

# Service Quality, Brand Image and Price Fairness Impact on the Customer Satisfaction and Loyalty

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*Abstract* - As the times progress and the enhancement of the public educational level, life insurance has been paid much attention day by day. Especially, medical insurance plays an important role in all sorts of life insurance. Medical insurance is the invisible merchandise. While customers buy the invisible products, they usually place an importance on invisible factors.

The study problem into the direct impact on service quality, brand image and price fairness; This research anticipates after applying structural equation modeling (SEM), while customers buying the medical insurance; service quality and brand image has direct and positive impact on the customer satisfaction, service quality and brand image has no direct and positive impact on the customer loyalty. But service quality and brand image has direct and positive impact on the customer loyalty through customer satisfaction. After analysis, customer satisfaction has a direct and positive effect on customer loyalty. Finally, after measure of price fairness, whether it is a direct impact on customer satisfaction, customer loyalty, or indirectly affect customer loyalty through customer satisfaction, all have no significant impact.

*Keywords* - Medical insurance, Service quality, Customer satisfaction

## I. INTRODUCTION

While the times going, technology development and the enhancement of educational standard and average income in twentieth century, people understand the concept and meaning about insurance more and more, and also place importance on the function of insurance more. Among insurance industry, life insurance has the highest marketing share. Because the intense competition in the market, insurance company usually ignore the service quality in promotion and adjustment. Therefore, it usually affects the brand image of insurance companies, and even damages the consumers' rights and interests.

The study is related to customer satisfaction and loyalty and the purpose of this study is to analyze consumers' perception of service quality, brand image and price fairness and to explore customers' higher satisfaction and loyalty for medical insurance. Furthermore, the study is to raise insurance companies' competitive ability, enlarge the existing customer group and grow up the insurance industry in the insurance company's point of view.

According to the statistics of Taiwan Insurance Institute, the insurance premium revenue was 2.1084185 million NT dollars in Taiwan in 2009. Compared to 2008, the

insurance premium total was 2.026584 million and it grew up 4.04%. It showed that people value the insurance plan more and more. Insurance industry has assets of 23.53% in financial institution. Among them, industry insurance occupied 0.54% and life insurance occupied 22.98%. It also indicated that life insurance plan is the main commodities in the insurance industry. As shown in Table 1, the insurance industry grew up 7.5% in recent five years. According to UDN (2010) news that life insurance companies according to a survey, nearly a year are willing to buy insurance consumers, who buy health insurance the most, accounting for 40 %; second cancer insurance accounted for 20%, indicating consumer acceptance and demand for medical insurance is growing.

The main product content medical insurance is the date volume pays. According to Insurance Institute of Statistics and Statistics Development Center, 2006 national hospital visits more than 299 million people, accounting for 13% of the total population, a daily average of 8,193 people were hospitalized, the average number of days per hospital stay was 10.6 days in these data is increasing year by year. Because the average life expectancy has increased, medical technology, so that health care must be more fully prepared to cope with the future aging society. Therefore, planning for life insurance, risk management is a very important issue. Medical insurance for insurance companies all the merchandise, occupies a pivotal position, so its related issues is also very valuable research.

Biel [1] proposed the brand image influence consumer behavior, then changed its brand equity; Therefore, insurance companies must also consider how to enhance self-brand image, and thus to enhance its customer satisfaction and loyalty. Finally, with excellent service quality and establish a good brand image, the fair price for the purchase decision will be the most important factor. How to price and product quality in the balance, but also be able to create fair prices to increase purchase intention.

In this study, examples for consumers to buy Medical insurance, and to explore the service quality, brand image and price fairness impact for customer satisfaction and customer loyalty; where to find the best influence consumer satisfaction and loyalty factors. Hope can work out their results, and can make business in the strategic management planning, be helpful.

## II. LITERATURE REVIEW

he insurance industry, services for compensation is the most important. Compensation for service quality and content is the most important part. Kotler [2] research indicates that service is different from the manufacturing, service with a number of features to make their service activities and general economic activity are different, so understanding these features is very important. Lovelock, Wright [3] defined the quality of service into the following five characteristics: (a) Certainty (b) Tangible (c) Responsiveness (d) Assurance (e) Empathy.

Heskett et al. [4] thought profit and growth are stimulated primarily by customer loyalty. Loyalty is a direct result of customer satisfaction. Satisfaction is largely influenced by the value of services provided to customers. Bitner's [5] path analysis indicated that service quality affects customer satisfaction, and that customer satisfaction in turn affects customers' recollected perceptions service quality. Abod et al. [6] cited the PZB SERVQUAL scale, research from the telecommunications industry that found service quality (error records center, response time, restore the time) and customer satisfaction are highly related. Cronin, Brady, and Hult [7] pointed out that both direct and indirect effects of service quality on behavioral intention should be considered. Anderson and Sullivan [8] consider customer satisfaction can achieve higher customer loyalty. Composite theory of scholars, the service quality has a direct and positive impact for customer satisfaction, and service quality indirect impact for customer loyalty.

