THE INFLUENCE OF PERCEIVED VALUE ON REPURCHASE INTENTION: A LEADING 3C RETAILER IN TAIWAN AS AN EXAMPLE

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Abstract

The main research purpose of this study is to validate the influence of perceived value on repurchase intention with customer satisfaction as the mediating variable. A survey is conducted on the front-desk employees of different branches of a leading 3C retailer in Taiwan via stratified random sampling. Structural equation modelling (SEM) is employed to measure the model fit of the overall model with the structural model and the measurement model. This study then conducts the Sobel test on the coefficient path of latent variables (non-observable) by using maximum likelihood estimation (MLE), in order to verify whether the direct effects, mediating effects and total effects are statistically significant. The research findings suggest that perceived value has significant and direct effects on repurchase intention. Customer satisfaction also serves a certain degree of mediating effects. The research findings can provide a reference to the strategic planning of the management of the leading 3C retailer concerned so as to enhance the repurchase intention of customers.

Keywords: perceived value; customer satisfaction; repurchase intention

INTRODUCTION

According to the Internet news on April 10, 2015, elifemall, TKEC and Tatung are all planning to join the bandwagon of e-Commerce by combining bricks and mortars with virtual world, in response to the rapid growth of the online shopping market.

The channel strength of the 3C retailers in Taiwan is the result of hardworking employees who process thousands of orders every day. The industry is well-recognized by the public and investors for its down-to-earth culture, profitability and operational performances.
knowledge economy, perceived value and customer satisfaction enhance the repurchase intention of customers and lead to competitive advantage. This study seeks to validate and understand the influence of perceived value on repurchase intention by referring to customer satisfaction as the mediating variable. By conducting a case study on a leading 3C retailer in Taiwan, this study sets out the following research purposes:

1. Validation and understanding of whether the perceived value of the customer of the leading 3C retailer in Taiwan has positive influence on their repurchase intention;
2. Validation and understanding of whether the perceived value of the customer of the leading 3C retailer in Taiwan has positive influence on their satisfaction levels; and
3. Validation and understanding of whether high levels of customer satisfaction with the leading 3C retailer in Taiwan have positive influence on the repurchase intention of customers.

LITERATURE REVIEW

This study intends to interview the front-desk employees at different branches of a leading 3C retailer in Taiwan in order to verify the impact of perceived values on repurchase intention of customers, with customer satisfaction as the mediating variable. Below is a description of the academic theories and relevant studies.

Definitions and Constructs of Perceived Values

Definitions of perceived values

This study defines the perceived values as the perceptions and emotions that consumers hold toward products and prices. Perceived values depend on subjective and individualistic assessments. This conceptual definition is based on the literature below.

Scholars have come up with various definitions of perceived values. Woodruff [3] believed that perceived values are the perceived preferences for product attributes and attribute effectiveness. Lovelock [4] suggested that perceived values are the customer evaluation on the perceived costs and benefits. Ryu, Han & Kim [5] argued that perceived values are the general evaluation of the net value of products or services on the basis of the assessments by customers on the pros and cons. Chang [6] posited that perceived values are a subjective feeling after consumers have evaluated all the costs and benefits. Tsai [7] thought that perceived values are the overall and subjective evaluations by consumers regarding their costs and benefits for the advertised products. Hsu [8] indicated that perceived values are the ratio of total values (benefits) to overall costs, as well as the inner feelings and valuations that customers develop.

Constructs of Perceived Values

This study refers to the measurement of perceived values developed by Yu [9].
classifying perceived values into (1) emotional value: the pleasure in purchasing the product or receiving the service; (2) quality function value: the evaluation of the product quality and performance; and (3) price function value: the assessment of whether the product lowers short-term and long-term costs. Below is the list of references referred to by this study in the measurement of perceived values.

