

Waiting as a Signal of Quality When Multiple Extrinsic Cues are Presented

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Abstract While quality of a product or a service is considered one of the most important factors that influence consumer satisfaction, evaluating and determining product or service quality can be difficult for many consumers. People thus usually rely on extrinsic cues or surrogate signals of quality to tackle the information asymmetry problems associated with product/service quality. Unfortunately, research which has empirically documented the link between quality signals and perceived quality focus mainly on the situation where there exists only a single extrinsic cue. This study aims to investigate the interaction effect between multiple cues or signals on perceived quality. In particular, “waiting” or “queuing” in this study is no longer treated as a phenomenon that solicits disutility or negative emotions, but considered a signal of quality that has positive effect on consumer evaluation or satisfaction. Furthermore, this study hypothesized that the “waiting” can only be a positive signal under some specific situations especially when other quality signals (i.e., price and guidance) co-exist, and used experiments to rigorously test the hypotheses. By considering multiple cues simultaneously, this study lead to a better understanding of when and to what extent waiting can be use as a quality signal, and thus extend the original theory proposed by other researchers.

Keywords Perceived quality · Satisfaction · Signaling · Wait · Price

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1 Introduction

Although many researchers have empirically verified the causal effect between product quality and customer satisfaction and/or willingness to buy (Baker et al. 2002; Cronin and Taylor 1992), pointed out that the quality of a product or service is sometimes very difficult to observe or evaluate objectively and customers usually relies on some extrinsic cues or signals to determine the quality (Boulding et al. 1993). In the literature related to the signals or indicators of quality, one of the most common themes focuses on the positive relationship between price and perceived quality, as well as the contextual or situational factors that may moderate this relationship. Near 100 relevant studies in the past 30 years have been reviewed and summarized by Brucks et al. (2000).

Other than the effects of price or brand name, Giebelhausen et al. (2011) proposed and experimentally showed that waits can also function as a signal of quality. After all, it is easy to find circumstances in which consumers are willing to wait. However, the relationship between waiting and quality perception of a product or service is relatively unclear, compared to the relationship between price or brand name and perceived quality. In traditional management point of view and in most academic literature, waiting is usually described as a phenomenon that cause negative emotions of consumers and have negative impacts on consumers' evaluation of products or services (Berry et al. 2002; Hui and Tse 1996; Baker and Cameron 1996). However, in recent years, business practitioners and marketing managers may deliberately create "must wait" situation or even deliberately increase the waiting time. For example, store may provide only limited space for waiting so that the customers must line up on the sidewalk. Giebelhausen et al. (2011) provided an explanation for this phenomenon. They believed that letting customer wait can increase the perceived quality (of a product or service), satisfaction, and intention to buy. In other words, while waiting may have negative emotional impact, it can also be treated as a positive signal of quality.

Although many theoretical and empirical research have been conducted to explore or investigate variables that can be used as signals of quality, most of the investigations focus on investigating one specific factor. However, several signals of quality usually exist simultaneously in the real world business practices. The one-factor-at-a-time approach used in previous studies may overlook important interactions between different signals. For example Monroe and Krishnan (1985) found that the effect of price on quality perception is moderated by the variable brand name. Without a factorial experiment design, this interaction cannot be easily identified.

Thus, in this study, we use a similar paradoxical view of waiting proposed by Giebelhausen et al. (2011) to study the positive effect of waiting on quality perception and purchase intention. In particular, we intend to investigate the interactions between wait and price, and try to determine that whether effect of wait as a indicator of quality will be suppressed or be strengthened when the signal of price is considered concurrently.

By using rigorous experiments to verify the main and interactions effects of wait and price, the main contribution of the present research include: (1) confirm that waits can have a positive impact on quality perception and at the same time identify the underlying mechanism through which the effect operates to make sure the effect is not caused by other confounding factors or lurking variables, (2) experimentally evaluate the signal effect of wait under different prices to test whether the “economic value of wait” is moderated by price, which is a commonly used signal and is sometimes called a “surrogate for quality” in the absence of other information. This study thus lead to a better understanding of when and to what extent waiting can be use as a quality signal, and thus extend the original theory proposed by other researchers.

2 Methods

2.1 Research Model

Based on the literature review, price and waiting may function as signals for quality when there is information asymmetry between buyers and sellers (Spence 2002; Volckner and Hofmann 2007; Giebelhausen et al. 2011). Furthermore, Kirmani and Rao (2000) pointed out that a customer usually consider several intrinsic and extrinsic cues or signals (e.g., price, warranty, country of origin, brand name) simultaneous to form his/her quality perception when evaluating the quality of a product or a service. However, there may be some interaction effects between various cues or signals of quality. Miyazaki et al. (2005) suggested that when the information presented in two or more signals is consistent, these signaling factors may complement each other, further increasing a customer’s quality perception. On the other hand, if the information from multiple signals is inconsistent, Miyazaki et al. (2005) suggested that the signal containing negative information may become more dominant.

