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Ju Long

University of Texas at Austin

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UTILIZING WIRELESS TECHNOLOGY IN MARKETING RESEARCH OF CUSTOMER SATISFACTION

Ju Long

University of Texas at Austin
julong@mail.utexas.edu

Abstract

Wireless information devices provide researchers innovative tools to conduct marketing research surveys on customer satisfaction. One of the major strengths of wireless marketing survey is its ability to provide timely and accurate consumer satisfaction data in the real shopping and consumption environment. In this research, we propose that dynamic and pervasive wireless surveys could enable marketing researchers to develop a better understanding on customer satisfaction formation, evolvement and the effects of the “word of mouth”. Survey participants could also benefit from this convenient and non-intrusive method. Besides detailed discussions on the potential benefits of wireless surveys on the customer satisfaction studies, we also propose preliminary experiments to test the above propositions.

Keywords: Customer satisfaction, wireless marketing survey, marketing research, wireless Internet, wireless communication networks

Introduction

Customer satisfaction has been one of the fundamental driving forces for business profitability. In intense competitions, it is clear that those who win customers will win the markets. In effect, customer satisfaction is so important to marketers that it may be the most frequently studied topic in today's marketing research. However, is the measurement of customer satisfaction accurate? Does the data truly reflect the consumers' experiences? When researchers study customer satisfaction in the actual shopping and consumption environment, important questions still remain unclear. Those questions include how consumers form satisfaction toward the products or services at the time of consumption? What are the long-term impacts of the customer satisfaction? What are the effects of interpersonal influences on customer satisfaction? Current techniques used in customer satisfaction may not be adequate to answer these questions.

Basic techniques used in today's customer satisfaction studies are laboratory tests and focus groups. Both techniques are not adequate to show how customer satisfaction is formed in the actual consumption experiences. They are conducted in unnatural situations that can make the consumers behave differently than in the actual shopping environments (Hughes and Lennox 1990).

To better understand the customer satisfaction formation and evolvement, researchers need to observe customers in the actual shopping and consumption environments. However, compared with laboratory experiments, it is more difficult to do field studies because researchers have to control much more environmental variables. In order to keep track of subjects' behaviors, researchers need sophisticated technologies to aid them in the field studies.

For decades, in the field study of customer satisfaction, the paper and pencil based surveys were the main tools used. Although they can be relatively cheap to implement, coding and entering the answers into the backend databases are notoriously time-consuming and error-prone. In addition, the data collected through these techniques are not timely and accurate since the surveys heavily rely on the retrospective reports of the consumers. Recently, a new way to do field study on consumer behaviors has emerged. Researchers borrow the techniques of ethnographic research from anthropology and observe consumer behaviors in day-to-day lives. Although it could provide insights on consumer's natural behaviors that may not be gained from laboratory tests and surveys, ethnographic method is prohibitively expensive and its results are hard to quantify due to the limits on the sample size.

Clearly, the absence of advanced and efficient research techniques severely restrained researchers' ability to study consumer satisfaction in the natural environments. However, many promising new technologies, such as the vastly improved wireless data networking technology and advanced database technology, become available to researchers in the past several years. The question is: How do we leverage these technologies to improve research of customer satisfaction in field studies? To address this question, we propose an innovative way to collect data on customer satisfaction -- wireless marketing survey.

In this article, we will provide marketing researchers and practitioners an introduction of this new marketing research technique. We first explain what the wireless marketing survey is. We then discuss its potential benefits to the customer satisfaction studies. We propose that wireless marketing survey can improve research in customer satisfaction formation, evolution and the effects of the "word of mouth". Then we propose preliminary experiments to test the proposed hypotheses.

Wireless Marketing Survey

Wireless marketing survey is a new data collection technique that allows us to conduct marketing surveys from standard wireless phones. In practice, to conduct a wireless survey, the researchers can either send a text-based or a voice-based questionnaire to a respondent's cell phone. The respondent could use the dial pad to answer the survey questions or just speak their answers into the phone. The answers can then be sent back to the backend database instantly through the wireless communication network and the Internet. The researchers manage the survey process through Internet-based survey administration software. They can access the survey database, monitor the survey process and dynamically interact with respondents in real time (Long et al., 2002).