According to the conceptualization theory by Monroe and Krishnan [10], perceived values are the indicators developed by customers by comparing the perceived benefit and perceived sacrifice in product quality. If perceived quality outweighs the perceived sacrifice, the customers develop a positive perceived value and become more willing to purchase. Zeithaml [11] modified the conceptualization model developed by Monroe and Krishnan [10] and develops a perceived value model by categorizing perceived values into three levels, i.e. lower-level attributes, perceived lower-value attributes and higher-level attributes. Sheth, Newman & Gross [12] developed a comprehensive framework that measures consumers’ values of products or brands with five constructs, i.e. functional value; social value; emotional value; epistemic value and conditional value. Parasuraman & Grewal [13] divided perceived values into four aspects, i.e. acquired value, transactional value, utilization value and residual value. Sweeney & Soutar [14] developed a perceived value measurement with four constructs, i.e. quality functional value; price functional value; emotional value and social value. Petrick [15] classified perceived values into five constructs, i.e. behavioral price; monetary price; emotional response; quality and reputation. Yu [9] defined perceived values with three constructs, i.e. emotional value; quality functional value and price functional value.

Definitions and Constructs of Repurchase Intention

Definitions of repurchase intention

This study defines repurchase intention as the behavioural intention for repeated purchases by customers. This conceptual definition is based on the literature review as follows:

Crosby, Evans & Cowles [16] believed that if customers find the service provided to be trustworthy and satisfactory, they will continue to transaction with the company.

Hellier, Geursen, Carr & Rickard [17] suggested that customers evaluate the current and possible situations in the future in order to determine whether to repurchase the same product or service from the same company.

Guo [18] contended that the repurchase intention is the feel-good factor consumers experience with the services provided.

Chen [19] posited that repurchase intention is the degree of willingness consumers have to accept the same product or service.

Lin [20] indicated that repurchase intention refers to the willingness to consume or purchase specific products or services in the future.

Lin [21] defined repurchase intention as the willingness to return to the same shop after
consumers have received the service for the first time.

Yin [22] believed that repurchase intention is the likelihood of purchasing the same product or service after the use of the same product or services.

Constructs of repurchase intention

There is extensive literature examining repurchase intention. This study extends the two constructs developed by Kotler [23] as the sub-constructs for repurchase intention. These two sub-constructs are (1) repeated purchases by customers; (2) recommendation to others by customers. The sub-constructs in this study are constructed based on the literature review as follows:

Janes and Sasser [24] categorized and measured the repurchase intention with three indicators: (1) primary behavior: consumers’ loyalty is measured with the trading information with the company and with an analysis of the recent purchases and actions (such as the timing of the most recent purchase, purchase frequency and quantity); (2) secondary behavior: whether consumers are willing to openly recommend or introduce the product or service and broadcast the message; (3) repurchase intention: this refers to whether consumers, if asked at any time, are willing to repurchase specific products or services in the future. Kotler [23] measured repurchase intention with two constructs, repeated purchases by consumers and recommendations to others. Meanwhile, Gronholdt, Martensen & Kristensen [25] employed three measures for repurchase intention: (1) intent to repurchase; (2) primary behavior: No. of purchases, frequency, value and quantity of purchases; and (3) secondary behavior: the willingness of customers to refer customers, make recommendations and spread the words. Yu [9] thought that repurchase intention can be a standalone construct [26].

Definitions and Constructs of Customer satisfaction

Definitions of customer satisfaction

This study defines customer satisfaction as the variance between the expected standards and the actual standards of the products or services. This conceptual definition is based on the literature review as follows:

Cardozo [27] was the first scholar that came up with the concept of customer satisfaction. Customer satisfaction occurs when the perceived returns from the product purchase turns out to be greater than the costs paid. It encourages repurchase behavior. Howard & Sheth [28] applied the concept of satisfaction into consumer theories. They believe that customer satisfaction is the perception by customers regarding whether the sacrifice they have made (e.g. time and money) for the product purchase is worthwhile. Fornell [29] suggested that customer satisfaction is an overall feeling. It is an attitude toward consumption, reflected by the like or dislike they feel about a service or product. Anderson & Sullivan [30] indicated that the measurement for customer satisfaction is based on the gap between their expected experience
and their actual experience. In other words, the degree of customer satisfaction depends on the difference between their expected standards and actual performance of the product or service. Lovelock [31] contended that customer satisfaction is based on a comparison of customer expectation for the product or service and the utility provided by the product or service. It is an important driver for customer loyalty and there is a positive correlation between customer satisfaction and customer loyalty. Szymanski & Henard [32] indicated that customer satisfaction is subject to factors such as expectations, disconfirmations, performances and emotions. In fact, fairness is also an important determinant. Yeung, Ging & Ennew [33] believed that customer satisfaction is a validation for customer expectations and it has almost been conceptualized as a threshold for customer satisfaction for services. Wang, Lo & Yang [34] argued that customer satisfaction is an emotional status. The levels of customer satisfaction are influenced by product effectiveness.