Graeff [9] research indicates that when consumer's self-image and brand image similar, it will influence consumer purchase intention. Fredericks and Slater [10] proposed the customer perceived value of decision come from the brand image will also affect customer loyalty. Romaniuk and Sharp [11] consider positive brand image and cognition will impact on consumer purchase intentions, brand image and customer loyalty was positively related. Romaniuk and Sharp [11] study of brand image indicated that "When positive image associate with brand attribute, customers will have higher purchase intention." Cretu and Brodie [12] research suggests that the brand image for evaluation of customers and the company's reputation with a significant correlation.

Smith, Bolton and Wagner [13] point out that they used consumer's recognition for service and differences between expectations as evaluation standard of customer satisfaction, besides evaluation of fair perception and cognition for customer have become valuable in recent years. Olsen and Johnson [14] in a 2x2 quasi-experimental design study of fair priority mode (to pay the fair on customer satisfaction, customer satisfaction on customer loyalty) and the satisfaction priority mode (customer satisfaction on pay equity and pay equity on customer loyalty), found that both specific transactions or cumulative transactions, pay equity are positively related to customer satisfaction.

Zeithaml, Berry and Parasuraman [15] to explore the dimensions of loyalty, point out that loyalty is "the customer willing to buy more, and the price increase will be out of past experience and the negative experience of customer perception". Research shows price is one of the determinants for the customer satisfaction, and affect on customer loyalty. This study suggests that price fairness on any exchange and transactions, plays a very important role. When consumers buy a higher price of product and not expected, at this time, will have a negative customer satisfaction. When prices change, or unfair, consumers also will have an impact on loyalty of product to consider whether have loyalty on this product or brand.

Customer loyalty is the consumer in the future will repeat purchase products or services they prefer. Reichheld et al. [16] considered the customer loyalty had cash value of the real benefits. Jones and Sasser [17] thought customer loyalty can be divided into long-term loyalty and short-term loyalty. Long-term loyalty means customers' long-term purchase, and it is not easy to change their choices, but short-term loyalty means when customers have a better choice, they will immediately go off in a huff. In other word, the concept of loyalty includes both positive attitude and behavior. Therefore, a positive attitude and behavior is embedded in the customer loyalty. Jones and Sasser [17] emphasized that the more the customers satisfy, the more the customer loyalty. Chiou et al. [18] studied how to impact on customer knowledge level to customer loyalty, found that customer satisfaction on reputation, customer satisfaction and loyalty (purchase intentions), had positive effects. Anderson and Sullivan [19] pointed out in their study that satisfaction were positive impact on repurchase behavior. Customer loyalty is based on customer satisfaction.

## III. METHODOLOGY

### A. Research Framework

According to the background, motivation, literature review, in this study, service quality, brand image and price fairness for the direct effect of customer satisfaction and customer loyalty; service quality, brand image and price fairness as independent variables, and customer satisfaction and customer loyalty as the dependent variable. Research on the independent variables on the impact of customer loyalty, customer satisfaction is as an intermediate variable. Through literature review, this study proposes a conceptual research framework, such as (Figure 6). The framework is based on the satisfaction model of the scholar Parasuraman, Zeithaml, and Berry [15], and focus on the perceived antecedents of the model.

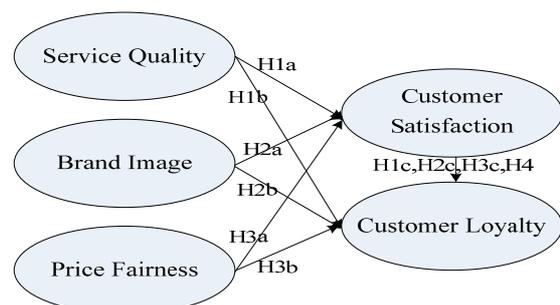


Fig. 1. The main structure chart

*B. Research Hypotheses*

In this study, consumers purchase medical insurance as an example. Because of its low proportion of tangible products, almost do not provide physical products. Therefore, consumers will pay more attention to considerations outside the product itself. Therefore this study first explore to the service quality impacts for customer satisfaction and customer loyalty (H1). Second, research the brand image effects on customer satisfaction and customer loyalty (H2). Third, the perceived fairness of the price impacts for customer satisfaction and customer loyalty (H3). Finally, it is to explore the impact of customer satisfaction on customer loyalty (H4). The following is the research hypothesis:

