



Preliminary research on customer satisfaction models in Taiwan: A case study from the automobile industry

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ABSTRACT

For our research we applied the TCSI model to the automobile industry in Taiwan. The subjects of our research were consumers of new cars in Taiwan during the years 2006–2008. According to statistics provided by the Taiwan Transportation Vehicle Manufacturers Association (TTVMA) Toyota, Ford, Nissan, and Mitsubishi Motors made up for 79% of all cars sold in Taiwan from January through June, 2008. Questionnaires were issued randomly to four companies. We used structural equation modeling (SEM) to manifest the model's suitability and develop a standard questionnaire to obtain the customer's opinions. The conclusions reached provide valuable insight into the companies and industry and can help them to develop strategies to increase their competitiveness.

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1. Introduction

In recent years the competition of the Taiwan automobile industry has been very fierce. Because the scale of the Taiwan automobile market is relatively smaller than other countries and there are a large number of car brands, car companies often engaged to participate in “price wars” in order to attract more customers and hold onto old customers. However with the competitiveness of this vicious cycle in order to increase one's own ability to compete a company must not only actively develop new products and improve quality, but must also actively seek to raise the levels of customer satisfaction and loyalty. Compared with other business performance indexes, the customer satisfaction index is less likely to be influenced by seasonal trends, cost changes, price fluctuations and accounting matters. Therefore it could be said that it is the least sensitive index, causing it to be a favorite among many experts, organizations, and countries. In this age of “customer orientation” the topic of how to materialize the thoughts of the consumer in order to find the factors which influence a corporation's performance has become even more important. Raphael and Raphael (1995) pointed out that the cost of creating a new customer is 5–9 times greater than the cost of maintaining an old customer, and

that if the loyalty of customers can be raised by 5% a corporation can obtain 25–85% more profit. Therefore the importance of keeping old customers exceeds that of finding new customers. How to establish a fair and subjective method of measuring customer satisfaction has become a very important academic and practical issue.

The level of customer satisfaction has always been an important issue of the service industry. In 1989 Fornell proposed the Swedish Customer Satisfaction Barometer (SCSB) (Anderson, Fornell, & Lehmann, 1994), in 1994 established the American Customer Satisfaction Index (ACSI), in 1998 established the European Customer Satisfaction Index (ECSI) which is a more complete and widely used index (Grigoroudis & Siskos, 2004).

With the success of the SCSB and ACSI many countries have started to research and establish a customer satisfaction index for themselves. For example the Swiss Customer Satisfaction Index (SWICS) established in 1998, and the European Customer Satisfaction Index (ECSI) established in 2000. A total of 11 European countries participated in the research for the establishment of the ECSI, all European countries have joined the new index which has allowed the index to become more and more mature (Martensen, Gronholdt, & Kristensen, 1999; Martensen, Kristensen, Gronholdt, & Eskildsen, 2000). Other countries have also followed by establishing their own customer satisfaction models, such as the Korea Customer Satisfaction Index model, and the China Customer Satisfaction Index model. Through this we can see that the application of CSI within many facets of the service industries (Chitty, Ward, & Chua, 2007; Terblanche, 2006; Turel & Serenko,

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2006; Türkyilmaz & Özkan, 2007) and even the measurement of the satisfaction of online services (Hsu, 2008) produces good empirical validity. With this in mind scholars who have spent many years using the topics of quality, marketing, psychology, economics, and industrial development to establish the “National Customer Service Research Council” (NCSRC) in order to actively research and develop an index that complies with Taiwan’s culture and consumer behaviors, the Taiwan Customer Satisfaction Index (TCSI). The TCSI is formed mainly by combining the concepts of the ACSI and ECSI and provides Taiwan with a fair and objective index to produce important information which can help the country, industries, and companies improve their competitiveness.

The purpose of our research is to introduce the establishment of Taiwan’s customer satisfaction index, and use the four largest automobile companies (Ford, Yulon, Kuozui, and CMC) to analyze customer satisfaction and loyalty. Using Structural Equation Modeling (SEM) to perform result analysis we shall attempt to find the largest benefit indexes for the influence of satisfaction to provide corporations with a reference to make improvements.

2. Literature review

2.1. Customer satisfaction

Cardozo (1965) was the first scholar to propose the idea of customer satisfaction. He felt that the higher the level of customer satisfaction the more likely the customer was to make more repeat purchases and purchase other products. Many other scholars proposed related customer satisfaction theories. The concept of customer satisfaction was part of the marketing and practical field for around a century; then in the 1970s it started to become a separate topic for research and surveying (Churchill & Carol, 1982).

