

Differences and Impact Factors between Customer Expected Value and Customer Perceived Value

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Abstract—In recent years, as the concept of customer value has attracted raising attention among marketing researchers and practitioners, more enterprises start to take customer value strategies in order to increase profits and ensure sustainable development. Basically, the variety of customer value has been brought by the differences between customer expected value (CEV) and customer perceived value (CPV). This paper analyzes systematically the discrepancy between CEV and CPV in three aspects, including characteristics, structure and influence factors, combined with theories of customer satisfaction and customer behaviors, constructs a measurement framework on the differences between CEV and CPV, which are composed of differentiated model and impact factors model. These models are tested using data from a survey among 220 college students in mobile phone market. The findings of this article are directions for future research and managerial implications.

Keywords—customer expected value; customer perceived value; differences

I. INTRODUCTION

Since the idea of competitive advantage proposed by Porter (1985) had been widely recognized in both the business and the academic world, people began to conduct a lot of explorations to obtain sustainable competitive advantage [1]. Woodruff (1997) suggested that company must provide customer with more value (i.e. superior customer value) than its competitors [2], only by doing this can a company create and retain loyal customers, obtain sustainable competitive advantage (Philip Kotler, 2001)[3], and establish itself in an unassailable position. Although the basic theory of customer value has gradually formed, little research studies on the measurement and evaluation of CEV, the relationship between CEV and CPV, and the differences between them has been done.

The objective of this paper is to build a measurement model of the discrepancy between CEV and CPV, so that enterprises can understand customer value more accurately in the future. For this purpose, the rest of the paper is structured as follows: (1) review the literature on customer value; (2) build a differentiated model between CEV and CPV; (3) test the differentiated model using data from a survey among college students; (4) discuss the managerial implications based on the empirical research results and suggest directions for future research.

II. LITERATURE REVIEW AND CONCEPTUAL MODEL

A. Customer Expected Value and Customer Perceived Value

Customer expected value is the desire that customer wants to fulfill the expected purpose or goal when using the product/service in some context (Flint, Daniel, Woodruff, 1997) [4]. Hogan (2001) built a structural model to assess expected relational value based on data from interview and Monte-Carlo model [5]. Moreover, Woodruff (2002) focused on the changes of CEV, and proposed a change-driven model of CEV by the empirical research of the automotive industry in the USA. Many researchers argued that environment and dynamic organization might change CEV [6].

Customer perceived value is “the customer’s assessment of the value that has been created for them by a supplier given the trade-offs between all benefits and sacrifices in a specific-use situation” (Woodruff, 1997) [7]. Earlier research is not sufficient to gain competitive advantage (Rintamaki, 2006) [8]. Some scholars suggested that CPV had a vague and complex structure, including quality, benefit, price and cost (Bolton, 1991; Indrajit, 1998; Angelis, 2005) [9-11]. Some other researchers presented that CPV was composed of perceived benefits, perceived sacrifices and personal preference, and influenced by context. Although many scholars have proposed methods to define customer value from a customer-based view (Zeithaml, 1988; Anderson, 1993; Gronroos, 1996; Christopher, 1982; Kleijnen, 2007) [12-16], most of them were theoretical studies. Therefore, a much more empirical research is still needed.

B. Conceptual model

Based on customer-value dimensions classified by Sweeny (2001) [17], we propose that CPV is composed of four dimensions: product value, service value, cost value and sentimental value. Currently, the typical models and methods in researching customer satisfaction are SCSB (Fornell, 1992) [18], ACSI (Fornell, 1996) [19] and ECSI (Cassel, 2000) [20]. The models above agreed that customer was influenced by CEV and CPV, and regarded the two values as pre-variables. From the foregoing, we conclude that purchase decision of customer depends on the contrast of CPV in the purchase process and CEV, while the contrast of CPV after purchase and CEV will affect the degree of customer satisfaction and CEV

when customer make purchase decision in the next time. The relationship between them is shown in Fig.1.