Constructs of customer satisfaction

This study refers to Fornell [29] in the measurement of customer satisfaction by dividing customer satisfaction into five sub-constructs: (1) ex-ante expectations before purchase; (2) perceived performances post purchase, a comparison of the price level and quality standards; (3) degree of satisfaction: overall satisfaction and the gap from expectations; (4) complaints: No. of complaints to sales personnel and managers; and (5) customer loyalty: price tolerance and repurchase intention. The sub-constructs of customer satisfaction in this study are based on the literature review as follows:

Czepiel, Roserberg & Akerele [35] classified customer satisfaction into three levels: system satisfaction; enterprise satisfaction and product/service satisfaction.

Oliver and Desarbo [36] indicated that there are five theories concerning customer satisfaction. They are expectation theories, disconfirmation theories, equity theories, attribution theories and performance theories.

Fornell [29] classified customer satisfaction into five sub-constructs, i.e. before-purchase expectations; perceived performances after purchase; satisfaction levels; complaints; customer loyalty.

Oliver [37] believed that it is necessary to increase the weighting on the attributes that customers value in order to accurately reflect and measure the overall level of customer satisfaction. Zeithaml & Bitner [38] suggested that satisfaction is subject to the influence of product quality, service quality, prices, scenarios and personal factors. In fact, service quality and customer satisfaction can be collectively described as overall service levels in their own right. Service quality is one of the factors contributing to customer satisfaction and satisfaction is a wider-reaching concept than service quality.

Yu [9] stated that the measurement of customer satisfaction may be conducted with
two approaches: (1) overall assessments: based on a single construct; (2) multiple items: satisfaction measured with the performance of different attributes.

**Perceived Values and Customer Satisfaction**

The relationship between perceived values and customer satisfaction is evidenced with the following literature.

Hallowell【39】argued that customer satisfaction is the acceptance of perceived values. Fornell, Michael, Eugene, Jsesung, and Barbara【40】also indicate that perceived values are an antecedent variable of customer satisfaction.

Patterson & Spreng【41】examined the relationship among service quality, values, satisfaction and repurchase intention in four service industries. The results indicate that perceived values are indeed the antecedent variable of customer satisfaction. These two factors are positively correlated.

Yin【22】contended that perceived values have positive and significant influence on customer satisfaction. The higher the perceived values from customers, the higher the level of their satisfaction is.

Whilst the abovementioned literature examines different industries or companies of varying scales, the perspectives are similar. This study hence develops the following hypothesis:

Hypothesis 1 (H1): The perceived value toward a leading 3C retailer in Taiwan has positive and significant influence on customer satisfaction.

**Customer Satisfaction and Repurchase Intention**

Lan【42】believed that customer satisfaction exhibits positive influence on repurchase intention. Wang【43】indicated that customer satisfaction boasts significant influence on repurchase intention. The higher the customer satisfaction, the stronger the repurchase intention is. Fan【44】suggested that customer satisfaction has a direct impact on repurchase intention. Wang【45】concluded that customer satisfaction has positive and significant influence on repurchase intention. To sum up the abovementioned literature, this study develops the following hypothesis:

Hypothesis 2 (H2): The customer satisfaction toward a leading 3C retailer in Taiwan has positive and significant influence on repurchase intention.

**Perceived Value and Repurchase Intention**

There is limited literature concerning the relationship between perceived value and repurchase intention.

Wang【1】noted that perceived values have positive and significant influence on customer satisfaction and repurchase intention. The greater product quality, the higher customer satisfaction, the stronger repurchase intention and the more willingness there is to recommend others for group buying.

Although the abovementioned literature addresses different industries or scales, the opinions are similar. This study hence develops the following hypothesis:

Hypothesis 3 (H3): The perceived value toward a
leading 3C retailer in Taiwan has positive and significant influence on repurchase intention.

