relationships between consumers' purchase reasons and product attributes with respect to the product categories and types of flowers using these methods. The application of this technique led to results that did not meet the expected frequency value (cells with a calculated value below 5 should amount to less than a standardized 20%) for both foci (Yates, Moore & McCabe, 1999). Thus unfortunately, we could not employ the Chi-Square Test and include the both foci to the conceptual framework for this study.

To fix this problem, researchers should enlarge the sample size in order to meet the criterion. In addition, the Fisher's Exact Test is deemed to be not appropriate to conduct because of the barriers and limitations of its requirements in terms of long time period of use and high level of computer's memory and efficiency.

Further, time and budgetary limitations lead us to apply a survey approach to only the primary groups of consumers in the existing new market segment of the flower industry at the time of gathering the data for this research. Consequently, it was difficult for us to approach the target sample which is reflecting in the small sample size. Future research might increase the sample size to investigate whether the outcomes would be consistent.

6. Conclusion

This study suggests small enterprises or startups that are involved in the flower industry, particularly, in the new market segment like the preserved flowers market to increase consumers' perceived product value. Especially, firms should focus on the three dimensions of perceived value with respect to (1) quality value, (2) social value, and (3) convenience value. As these three aspects significantly affect consumers' decision-making to buy a specific handicraft.

The dimension of perceived price value is deemed to be lesser importance to influence consumers' choice in their buying behaviors. This outcome implies that small businesses in the preserved flowers in glass sector do not need to be anxious about their price strategies and policies. Consumers appear to understand and welcome a high price for handicrafts like the preserved flowers in glass with its high quality, brand reputation, and popularity without changing their minds due to price sensitivity. However, entrepreneurs or marketers should implement these guidelines with cautions and thoroughly consider and apply them to match with their product category or market sector.

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