Compared with other marketing surveys, wireless marketing survey has the ability to deliver *instant answers anytime from anywhere*. Wireless survey has several advantages:

- It is timely and accurate. The answers can be sent instantly to the researchers without any delay. Surveys can be conducted right at the moment of purchase or consumption to accurately reflect consumer's experiences.
- It is convenient and non-intrusive to the respondents (Yuan et al., 2002). The respondents just need a handy cell phone to participate in the survey. No special training or devices are required.
- It is always accessible to the respondents. Like a watch, a wireless phone is always with the consumer wherever they go. Other survey instruments, such as computers or wired telephones, do not have this *always with the consumer* feature.
- It could be longitudinal. A wireless phone is a personal belonging and therefore is associated with each individual. This *personal* feature makes it easy for researchers to keep track of each respondent over a period of time.
- It could be dynamic. Connecting with the wireless network enables respondents to send answers to the backend database during the survey. The survey can be programmed to branch questions automatically based on the respondent's previous answers.

But if wireless marketing survey has so many advantages, how come it had not been utilized before? It is mainly because the supporting technologies, such as wireless Internet browsers and servers, had yet to develop. Only after the recent advances in the wireless Internet technologies, does wireless marketing survey become an implementable method. In addition to the technological improvement, the exponentially growing wireless consumer market also provides an ever-expanding respondent base for wireless marketing surveys.

Potential Benefits to Consumers Satisfaction Research

Wireless marketing surveys can be used in many marketing research areas, such as new medicine clinical trials (Long et al., 2002). In the field study of consumer satisfaction, wireless marketing survey can be especially valuable. It could be used to get consumer feedbacks at the time of consumption, study the long-term effects of consumer satisfaction, and study word of mouth's effects.

Get Consumer Feedbacks at the Time of Consumption

Intuitively, data collected at the moment of consumption is more accurate to reflect customers' experiences with the products/services. However, many customer satisfaction research projects rely on the data collected after the consumption (Oliver

1997). The consumers must rely on their memories to recall their experiences with the products and services. This retrospective approach results in questions in data validity and accuracy. Researchers have long shown that human memory retrieval process is subject to recency effects. Consumers give disproportionately more weight to the most recent occurrence of product performance, and consumers are not able to process a long history of performance experiences (Oliver 1993). In addition to the recency effect, it has been found that people retrieve negative events more easily than positive events from memory (Kanouse and Hanson 1972). As a result, most feedbacks the firms get may be disproportionately negative feedbacks, while the positive feedbacks may be under-represented due to the skewed retrieval of information.

Consumers do have compliments or complaints at the time of consumption. They simply cannot always find a convenient and immediate way to give their feedbacks. For instance, a traveler may not be satisfied with the services she receives on an airplane. But if she has to wait until the plane lands to complain through phone or by mail, she probably will not bother. Because of the inconveniences of giving feedbacks, most customers would not file complaints or compliments after all. Consequently, firms would lose the valuable feedbacks from customers to improve their products and services.

Wireless survey can be used to reduce such distortion in the customer satisfaction research. Since wireless phones are always with the consumers, customers are able to give accurate feedbacks through the wireless Internet from anywhere at anytime. Based on this information, firms could fine tune the products and services to better fulfill customers' needs more quickly and precisely.

In addition, wireless survey fundamentally innovates the way firms solicit the customer's feedbacks. In conventional surveys, it is mainly the firms who initiate the communication with customers at first. The cost of such initiation could be high and that limits the sample size. The small proportion of the consumers sampled may not generate insights applicable to the firm's customers in general. By contrast, wireless surveys provide the customers convenient ways to give feedbacks. Therefore, more customer initiated feedbacks are expected. Such customer initiated feedbacks are more effective since they are from the customers who really have the intention and information to share with the firm and it can save research costs for the firms as well.

Study Long-Term Effects of Customer Satisfaction

Customer satisfaction does not only consist of static phenomena and lone events. Instead, it is a continuous and dynamic process covering the entire purchasing and consumption time span. The customers who are satisfied with the performance of the products would continue interactions with the firms through repeated purchases and strengthen the relationships with the producers. Such strong and continuous trust from customers evolves into customer loyalty and becomes one of the driving forces of firms' long term profitability and competitiveness (Dick and Basu 1994).

However, most customer satisfaction research are static and one-shot and satisfaction has been treated as short-term events (Oliver 1997). It is mainly because keeping track of respondents is a tedious and costly task in longitudinal surveys. To conducting longitudinal studies on consumer satisfaction, researchers need a suitable technique that can track the respondents effectively. The main method used in current longitudinal studies is customer diaries. However, diary studies are very inconvenient for the respondents to participate. Respondents would simply skip the entries or forget to carry the diary with them when needed. Thus, the data collected through diary studies may be inaccurate. The inconvenience may also contribute to high rate of respondent drop-out.