Research Structure

Based on the above research motives, purposes and literature review, this study presents its hypotheses and constructs the research structure as illustrated in Figure 1.

RESEARCH METHODOLOGY

Research Subjects and Questionnaire Design

This study issues the questionnaires to the front-desk employees in a leading 3C retailer in Taiwan with stratified random sampling on the basis of the number of shops in respective cities and counties. To enhance content validity and reliability of the questionnaire, this study conducted a pilot test of the draft questionnaire by consulting with experts and eliminated or modified the inappropriate questions before a post-test. A total of 1,000 questionnaires were released and the effective and recovered questionnaires were 202, at an effective recovery rate of 20.20%. Table 1 shows the structure of the questionnaire and the number of questions concerning the constructs (latent variables) and sub-con structs (measurable variables).

Processing and Measurement System for Questionnaire Data

To validate the research structure, this study applies structural equation modelling (SEM) to conduct a confirmatory factor analysis (CFA) on the structure. The questionnaire is segmented into three parts that deal with three latent variables, i.e. perceived value, customer satisfaction and repurchase intention. Each latent variable contains observable variables (or explicit variables) and each of these observable (explicit) variables is accompanied with a number of questions in the survey. The questionnaire data is processed and collated into...
a data file. The construction of the measurement system in the model is designed according to the itemized measurements in the questionnaire. However, this study employs dual measurement techniques in order to facilitate the processing by computer software [46]. The number of questions and references for the individual implicit variables and explicit variables in this study are shown in Table 1.

Table 1 Questionnaire Structure

<table>
<thead>
<tr>
<th>Main Constructs</th>
<th>Sub-Construct</th>
<th>No. of questions</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Value (PV)</td>
<td>Price functional value</td>
<td>3</td>
<td>This study; Yu[9]</td>
</tr>
<tr>
<td></td>
<td>Emotional value</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality functional value</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction (CS)</td>
<td>Expectations before purchase</td>
<td>2</td>
<td>This study; Fornell[29]</td>
</tr>
<tr>
<td></td>
<td>Perceived performance after purchase</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfaction levels</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complaints</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer loyalty</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Repurchase Intention (RI)</td>
<td>Repeated purchase</td>
<td>3</td>
<td>This study; Kotler[23]</td>
</tr>
<tr>
<td></td>
<td>Recommendation to others</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Linear Structural Model**

Confirmatory factor analysis (CFA) is a technique of exploratory factor analysis. This paper conducts a pairwise CFA on the three constructs (i.e. perceived value, customer satisfaction and repurchase intention). A structural equation mode (SEM) contains a structural model and a measurement model, to effectively resolve the cause-and-effect relationship between latent variables. In addition, this paper intends to validate the research model in three aspects, i.e. the compliance of the overall model fit with goodness-of-fit criteria; the fit of the measurement model and the fit of the structural model.

**Common Method Variance (CMV) Test**

The CFA results in Table 2 indicate that the questionnaire in this paper does not suffer from the problems associated with common method variance.

Table 2 CMV Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>χ2</th>
<th>DF</th>
<th>Δχ2</th>
<th>ΔDF</th>
<th>P</th>
</tr>
</thead>
</table>
### RESEARCH ANALYSIS AND FINDINGS

#### Goodness-of-Fit Test

This paper designs the model structure based on the literature review and the sample factor analysis above. According to Hair, Anderson, Tatham & Black [47], the measurement of the overall model fit can be classified into three categories, i.e. measures of absolute fit, incremental fit measures and parsimonious fit measures. The goodness-of-fit test results are shown in Table 3 [48].

<table>
<thead>
<tr>
<th>Fit Indicators</th>
<th>Criteria</th>
<th>Results in this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures of Absolute Fit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFI</td>
<td>&gt;.9</td>
<td>.914</td>
</tr>
<tr>
<td>AGFI</td>
<td>&gt;.8</td>
<td>.902</td>
</tr>
<tr>
<td>RMR</td>
<td>&lt;.05</td>
<td>.011</td>
</tr>
<tr>
<td>Incremental Fit Measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFI</td>
<td>&gt;.9</td>
<td>.913</td>
</tr>
<tr>
<td>CFI</td>
<td>&gt;.9</td>
<td>.911</td>
</tr>
<tr>
<td>Parsimonious Fit Measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNFI</td>
<td>&gt;.5</td>
<td>.692</td>
</tr>
<tr>
<td>PGFI</td>
<td>&gt;.5</td>
<td>.681</td>
</tr>
</tbody>
</table>

