

Consumer choice between online/offline mediums: Based on media richness theory

Abstract:

Every consumer applies multiple communication mediums to acquire various kinds of product information. This study utilizes media richness theory to explain the reason why a consumer chooses online/offline communication mediums based on equivocality of the information that he/her is looking for. The results of Fisher's Exact Test and Analysis of Variance show that consumers who perceive that offline mediums are higher than online mediums in media richness choose an offline medium for processing high-equivocality information and choose an online medium for processing low-equivocality information, whereas consumers who perceive that online mediums are higher than the offline mediums in media richness choose an online medium for both high- and low-equivocality information.

Keywords: *Online store, Equivocality, Media richness*

Track: *New Technologies and E-Marketing*

1. Introduction

A consumer chooses different communication mediums to obtain different kinds of information. For example, if you want to know the level of ease of use and/or goodness of the design of a product, you may choose an offline store (a brick-and-mortar store) as a communication medium. In contrast, if you want to know the size and/or price of the product, you may choose an online store. Why do consumers utilize multiple communication mediums? There are no previous studies that have described the reason in the research field of consumer behavior.

Media richness theory is to explain managers' choice of communication mediums in an organization, focusing on the relationship between task equivocality and richness of the communication mediums (Daft & Lengel, 1983). Recently, this theory has been applied to explain consumer behavior (Brunelle, 2009; Lo, forthcoming). Based on media richness theory, a consumer researcher conducted an empirical analysis to explain why a bidder chooses different communication mediums to collect various kinds of product information in an online auction (Lo, forthcoming). However, he assumed unrealistic situation of using the telephone as a communication medium to collect product information in online auctions. Also, like most studies on media richness theory, he did not take into account the individual differences in perceived level of media richness of communication mediums.

Thus, this paper proposes a model to describe a consumer's choice between online and offline stores as communication mediums based on an expanded version of media richness theory in which consumers are assumed to be different from each other in the perception of media richness.

2. Literature review

Media richness theory, proposed by Daft and Lengel (1983), is a theory to explain the choice of communication mediums in an organization, focusing on the relationship between task equivocality and media richness of the communication mediums. Equivocality is defined as the degree to which there exist more than two ambiguous and conflicting interpretations for the task that organization needs to carry out (Daft & Macintosh, 1981). It should be noted that equivocality is not reduced by simply increasing amount of information. It is reduced only by obtaining rich information that can make ambiguous issues clear or help understanding in a short period of time. Daft and Lengel (1986) defined media richness as the degree of ability for the communication medium to handle high-equivocality information.

According to media richness theory, high-equivocality information can be processed only with communication mediums with high media richness. Regarding low-equivocality

information, communication mediums with any levels of media richness can reduce the equivocality, but low-richness mediums are more efficient than high-richness mediums because they are low in cost of use (Daft, Lengel, & Trevino, 1987). Therefore, low-equivocality information is processed with communication mediums with low media richness.

Lo (forthcoming) conducted an empirical analysis to explain why and how consumers (bidders) choose various communication mediums when collecting information in online auctions. The results of the analysis showed that consumers choose communication mediums with high media richness such as face-to-face and telephone for collecting high-equivocality information, while they choose communication mediums with low media richness such as instant messages, pictures, and documents for collecting low-equivocality information. Although his study is appreciated in explaining a consumer's choice of communication mediums, taking into account matching communication medium's media richness to equivocality of product information, it still has problems that it assumes unrealistic situation of using telephone as a communication medium to collect product information and that it does not take into account the individual differences in perceived level of media richness of each communication medium (Fulk, Schmitz, & Steinfield, 1990; Schmitz & Fulk, 1991; Carlson & Zmud, 1994, 1999).

3. Hypotheses

Individuals might be different from each other in the perception of media richness (e.g., Fulk et al., 1990). Thus, this paper assumes two types of consumers; consumers who perceive that media richness of offline mediums are higher than online mediums, and consumers who perceive that media richness of online mediums are higher than offline mediums.

According to media richness theory, a communication medium with high media richness is chosen in the case of a task with high equivocality, while a communication medium with low media richness is chosen in the case of a task with low equivocality (Daft et al., 1987). This is applicable to consumers' choice of communication medium if the consumer perceives that media richness of offline mediums is higher than online mediums.

Hypothesis 1a. Consumers who perceive that media richness of offline mediums is higher than online mediums choose an offline medium when processing information with high equivocality whereas they choose an online medium when processing information with low equivocality

Also, another version of hypothesis is proposed focusing on the communication efficiency

as the reason why a consumer chooses a particular medium.

Hypothesis 1b. Consumers who perceive that media richness of offline mediums is higher than online mediums evaluate that choosing an offline medium is more efficient in the case of processing information with high equivocality, while choosing an online medium is more efficient in the case of processing information with low equivocality.

However, consumers who perceive that media richness of online mediums is higher than offline mediums choose an online medium when processing information with both high and low equivocality because online mediums are higher in media richness and lower in cost.

Hypothesis 2a. Consumers who perceive that media richness of online mediums is higher than offline mediums choose an online medium when processing information with both high and low equivocality.

Also, as with hypothesis 1, another version of hypothesis is proposed regarding communication efficiency.