Therefore, this study aims to examine whether there is an interaction effect between extrinsic quality signals price and wait. In particular, we are also interested in investigating the effect of waits on quality perception and satisfaction when it is co-existed with different signals or under different contexts. Based on the research framework, we summarized the four hypotheses proposed as follows.

Hypothesis 1 There is a positive main effect of a wait such that quality perception will be greater when a wait is present than when a wait is absent.

Hypothesis 2 There is a positive main effect of price such that quality perception will be greater for the high-priced product (or service) than the low-priced product (or service).

Hypothesis 3 There is an interaction between price and the presence of a wait. In particular, for a low price service, the presence of a wait increases perceived

quality. However, for a high price service, the presence of wait has smaller effect on perceived quality.

Hypothesis 4 Perceived quality function as a mechanism by which price and the presence of a wait influences purchase intentions.

2.2 Design and Participants

According to the literature, consumers usually rely on the extrinsic cues or alternative signals to determine the quality of a product or a service when there is no sufficient information (about the product or service) available or when the product or service quality is ambiguous. This study thus focuses on the cases where the consumers are making their first-time consumption and are not very familiar with the product or service.

In particular, the experiment design of this study allow participants (i.e., consumers) received two signals (price and wait) simultaneously. Furthermore, different contexts (the scenario related to the product or service consumption) are constructed to mimic the realistic consumption environments. A survey are finally employed to collect the measures of quality perception and satisfaction of the participants, and statistical tests were conducted to determine whether proposed hypotheses can be supported by the data.

This study use a two-factor within-subject experimental design. To avoid the carry-over effect and to make participants less easy to see the whole picture of the experiment (and avoid the possible biases that may have caused), two different decision contexts are considered in this study. Both decision contexts is related to restaurant service settings, but one is serving the western style food and the other is serving the Japanese noodle soup. The study utilized a 2 (price: high, low) \times 2 (wait: absent, present) design. The price levels or the levels of stimuli are based on the market research of the general price range of the same products or services in Taiwan, and different menus each containing a sequence of dishes are designed and presented to the participants. The low-price and high-price settings for the menu of steak house (western style food) are around NT\$200 and NT\$1200, respectively. The low-price and high-price settings for the menu of Japanese noodle house are around NT\$100 and NT\$300, respectively. For manipulating the factor of wait in the experiment, in the “wait absent” condition, the scenario indicated that the waiting area was empty and the customer can be seated right away. However, in the “wait present” condition, the customer is notified that no more reservation can be taken and he/she need to wait 25–30 min to be seated.

While the within-subject design employed in this study has the strength of making experiment more efficient, there are also threats to the internal validity of this design such as the carry over or order effects. It is possible that effects from previous treatments (scenario) may still be present when testing new treatment (scenario), thus affecting or biasing the outcome. One solution to the problem of

carryover effects is to counterbalance the order of treatment levels. Thus, different subjects are randomly assigned to different scenarios in different orders.

3 Preliminary Results

SPSS statistical package was used to perform the analysis. Quality perception measures of participants were analyzed by means of the two-way within-subject ANOVA with two levels of price (high, low) and two levels of wait (absent, present). All main effects were found to be statistically significant. The main effect of price showed that high price led to higher quality perception than did low price, $F(1, 171) = 25.930, p < 0.01$. The main effect of wait also showed that the presence of wait led to higher quality perception than did the absence of wait, $F(1, 171) = 28.622, p < 0.01$. Our hypotheses 1 and 2 are supported by the preliminary results of the data analysis.

On the other hand, Although we hypothesize that here is an interaction between price and the presence of wait (partially based on Miyazak (Miyazaki et al. 2005)), the interaction effect between price and wait on quality perception was not significant ($F(1, 171) = 0.244, p = 0.622$). In particular, while we suggested for a low price service, the presence of a wait increases perceived quality, and for a high price service, the presence of wait has smaller effect on perceived quality, no significant trend were identified. The seemingly parallel interaction plots also confirmed this finding.

4 Conclusion

Multiple signals or cues of quality usually exist simultaneously in the real world business practices, but most of the study conducted in this field use the one-factor-at-a-time approach by focusing on one specific factor. In this study, We intend to investigate the important interactions between different signals which were usually over-looked. In particular, we aim to investigate interactions between wait and price, and try to determine that whether effect of wait as a indicator of quality will be suppressed or be strengthened when the signal of price is considered concurrently.

Although significant price and wait effects were found in our analysis, showing that both price and wait can function as signals of quality. The interaction effect between price and wait on quality perception was not significant. Other variables or moderators, such as the consumer's motivation, might need to be taken into consideration to further clarify this issue.

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