- H1a: service quality directly and positively impacts on the customer satisfaction.
- H1b: service quality directly and positively impacts on the customer loyalty.
- H1c: Service quality indirectly affects on the customer loyalty through customer satisfaction.
- H2a: brand image directly and positively impacts on the customer satisfaction.
- H2b: brand image directly and positively impacts on the customer loyalty.
- H2c: brand image indirectly affects on the customer loyalty through customer satisfaction.
- H3a: price fairness directly and positively impacts on the customer satisfaction.
- H3b: price fairness directly and positively impacts on the customer loyalty.
- H3c: price fairness indirectly affects on the customer loyalty through customer satisfaction
- H4: Customer satisfaction direct and positive impacts on customer loyalty

IV. RESULTS

*A. Reliability Analysis*

Nunnally [20] pointed out that Cronbach's  $\alpha$  is lower than 0.35, it should be rejected. When ranged between 0.5 and 0.7, it's acceptable. If the letter is greater than 0.7, reliability is high. In this study, the reliability of each dimensions are follows table 1:

TABLE 1  
SUMMARY OF RELIABILITY ANALYSIS

Measured variables	Cronbach's $\alpha$	Measured variables	Cronbach's $\alpha$
Service Quality	0.893	Customer Satisfaction	0.890
Brand Image	0.809	Customer Loyalty	0.826
Price Fairness	0.778		

*B. Convergent Validity*

In this study, samples and the data input LISREL8.7 program, and use Method of maximum likelihood (MLE) for model estimation. Past researches proposed model is estimated to be making, you should first test whether there are violations estimate (offending estimates), which contains three: (1) whether there is a negative error variance; (2) The standardized coefficient is larger than or

too close to 1; (3) whether there is too large standard errors.

TABLE 2  
SUMMARY OF CONVERGENT VALIDITY

Variables	Dimensions	Coefficient	Standard error	t-value
Service Quality	Reliability	0.82	0.33	11.35***
	Responsiveness	0.92	0.16	13.59***
	Assurance	0.74	0.46	9.73***
	Empathy	0.79	0.38	10.75***
	Tangible	0.73	0.47	9.54***
Brand Image	Functional	0.90	0.19	12.66***
	Symbolic	0.75	0.44	9.78***
	Experiential	0.67	0.56	8.32***
Price Fairness	Performance	0.70	0.51	8.70***
	Expectations	0.86	0.26	11.37***
	Comparative	0.67	0.55	8.16***
Customer Satisfaction	Compared	0.72	0.49	9.25***
	Overall	0.75	0.44	9.85***
Customer Loyalty	Pleasure	0.86	0.26	12.11***
	Right Choice	0.80	0.37	10.75***
Customer Loyalty	Encouraging	0.74	0.45	9.52***
	Recommending	0.83	0.31	11.03***
	First Choice	0.85	0.28	11.32***

Note: | t-value |  $\geq$  1.96, reached 0.05 level of significance to \* Note; | t-value |  $\geq$  2.58, significant level of 0.01 to \*\* Note; | t-value |  $\geq$  3.29, significant level of 0.001 to \*\*\* Note.

In this study, did not test the violation of the above three principles. And measure the dimensions of their relationship between the variables are reached significant level, it represents the variability of each variable by them can be significantly explained by the corresponding dimensions. Therefore, this study's fitness of the model should be acceptable.

*C. Discriminant validity*

Discriminant validity means measurement tools (ex: questionnaires, tests) describes a particular aspect of the project and the relevance of other perspectives. If the two dimensions of relevance is low, it has discriminant validity. The discriminant validity between two dimensions of the test method was, find the difference between the qualified model  $\chi^2$  and non-qualified mode  $\chi^2$ . If the  $\chi^2$  value reached significant level ( $p > 3.84$  is the obvious), then these two dimensions with high discriminant validity. Discriminant validity of this study is as follows Table 3:

TABLE 3  
SUMMARY OF DISCRIMINANT VALIDITY

Mode	$\chi^2$	DF	$\Delta\chi^2$
Non-qualified mode	204.01	125	-
Service Quality - Brand Image	311.67	126	107.66*
Service Quality - Price Fairness	307.90	126	103.89*
Service Quality - Customer Satisfaction	359.67	126	155.66*
Service Quality - Customer Loyalty	344.74	126	140.73*
Service Quality - Brand Image	311.67	126	107.66*
Service Quality - Price Fairness	307.90	126	103.89*

In this study, the  $\Delta\chi^2$  value of each dimensions reached significant. In this study between any two dimensions, which all have high discriminant validity.