Source: This Study & Chen et al [48]

Measurement System of the Model

Fornell and Larcker [49] indicated that the factor loading for individual factors of latent variables (i.e. main constructs) and explicit variables (i.e. sub-constructs) measures the strength of linear correlation between the explicit variable and latent variable concerning respective factors. The closer the factor loading is to 1, the more the measurable variable (i.e. sub-construct variable) is able to measure the main construct. Table 3 shows that all the factor loadings of sub-constructs are greater than 0.7, indicating great reliability. In other words, all the sub-constructs (i.e. explicit variables) in the measurement system of the model are able to appropriately measure the corresponding constructs (i.e. latent variables). Meanwhile, the average variance extracted (AVE) is the
calculated value for the explanatory power of latent variables over the variances of the measured terms. A high AVE indicates high reliability and convergent validity of latent variables. Usually the AVE value should exceed 0.5, i.e. the explained variables greater than measurement errors of the construct concerned. All the AVE values in this study are larger than 0.5, indicating high reliability and convergent validity of all the latent variables (or implicit variables) (Table 4 and Figure 2).

Table 4: Robustness of Measurement System

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Measurable Variable</th>
<th>Factor Loading</th>
<th>Cronbach’s α</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived value (PV)</td>
<td>Price functional value (PFV)</td>
<td>.83</td>
<td>.82</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Emotional value (EV)</td>
<td>.84</td>
<td>.83</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>Quality functional value (QFV)</td>
<td>.85</td>
<td>.83</td>
<td>.63</td>
</tr>
<tr>
<td>Customer satisfaction (CS)</td>
<td>Expectation before purchase (EPP)</td>
<td>.83</td>
<td>.82</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Perceived value after purchase (PPA)</td>
<td>.82</td>
<td>.81</td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td>Satisfaction level (DCS)</td>
<td>.83</td>
<td>.82</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Complaints (C)</td>
<td>.82</td>
<td>.81</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Customer loyalty (DCL)</td>
<td>.83</td>
<td>.82</td>
<td>.63</td>
</tr>
<tr>
<td>Repurchase intention (RI)</td>
<td>Repeated purchase (RP)</td>
<td>.84</td>
<td>.83</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>Recommendation to others (ROP)</td>
<td>.82</td>
<td>.81</td>
<td>.61</td>
</tr>
</tbody>
</table>

Source: This Study & Fornell et al [49]

Coefficient of Determination

Coefficients of determination are also known as squared multiple correlations. They represent the level of explanatory power of independent variables on dependent variables. In other words, the R² values shown in Table 5 indicate that the implicit independent variables have adequate explanatory power over on the respective implicit dependent variables.

Table 5 Path Coefficients of Determination

<table>
<thead>
<tr>
<th>Coefficients of Determination</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived value (PV)→ Customer satisfaction (CS)</td>
<td>0.59</td>
</tr>
<tr>
<td>Customer satisfaction (CS)→ Repurchase intention (RI)</td>
<td>0.57</td>
</tr>
<tr>
<td>Perceived value (PV)→ Repurchase intention (RI)</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Source: This Study
Path Coefficients for Latent Variables

After the model has passed the goodness-of-fit tests, this paper standardized the coefficients and estimated the C.R. values for all the latent variables (Table 6). Figure 2 illustrates the path analysis.

Table 6 Estimated Parameters for Latent Variables

<table>
<thead>
<tr>
<th>Construct (PV) → Customer Satisfaction (CS)</th>
<th>Perceived Value (PV)</th>
<th>Customer Satisfaction (CS) → Repurchase Intention (RI)</th>
<th>Perceived Value (PV) → Repurchase Intention (RI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
<td>.593</td>
<td>.572</td>
<td>.521</td>
</tr>
<tr>
<td>S.E.</td>
<td>.086</td>
<td>.083</td>
<td>.081</td>
</tr>
<tr>
<td>C.R.</td>
<td>6.895</td>
<td>6.892</td>
<td>6.432</td>
</tr>
<tr>
<td>P value</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

Note: *** C.R. values statistically significant (α=0.001) or P-value<0.001
Source: This Study

Correlation Analysis

The results indicate that all the correlations between factors are significant. The relationships between research variables (Table 7) are as follows: (1) PV is positively correlated to RI; (2) PV is positively related to CS; (3) CS is positively related to RI.