Czepiel and Rosenberg (1974) pointed out that customer satisfaction is an accumulating concept, and summarized the satisfaction level of a certain product or service and the satisfaction level of different areas of an organization. He also pointed out that customer satisfaction is a holistic evaluation reaction that represents the sum of the customer’s objective reaction to the different properties of products, or in other words the goal is to use overall customer satisfaction to measure customer satisfaction. Woodside, Frey, and Daly (1989) felt that customer satisfaction is the main factor that influences customer behavior. Fornell (1992) believed that customer satisfaction can directly predict overall perception and that it is a company’s asset that can bring repeated consumer behavior, and therefore “customer satisfaction” can be used as an economic benefit index. Anderson et al. (1994) felt that customer satisfaction reflects a consumer’s total experience in the purchasing of a product or service, and that it is an overall evaluation built up over time.

Ostrom and Iacobucci (1995) felt that customer satisfaction is a way to evaluate the difference of a customer’s expectations and actual perceptions of a certain product, and that its indexes include product price, service efficiency, service attitude, overall company performance, and optimal level of company familiarity. Jones and Sasser (1995) used the willingness of a customer to make further purchases, basic behavior (the most recent time of purchase, number, and price), and derivative behavior (open recommendation, word of mouth, introduction of customers, etc.) as a way to measure customer satisfaction. In actuality many companies realize the importance of customer satisfaction but lack an effective evaluation index to measure it so that they can understand the customer’s expectations and needs and improve the quality of their products and services.

Customer satisfaction theories include the assimilation theory, comparison theory, dissonance theory, expectations mismatch

theory, equity theory, and attribution theory. Many scholars widely use the expectation-confirmation theory and rational expectation theory to explore the expectations of consumers before they make a purchase and their level of satisfaction after they make a purchase (Kotler, 2006). The different NCSIs of different countries are adjusted for the situation of each country. In regards to the factors that influence customer satisfaction, the TCSI is pretty much the same as the ECSI. The measuring indexes of the TCSI include the overall satisfaction level, the performance expectation, and the optimal situation comparison.

2.2. Taiwan Customer Satisfaction Index

The National Customer Satisfaction Indexes (NCSI) is widely used in the analysis of customer’s satisfaction in the fields of brands, trade, industry, and business. The NCSI is different from traditional customer satisfaction indexes in that different categories are given the same weight and then the differences between these categories are discussed (Fornell, 1992). Traditional customer satisfaction models give estimated parameters to the different categories in order to analyze and discuss the gaps between the different categories. Therefore in some ways it seems that this method does not meet the definition of a model. The NCSI on the other hand has a structural equation which includes the estimated parameters of the hidden categories and the category relationships. Therefore the NCSI is able to clearly define the different relationships between different categories and provide predictions for the future. Many scholars have discovered the characteristics of the NCSI (Karatepe, Yavas, & Babakus, 2005; Malhotra, Ulgado, Agarwal, & Baalbaki, 1994). The development of the quality measurement of a single customer satisfaction index will usually be according to a certain kind of culture or the culture of a certain country. Therefore scholars should be careful when using a certain model to measure the quality of other nations or countries. Scholars feel that when developing a system for measuring or evaluating a certain country or district’s customer satisfaction level that a specialized customer satisfaction index should be developed.

The Taiwan Customer Satisfaction Index was developed with the cooperation of the Chung Hua University and the Chinese Society for Quality. The American Customer Satisfaction Index (ACSI) and European Customer Satisfaction Index (ECSI) were used as a foundation to develop the Taiwan Customer Satisfaction Index (TCSI). In Taiwan the central government performs the role that private companies do in many modern countries, strengthening the potential of industries, and speeding up the rate at which industries upgrade and the rate at which the people’s quality of life improves. Therefore the TCSI is different from the ACSI in that it separated the model into a section for private institutions, government services and nonprofit organizations. These three models can be combined according to the content of the subject being researched which is more suitable for use in Taiwan. The three models and indexes can be used flexibly to adjust to the characteristics and differences of different situations.

Every aspect of the TCSI that influences overall customer satisfaction can be measured through surveys of the customer, and every index has a cause-effect relationship with the other five indexes. The relationships of the different aspects of the TCSI are different from those of the ACSI, but are the same as the ECSI. The TCSI assumes that currently: (1) Taiwan corporations have a satisfactory ability of dealing with customer complaints; customer complaints has already changed from a factor that influences customer satisfaction results to a factor that influences quality perception; (2) The expectations, satisfaction and loyalty of customers are influenced by the image of the corporation. The main reason that customers complain is not calculated into the TCSI model is that they were removed according to the ECSI model. ECSI

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