D. Structural equation modeling

Structural equation modeling (SEM) primarily a linear structural equation model, using path coefficient of the variable is significant, to test whether the empirical significance of the conceptual framework, and finally test the hypotheses. In this study, we used SEM to verify the relationship between service quality, brand image, price fairness, customer satisfaction and customer loyalty. The overall model fitness are as follows Table 4; chi-square value is 215.456, its greater than 0.05, indicating that the model has explanatory power. Goodness-of-fit index (GFI) was 0.902, greater than 0.90 within an acceptable range, and shows that this model has explanatory power. Adjusted goodness-of-fit index (AGFI) was 0.857, greater than 0.80 within an acceptable range. Normed fit index (NFI) is 0.907; greater than 0.90 within an acceptable range, the model is more significant than the null model. Root mean square error of approximation (RMSEA) value was 0.040, which is less than 0.05, the acceptable range, indicating that the model without the complexity of the sample. Comparative fit index (CFI) was 0.981, greater than 0.95 as the acceptable range, the model is null more improvement model, and particularly suitable for small samples.

TABLE 4  
FIT INDEXES

Fitness	Value	Range	Standard
Chi-square value	137.834	-	P>.05
$\chi^2/DF$	1.2198	-	<3
goodness-of-fit index (GFI)	0.902	0-1	>.90
Adjusted GFI (AGFI)	0.857	0-1	>.80
Root mean square error of approximation (RMSEA)	0.040	0-1	<.05
Comparative fit index (CFI)	0.981	0-1	>.95
Normed fit index (NFI)	0.907	0-1	>.90

E. Test hypotheses

This section will verify seven hypothesis of this study. Table 5 is the relationship among the variables, parameters, t-value and results are as follows:

TABLE 5  
SUMMARY OF RESEARCH'S PATH

Hypotheses	Path	Parameters	T-value	Results
H1	Service Quality -> Customer Satisfaction	0.28	3.19***	Support
H2	Brand Image -> Customer Satisfaction	0.45	3.19***	Support
H3	Price Fairness -> Customer Satisfaction	0.21	1.61	Not support
H4	Service Quality -> Customer Loyalty	0.11	0.96	Not Support

H5	Brand Image -> Customer Loyalty	0.11	0.58	Not Support
H6	Price Fairness -> Customer Loyalty	0.05	0.32	Not Support
H7	Customer Satisfaction -> Customer Loyalty	0.42	2.40***	Support

V. CONCLUSION

A. Conclusions

In this study, when consumers purchase insurance, service quality, brand image and price fairness direct and indirect effect on customer satisfaction and customer loyalty, which can summarize a few points:

TABLE 6  
SUMMARY OF RESEARCH'S HYPOTHESES

H	Hypothetical question	Results
H1a	Service quality directly and positively impacts on the customer satisfaction.	Support
H1b	Service quality directly and positively impacts on the customer loyalty.	Not Support
H1c	Service quality indirectly affects on the customer loyalty through customer satisfaction.	Support
H2a	Brand image directly and positively impacts on the customer satisfaction.	Support
H2b	Brand image directly and positively impacts on the customer loyalty.	Not Support
H2c	Brand image indirectly affects on the customer loyalty through customer satisfaction.	Support
H3a	Price fairness directly and positively impacts on the customer satisfaction.	Not Support
H3b	Price fairness directly and positively impacts on the customer loyalty.	Not Support
H3c	Price fairness indirectly affects on the customer loyalty through customer satisfaction.	Not Support
H4	Customer satisfaction direct and positive impacts on customer loyalty.	Support

H1a, H2a hypotheses are support, so the service quality and brand image direct and positive impact on customer satisfaction. H4 hypothesis also support, customer satisfaction has a direct impact on customer loyalty. So it can infer H1c, H2c two hypotheses are support, therefore, service quality and brand image indirectly effects on customer loyalty through customer satisfaction. In the H1b and H2b, service quality and brand image neither will have a direct impact on customer loyalty. Finally, H3a, H3b and H3c are not support. In addition to, when consumers buy medical insurance, price fairness doesn't direct and indirect effects on customer satisfaction and customer loyalty.

Because medical insurance as intangible goods, so the service quality for consumers has great influence. Brand image, whether it is the industry leading brands on the comparison or the company itself has a reputation, in the minds of consumers that will occupy important position. Price fairness, may explain the reason is medical insurance for customers of this intangible commodity, for

most people, probably don't understand its value or cost; so for the price perception was less affected.