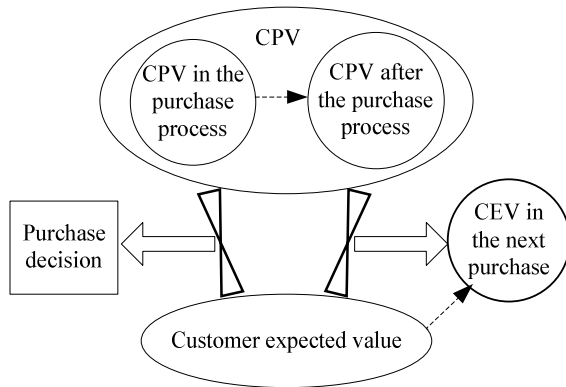


Figure 1 . Relationship between CEV and CPV

III. QUALITATIVE RESEARCH

A. Methodology

The present paper uses depth interview to explore the dimensions of customer value (include CEV and CPV) among college students. We choose cellular market based on its characteristics: this industry has numerous established companies, and the speed of product update is accelerating. Therefore, enterprises must know customer demands and potential demands, and examine the CPV of existing products/service, in order to infer the CEV to provided products/service in the future. The final sample consisted of 30 college students from Beihang University. The average length of each interview was 30 minutes. The purposes of qualitative research were to find out the most important attributes of cellular as key value dimensions, the differences between CEV and CPV after customer using the mobile phone, and the CEV in the next purchase. In the interview process, the contents of interviews were recorded in details to ensure the accuracy of the interview content.

B. Results

Based on the samples, elements considered significantly by customers were divided into four categories: product value, service value, cost value, sentimental value. When buying mobile phones, college students paid close attention to elements as follows: brand, reputation, price, stand - by time, talk time, style, appearance, signal quality, call quality, Menu effects and response rate, screen pixels, whether it can easily download the game application, camera, MP3, MP4, ring type, post - sale service, convenient maintenance, low repair rate, the attitude and efficiency of customer service section. Elements above can be categorized into the following four dimensions: (1) brand: high or low brand awareness; (2) price: high or low expected price; (3) quality: function, performance, repair rate, appearance, scalability; (4) service: facilities, rapid response, service effectiveness. A scale of CEV and CPV will be developed according to qualitative analysis.

IV. EMPIRICAL RESEARCH

A. Sample and Data Collection

Students from Beihang University (60 undergraduates and 60 postgraduates) and Tsinghua University (60 undergraduates and 40 postgraduates) formed the sample population for the investigation. A total of 220 questionnaires were issued, and 212 questionnaires were returned. The recovery rate was 96.4%. Most of the respondents for the sample were boys (71.43%).

B. Conjoint Analysis

Based on the data of 212 questionnaires, the relative importance of each value dimensions to CEV and CPV was shown respectively in Fig.2 and Fig.3. Fig.2 indicates that price, the most sensitive dimensions, is the most important item to customer (relative importance weight = 32.40%). Brand (riw=25.50%) and quality (riw=24.90%) follow behind price, and the relative importance weight of service is smallest, only 17.20%. In Fig.3, quality (riw=35.50%) becomes the most important element to customers, followed by brand (34.90%), service (25.90%) and price (3.70%).

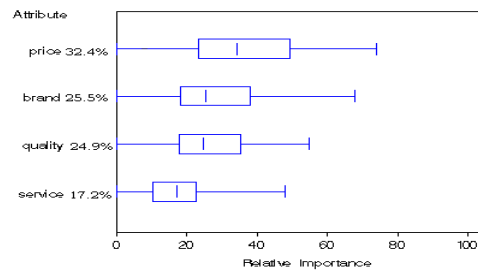


Figure2. Relative importance of each value dimation to CEV

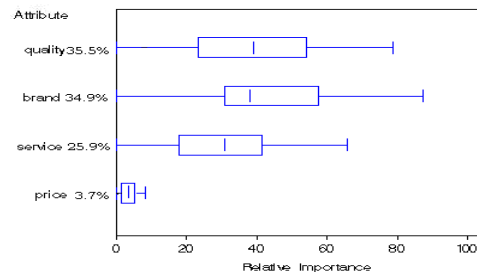


Figure3. Relative importance of each value dimation to CPV

Chi-square test was used to test whether the relative importance was significantly different between the dimensions of CEP and CPV. The test results in Tab. I and Tab. II indicate that there are significantly different ($p1 = 0.000 < 0.01$) between them.