Table 7 Correlation matrix

<table>
<thead>
<tr>
<th>Constructs (PFV)</th>
<th>(EV)</th>
<th>(QFV)</th>
<th>(EPP)</th>
<th>(PPA)</th>
<th>(DCS)</th>
<th>(C)</th>
<th>(DCL)</th>
<th>(RP)</th>
<th>(ROP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(PFV)</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(EV)</td>
<td>.631***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(QFV)</td>
<td>.781***</td>
<td>.552***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(EPP)</td>
<td>.472**</td>
<td>.652***</td>
<td>.533***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PPA)</td>
<td>.533***</td>
<td>.653***</td>
<td>.573***</td>
<td>-.332***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(DCS)</td>
<td>.782***</td>
<td>.681***</td>
<td>.732***</td>
<td>.281</td>
<td>.751***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C)</td>
<td>-.512***</td>
<td>-.781***</td>
<td>-.593***</td>
<td>.232</td>
<td>-.651***</td>
<td>-.783***</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(DCL)</td>
<td>.523***</td>
<td>.533***</td>
<td>.554***</td>
<td>.263</td>
<td>.462***</td>
<td>.693***</td>
<td>-.583***</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>(RP)</td>
<td>.533***</td>
<td>.511***</td>
<td>.513***</td>
<td>.228</td>
<td>.563***</td>
<td>.683***</td>
<td>-.521***</td>
<td>.881***</td>
<td>1.000</td>
</tr>
<tr>
<td>(ROP)</td>
<td>.532***</td>
<td>.509***</td>
<td>.504***</td>
<td>.227</td>
<td>.554***</td>
<td>.681***</td>
<td>-.513***</td>
<td>.871***</td>
<td>.831***</td>
</tr>
</tbody>
</table>

***denotes P<0.001; Source: This Study

The standardized results path of SEM analysis

By using the AMOS software, this study generates an illustration of the standardized path analysis shown below.
Based on Figure 2, this paper derives the following results:

1. The perceived value toward a leading 3C retailer in Taiwan has positive and significant influence on customer satisfaction. The standardized coefficient is 0.593 and hence \( H_1 \) is supported.
2. The customer satisfaction toward a leading 3C retailer in Taiwan has positive and significant influence on repurchase intention. The standardized coefficient is 0.571 and hence \( H_2 \) is supported.
3. The perceived value toward a leading 3C retailer in Taiwan has positive and significant influence on repurchase intention. The standardized coefficient is 0.522 and hence \( H_3 \) is supported.

Path Effects Analysis and Test in Structural Model

This study uses Bayesian estimations to analyze and test the path coefficients between latent variables (non-observable) in the structural mode. The Sobel test is conducted with the maximum likelihood estimation (MLE) by referring to customer satisfaction as the mediating variable to examine whether the direct effects, mediating effects and total effects are statistically significant. According to the results
shown in Tables 8–9,

(1) The path coefficient from perceived value (PV) to customer satisfaction (CS) is I_1=0.593, with a 95% confidence level of (0.507, 0.679). This one-order indirect utility is significant.

(2) The path coefficient from customer satisfaction (CS) to repurchase intention (RI) is I_2=0.571, with a 95% confidence level of (0.488, 0.654). This two-order indirect utility is also significant.

(3) The path coefficient from perceived value (PV) to repurchase intention (RI) is D=0.522, with a 95% confidence level of (0.441, 0.603). The direct utility is significant.