### B. Limitations and Directions for Future Research

For the purchase of medical insurance, there are still many unmeasured factors that affect consumers; like a favors, expertise, product quality and consumer personality. For these factors, still occupy a certain proportion of the consideration; so in the future study, how to avoid or minimize these factors impact on consumer purchase intention, future research needs to pay attention. Cross-sectional data collection; the survey only once, not long-term traceability, that cannot be effectively observed. As mentioned above, consumers may be in a period of time due to other confounding variables that impact or change its thinking or consumer behavior. In the future researchers, it is recommended that can incorporate this concept. At different time points test, product quality and consumer behavior may change over time. It is recommended that future researchers to continue in this direction can be in multiple time points to tests of consumer behavior.

### REFERENCES

- [1] Biel, A.L. "How Brand Image Drives Brand Equity", *Journal of Advertising Research*, vol. 12, pp. 6-12, 1992
- [2] Kotler, P., *Kotler on Marketing: How to create, Win, and Dominate Markets*, 1th ed, New York: Free Press, pp. 208-213, 1999.
- [3] Lovelock, C. H., & Wright, L. *Principles of service marketing and management* , 2nd ed, New Jersey, Prentice Hall, 2002.
- [4] Heskett, J. L, Jones, T. O., Loveman, G. W., Sasser Jr., W. E., and Schlesinger, L. A., "Putting the service-profit chain to work", *Harvard Business Review*, vol. 72, pp. 164-174, 1994.
- [5] Bitner and M. Jo, "Evaluating Service Encounter: The Effects of Physical Surroundings and Employee Responses," *Journal of Marketing*, vol. 56(April), pp. 57-71, 1990.
- [6] Abod, A.K., I. Hishamuddin and T. Venu, "What Drive Customer Loyalty: an Analysis from the Telecommunications Industry", *Measurement and Analysis for Marketing*, 1th ed, London, pp. 35-42, 2002.
- [7] Cronin, J. J., Brady, M. K. and Hult, G. T., "Assessing the Effects of Quality, Value and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments," *Journal of Retailing*, vol. 76, pp. 193-218, 2000.
- [8] Anderson, E. W. and M.W. Sullivan, "The Antecedents and Consequences of Customer Satisfaction for Firms", *Marketing Science*, vol. 12, pp. 125-143, 1993.
- [9] Graeff. T. R., "Using promotional messages to manage the effects of brand and self-image on brand evaluations", *Journal of Consumer Marketing*, vol.13, no.3, pp. 4-18, 1996.
- [10] Fredericks, J.O. and J.M. Slater II, "What Does Your Customer Really Want?" *Quality Progress*, vol.31, no.1, pp. 63-65, 1998.
- [11] Romaniuk, J. and Sharp, B. "Measuring brand perceptions: Testing quantity and Quality." *Journal of Targeting, Measurement and Analysis for Marketing*, vol. 11, no.3, pp. 218-220, 2003.
- [12] Cretu, A. E. and Brodie, R. J., "The influence of brand image and company reputation where manufacturers market to small firms: A customer value perspective", *Industrial Marketing Management*, vol. 36, pp. 230-240, 2007.
- [13] Smith, A., R. Bolton, and J. Wagner, "A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery." *Journal of Marketing Research*, vol. 36, no. 3, pp. 356-372, 1999.
- [14] Olsen, L. L. and M. D. Johnson, "Service Equity, Satisfaction, and Loyalty: From Transaction-Specific to Cumulative Evaluations." *Journal of Service Research*, vol. 5, no. 3, pp. 184-95, 2003.
- [15] Parasuraman, A., V.A. Zeithaml and L. L. Berry, "The Behavioral Consequences of Service Quality", *Journal of Marketing*, vol. 60, pp. 31-46 and 55-61, 1996.
- [16] Reichheld, Frederick, F. and W. E. Sasser, "Zero Defection: Quality Comes to Services," *Harvard Business Review*, vol. 68, no. 5, pp. 105-111, 1990.
- [17] Jones, T. O. and Sasser, W. E. Jr., "Why satisfied customers defect", *Harvard Business Review*, vol. 73, no. 6, pp. 88-99, 1995.
- [18] Chiou, J. S., C. Droge, and S. Hanvanich. "Does Customer Knowledge Affect How Loyalty Is Formed?" *Journal of Service Research*, vol. 5, no. 2, pp. 113-124, 2002.
- [19] Anderson, E. W. and M.W. Sullivan, "The Antecedents and Consequences of Customer Satisfaction for Firms", *Marketing Science*, vol. 12, pp. 125-143, 1993.
- [20] Nunnally, J. C., *Psychometric Theory*, 2nd ed, New York: Mcgraw-Hill, 1978.