Hypothesis 2b. Consumers who perceive that media richness of online mediums is higher than offline mediums evaluate that choosing an offline medium is more efficient in the case of processing information with both high and low equivocality.

4. Methodology

To test the hypotheses discussed in the previous section, a consumer survey using a questionnaire was conducted. Respondents were 146 university students and usable respondents were 136 (93.2%). Respondents were instructed to assume that they are trying to gather two kinds of product information in an online or offline retail store in order to buy a new personal computer: One was the design of personal computers as high-equivocality information; the other was the release date of the personal computers as low-equivocality information.

We utilized multiple question items to measure each concept. To measure media richness of offline and online mediums, this paper adopted a scale of media richness that Daft and Lengel (1983) used. In addition, to measure communication efficiency, this paper adopted a scale of perceived usefulness that Davis, Bagozzi, and Warshaw (1989) used. Additionally, to measure equivocality of information, this paper adopted a scale of equivocality that Dennis and Kinney (1998) used. Cronbach's alphas for the constructs were at least more than .82. All

the estimates for AVE and SCR were higher than the .060. Overall, the results showed adequate reliability and validity levels for the measures. Also, we conducted manipulation check to ensure that the design and the release data of personal computers are relatively high- and low-equivocality information, respectively.

5. Results

In order to test hypotheses 1a and 2a, Fisher's Exact Test were utilized. In contrast, for hypotheses 1b and 2b, two-way ANOVA were utilized. As a result of Fisher's Exact Test for consumers who perceived that media richness of offline stores was higher than that of online stores, χ^2 value was 43.22 and significant at the 1% level. It indicates that there is an association between media richness of the stores that consumers selected and equivocality of the product information provided in the stores. Thus, hypothesis 1a was supported.

For these consumers, the average levels of communication efficiency of online stores for processing low- and high-equivocality information were 5.36 and 3.77, whereas the average levels of communication efficiency of offline stores for processing low- and high-equivocality information were 3.21 and 5.25, respectively. Two-way ANOVA (store type x equivocality) suggested that the interaction between the two classification variables was significant ($F=91.52$, $p<0.01$). Also, the difference between online and offline stores in communication efficiency of high-equivocality information and that in communication efficiency of low-equivocality information were -1.48 ($= 3.77 - 5.25$) and 2.15 ($= 5.36 - 3.21$), respectively. The results of the *post-hoc* test showed that communication efficiency of online stores was significantly lower than that of offline stores in the case of processing high-equivocality information ($F=26.96$, $p<0.01$), whereas communication efficiency of online stores was significantly higher than that of offline stores in the case of processing low-equivocality information ($F=19.41$, $p<0.01$). Thus, hypothesis 1b was supported.

As a result of Fisher's Exact Test for consumers who perceived that media richness of online stores was higher than that of offline store, χ^2 value was 2.74, suggesting insignificant ($p>0.10$). It indicates that there may not be associations between media richness of the stores that consumers selected and equivocality of the product information provided via the stores. Thus, hypothesis 2a was not rejected.

For these consumers, the average levels of communication efficiency of online stores for processing low- and high-equivocality information were 5.12 and 5.48, whereas the average levels of communication efficiency of offline stores for processing low- and high-equivocality information were 3.20 and 2.80, respectively. Two-way ANOVA (store type x equivocality) suggested that the interaction between the two classification variables was insignificant ($F=1.78$, $p>0.10$). Also, the difference between online and offline stores in communication

efficiency of high-equivocality information and that in communication efficiency of low-equivocality information were 2.68 ($= 5.48 - 2.80$) and 1.92 ($= 5.12 - 3.20$), respectively. The results of the simple main effect tests showed that communication efficiency of online stores was significantly higher than that of offline stores in the case of processing high-equivocality information ($F=65.57, p<0.01$), whereas communication efficiency of online stores was significantly higher than that of offline stores in the case of processing low-equivocality information ($F=136.82, p<0.01$). Thus, hypothesis 2b was supported.

6. Discussion

This study made academic and practical contributions. As an academic contribution, this study successfully answered, for the first time, the question why and how a consumer chooses different communication mediums—especially, online and offline stores—for different kinds of product information that the consumer wants to know. As media richness theory implies, the results of Fisher's Exact Test and Analysis of Variance in this study showed that consumers choose communication mediums with higher/lower perceived levels of media richness for higher/lower equivocal information.

This study implies that consumers do not always perceive that online stores are low-richness communication mediums, which are not able to reduce equivocality of product information: Some consumers may visit online stores because they expect the stores to reduce equivocality. If consumers perceive that media richness of a store is relatively high and visit the store, the store manager should try to communicate them and reduce equivocality. In contrast, other consumers may visit online stores because they expect that they are cheaper mediums of communication. In such a case, the store managers should pursue more efficiency in providing low-equivocality information to reduce communication costs rather than equivocality.

Although this paper successfully explains consumers' choice between online and offline stores as communication mediums by considering matching media richness of the two types of stores to equivocality of product information, there is also still room for further research. For example, mobile stores (online stores accessed with mobile devices) should be considered as another communication medium with low media richness.

7. References

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