**Table 8 Bayesian Estimations**

<table>
<thead>
<tr>
<th>Regression weights</th>
<th>Mean</th>
<th>S.D.</th>
<th>95% Lower bound</th>
<th>95% Upper bound</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived value (PV) → Customer satisfaction (CS)</td>
<td>.593</td>
<td>.086</td>
<td>.507</td>
<td>.679</td>
<td>I_1</td>
</tr>
<tr>
<td>Customer satisfaction (CS) → Repurchase intention (RI)</td>
<td>.571</td>
<td>.083</td>
<td>.488</td>
<td>.654</td>
<td>I_2</td>
</tr>
<tr>
<td>Perceived value (PV) → Repurchase intention (RI)</td>
<td>.522</td>
<td>.081</td>
<td>.441</td>
<td>.603</td>
<td>D</td>
</tr>
</tbody>
</table>

**Table 9 Numeric Estimands**

<table>
<thead>
<tr>
<th>Numeric Estimands</th>
<th>Mean</th>
<th>S.D.</th>
<th>95% Lower bound</th>
<th>95% Upper bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-order indirect utility I_1</td>
<td>0.593</td>
<td>0.086</td>
<td>.507</td>
<td>.679</td>
</tr>
<tr>
<td>Two-order indirect utility I_2</td>
<td>0.571</td>
<td>0.083</td>
<td>.488</td>
<td>.654</td>
</tr>
<tr>
<td>Direct utility D</td>
<td>0.522</td>
<td>0.081</td>
<td>.441</td>
<td>.603</td>
</tr>
<tr>
<td>Indirect utility (I_1*I_2)</td>
<td>0.339</td>
<td>0.063</td>
<td>.276</td>
<td>0.402</td>
</tr>
<tr>
<td>Total utility (D+I_1*I_2)</td>
<td>0.861</td>
<td>0.083</td>
<td>0.778</td>
<td>0.944</td>
</tr>
<tr>
<td>Total indirect utility as % of total utility</td>
<td>0.394</td>
<td>0.041</td>
<td>0.353</td>
<td>0.435</td>
</tr>
</tbody>
</table>

This paper draws the following conclusions based on the results shown in Table 9:

(1) The total indirect utility is estimated with I_1*I_2 (0.340) at a 95% confidence level of (0.276, 0.402). Total indirect utility accounts for 39.4% of the total utility. Therefore, indirect utility is statistically significant.

(2) The significance of indirect utility and direct utility implies that customer satisfaction boasts, to a degree, mediating effects in this model.

**CONCLUSIONS AND RECOMMENDATIONS**

Based on the above analysis and results, this paper draws the following conclusions, presents the research limitations and makes suggestions to follow-up studies.

**Conclusions**

This paper conducts a survey on the
front-desk employees at a leading 3C retailer in Taiwan and develops a structural equation model (SEM) to validate the influence of perceived value on repurchase intention with customer satisfaction as a mediating variable. The research conclusions are detailed as follows:

(1) Influence of perceived value on customer satisfaction

The research findings support Hypothesis 1 that perceived value has positive and significant influence on customer satisfaction. This is consistent with Hallowell【39】 , Fornell et al【40】 , Patterson et al【41】 and Yin【22】 .

(2) Influence of customer satisfaction on repurchase intention

The research findings support Hypothesis 2 that customer satisfaction has positive and significant influence on repurchase intention. This is consistent with Lan【42】 , Wang【43】 , Fan【44】 and Wang【45】 .

(3) Influence of perceived value on repurchase intention

The research findings support Hypothesis 3 that perceived value has positive and significant influence on repurchase intention. This is consistent with Wang【1】 .

The above three conclusions indicate a good model fit in this paper. In addition, customer satisfaction serves a degree of mediating effect. This conclusion is somewhat similar with Baron and Kenny【50】 that complete mediating effects weaken or obscure the relationship between independent variables and dependent variables after the addition of a mediating variable.

Research Limitations

This paper strives to complete each stage of research procedures in a robust manner despite of limited resources. The adoption of stratified random sampling on population is a research limitation as it may have caused a low effective recovery rate of the issued questionnaires.

Suggestions to Follow-Up Studies

The relationship among perceived value, customer satisfaction and repurchase intention is universal and goes beyond the leading 3C retailer in Taiwan examined in this study. Meanwhile, the author has comes up with slightly different definitions and measurements of perceived value, customer satisfaction and repurchase intention. This study only samples the front-desk employees at a leading 3C retailer in Taiwan. Follow-up studies may explore the influence of perceived value on repurchase intention in different industries with a larger sample or simply compare and contrast the results across industries.

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