TABLE I . RELATIVE IMPORTANCE COMPARISON BETWEEN CEP AND CPV

	Observed N	Expected N	Residual
price	3.7	32.7	-29.0
brand	34.9	25.8	9.1
quality	35.5	25.1	10.4
service	25.9	17.4	8.5
Total	100		

TABLE II. CHI-SQUARE TEST STATISTICS

	Value domain
Chi-Square(a)	37.499
df	3
Asymp. Sig.	.000

C. Factor Analysis

Based on the samples, nine key elements bringing about differences between expected value and perceived value of college students on mobile phone were listed in Tab.III. Factor analysis was based on a principal components analysis with a varimax rotation of 9 items. The results of factor analysis suggested that there were three types factors influencing the differences between CEV and CPV (See in Tab. IV): (1) improvement factors, including technological changes, advertisement, changes in purchasing motivation, and experience; (2) substitute factors, including the emergence of substitute goods, changes in economic conditions and lifestyle; (3) internal environment factors, including the context of using cellular, and the opinions and suggestions of family and friends.

TABLE III. ROTATED COMPONENT MATRIX

	Component		
	F1	F2	F3
Technological changes	.645	.132	-.091
The emergence of substitute goods	.289	.452	.026
Changes in economic conditions	.109	.796	-.186
The context of using cellular	-.035	.048	.648
Advertisement	.550	-.038	.285
Experience	.473	.110	.167
Changes in purchasing motivation	.706	-.119	-.069
Changes in lifestyle	-.098	.771	.252
Opinions and suggestions of family and friends	.180	-.010	.807

TABLE IV. FACTORS EXPLAINING

Common factor	Meanings of common factor	Explaining Variable
F1	Improvement factors	Technological changes Advertisement Changes in purchasing motivation Experience
F2	Substitute factors	The emergence of substitute goods Changes in economic conditions Changes in lifestyle
F3	Internal environment factors	The context of using cellular Opinions and suggestions of family and friends

D. Cross-Contingency Table Analysis and Results

Conjoint analysis was used to compare the differences of expected value and perceived value on price, brand, quality and service in each sample. To investigate the effect of customer character, sex and purchase behavior on differences between CEV and CPV, cross-contingency table analysis was adopted based on the types of characters (sanguine, melancholy, choleric and phlegmatic), sex and purchase behavior (habitual buying, rational buying, economic buying, and impulse buying).

For the same dimension, the differences between CEV and CPV of melancholy person were most significant among the four types of customer characters, on the one hand reflected in the variety of different types, on the other hand reflected in large range of fluctuation (See in Fig4.). Choleric person ranked the second. The differences between the two values of sanguine and melancholy person were the least obvious. The differences between the two values of male customers were more significant than female customers (See in Fig5.). As far as purchase type was concerned, impulse-buying customers had the most significant discrepancy followed by economic-buying customers in the same dimensions. The discrepancy between the two values of habitual-buying and rational-buying customers was not obvious.