On the contrary, wireless survey could be more convenient for longitudinal studies. The respondents do not need to bring the diary books with them around. Each entry they input can be automatically time stamped. Better yet, the researchers can send reminders to the respondents if they forget to input entries after an interval of time. They can also send message to less active participants to encourage their participations and prevent potential drop-outs.

Study "Word of Mouth" Behaviors in Customer Satisfaction

"Word of mouth" is an important topic in customer satisfaction research. Positive/negative word-of-mouth has been found to be strongly correlated with customer satisfaction or dissatisfaction. In customer satisfaction formation process, experiences of others carry much greater weight than other information sources due to the degree of similarity between recipients and communicators (Swan and Oliver 1989). For instance, a recommendation from a close relative would have much stronger influences on consumer's satisfaction than a thousand advertisements could do.

In addition to the influence on the recipients' satisfaction, word of mouth also influences the communicators' satisfaction. It has been found that negative word of mouth affects the communicator's dissatisfaction directly by reinforcing her ill feelings of the products and services (Richins 1983, Bearden and Teel 1983).

Wireless survey could be used to study the effect of word of mouth in customer satisfaction. Unlike other marketing surveys, the wireless survey allows the respondents to communicate with each other through voice communication or via text-based messaging during the survey. Using these P2P wireless networks, researchers can organize wireless focus groups among the respondents and study how this interpersonal communication influences consumers' satisfaction in the natural consumption environment.

Experiments

The purpose of the experiment is to study whether wireless survey could improve the quantities and qualities of data in customer satisfaction research. We would design the preliminary experiments to test the hypotheses we propose as below.

Experiment 1

Hypothesis:

H1: compared with traditional paper and pencil based surveys and the online surveys, wireless survey can generate higher response rate.

Subjects and Design

We will recruit 150 subjects from major companies in a major southwestern metropolitan area. These subjects are business travelers who would be traveling within a month. We would ask them to fill out a questionnaire with regard to their satisfaction on the hotels they stay during this coming business trips. We would divide these subjects into three groups, with 50 subjects in each group. We would implement wireless surveys, paper-pencil based mail surveys and online surveys to each group respectively. We will then compare the response rate generated from each group.

Experiment 2

Hypothesis:

H2: compared with traditional paper-pencil based diary studies, wireless longitudinal survey could improve the response rates from the participants and reduce the drop-out rate during longitudinal surveys.

Subjects and Design

Subjects would be recruited from business travelers from several major companies. Ideal sample size is 100. The study time span would be 6 months.

We would ask these business travelers to give their customer satisfaction rating on the hotels they stay during their business trips. We would divide the total sample into two groups with 50 subjects in each group. We would implement the wireless survey on one group while conduct paper-pencil based diary studies on the other group. We would then ask the subjects to input their general satisfaction level on each hotel they stay as well as their ratings on the detailed subsections of the services they receive in the hotel. We will then compare the response frequencies and response rates in each group as well as the drop out rate of the groups.

Experiment 3

Hypothesis

H3: wireless survey can be used to generate information on positive/negative "word of mouth".

Subjects and Design

We will recruit 20 subjects from business travelers in one major company. They are formed as a wireless focus group. The subjects are told to tell their group members about their experiences on the hotels they stay last time. We would then study the proportion of the negative/positive “word of mouth”, and consequently its impact on the customer satisfaction.

Conclusion and Future Research

Customer satisfaction is playing an ever greater role in product designs and marketing campaigns, as companies realize that they can gain a competitive edge by ensuring that their products/services best fit in consumers’ lives and keep customers happy. Compared with traditional tools, wireless marketing survey could provide marketing researchers more information on how customer satisfaction is formed during the time of consumption, its long-term effects and the effects of the “word of mouth”. Leveraging these new insights, marketing researchers can develop more effective marketing strategies for product development, distribution, pricing and promotion.

In this article, we have proposed the importance and benefits of using wireless surveys to study customer satisfaction. In our following up research projects, we will apply those concepts to conduct real life experiments to test these propositions. We have applied for research funds and corporate sponsorships to study customer satisfaction in specific industry sectors.

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