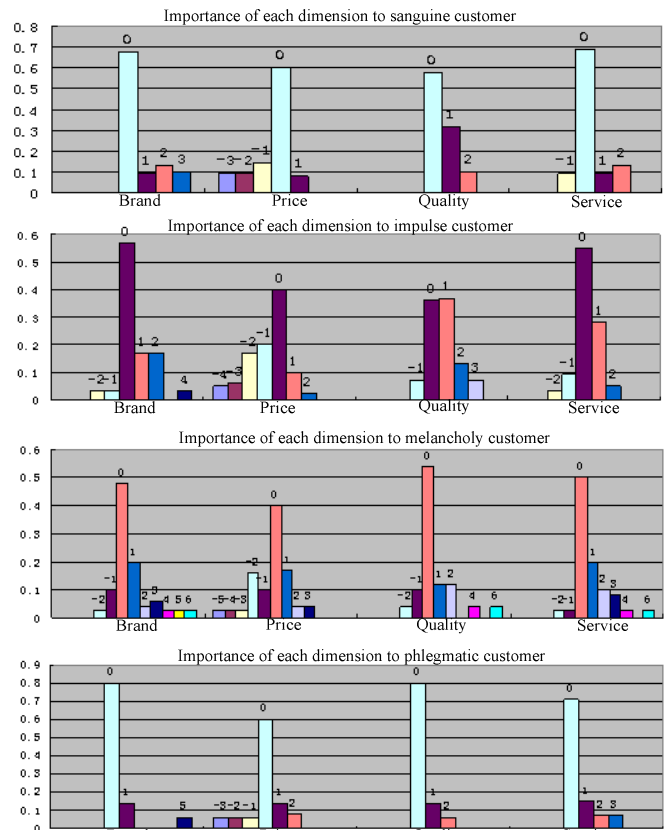


Figure4. Importance of each dimension to different characters

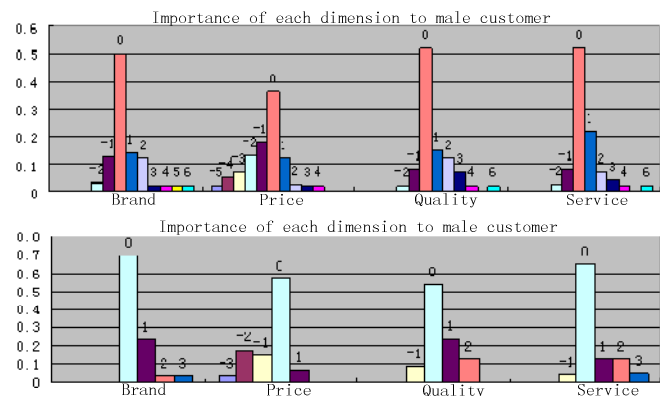


Figure5. Importance of each dimension to different sex types

In addition, the same studies were performed between different universities (Beihang University and Tsinghua University) and different degrees of students (undergraduates and postgraduates). The findings indicated that different degrees of students and different schools had little effects on the differences between the CEV and CPV of customers. Therefore, we suggest that the results of empirical research be adapted to all college-student cellular market in Beijing.

V. CONCLUSION

A. Implication of Research

This paper explored the differences and impact factors between CEV and CPV. Based on four dimensions found in sample analysis, we suggested the effect of customer character, sex and purchase behavior on the differences between the two values. Our findings have the following contributions to theories.

Firstly, based on the samples, college students paid more attention to four dimensions when they bought mobile phone: brand, price, quality and service. Among the four dimensions, the importance of price changed considerably, and it decreased from the first important dimensions in CEV to the least important one in CPV. On the contrary, the importance of brand, quality and service rose in varying degrees.

Secondly, the present paper explored three key impact factors of the differences between CEV and CPV: improvement factors, substitute factors, and internal environment factors.

Finally, this paper investigated the influence degree of customer character, sex and purchase behavior on the differences between CEV and CPV. As far as the customer characters were concerned, the melancholy person usually had more differential between the two values. Moreover, the differences between the two values of male were larger than female. As for the purchase type, the differences of impulse-buying customers were more significant than other three types.

B. Managerial Implications

Enterprises aims at better marketing performance can adjust the differences between CEV and CPV by interfering and influencing CEV. From the results of the empirical research, college students pay more attention to physical factors (price and quality), compared with the intangible factors (brand and service). Enterprises can cut prices to attract more attention of consumers and improve CEV in the short term. As brand, quality and service become more important in CPV, only through improving the levels of quality and service can enterprises make customers more satisfied and achieve a higher customer retention rate in the long run. In addition, college students of different sex, character and purchase types have different CEV towards mobile phone, therefore, managers can re-position target marketing, and decide new product strategy and other marketing plans.

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