

CAN TIME PRESSURE AND DISCOUNT STRATEGY OF MOBILE COUPONS AFFECT CONSUMERS' PURCHASE INTENTION

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Abstract

Increasing use of mobile devices has led to many marketers to send mobile coupons to consumers. The effectiveness of mobile coupon is context dependent which involves reaching customers with the right promotion strategies that differs in time-limited scarcity messages and quantity-limited scarcity messages. However, the joint effects of mobile coupon promotions under different time pressure, quantity limitation and discount strategies on consumers' purchase intention have been unexplored in the literature. Drawing from the value-risk paradigm, we develop a new research model to examine consumers' responses to mobile coupon with different time-limited scarcity messages and quantity-limited scarcity messages across different promotion strategies. An experiment is designed to test the research model. The findings of this study will have implications for future research and marketing practice. Specifically, Information Systems (IS) and marketing personnel will gain a fresh insight on how mobile couponing with different time-limited scarcity messages, quantity-limited scarcity messages and discount strategies can be effective for consumer purchase.

Keywords: Discount strategy, Time pressure, Quantity limitation, Perceived value, Perceived risk, Purchase intention

1 INTRODUCTION

The increased popularity of mobile devices such as smartphones and hand-held computers has fostered the proliferation of mobile marketing. Mobile marketing is defined as the use of mobile media to provide consumers with time- and location-based information that advertises goods and services, thereby creating value for business stakeholders (Haghirian et al. 2005). eMarketer (2014) forecasts that businesses could spend 22 percent of advertisement expenditure on mobile advertisement spending. A popular vehicle for mobile advertising is to send coupons to mobile devices such as smartphones in product promotion campaigns. A particularly interesting trend within mobile marketing is mobile couponing (Dickinger & Kleijnen 2008). JuniperResearch (2014) reported that there will be 1.05 billion mobile coupon users by 2019.

Beem and Shaffer (1981) categorized promotion by the form of incentives into three groups: (1) Product incentives (e.g., buy one get one free); (2) Price incentives (e.g., price reductions and discount coupons); (3) Incentives not related to product/price (e.g., gifts and competitions). Mobile coupon is regarded as a digital coupon that is similar to paper coupon, offering price incentives in short-run sales promotions (Bacile & Goldsmith 2011). In mobile couponing, promotional strategies leveraging on scarcity messages are commonly used in practice (Aggarwal et al., 2011). Scarcity messages are classified into two types, namely time-limited (e.g., time-of-day mobile coupon) and quantity-limited (e.g., limited edition) (Gierl et al. 2008).

In most instances, dynamic discount strategies are used by marketers to send scarcity messages, which lead to higher consumers' purchase intention. Liang and Doong (2000) posit three forms of dynamic discount strategies: (1) An utility-increasing discount strategy (UIC) provides consumers with an increasing discount over time (e.g., 20% discount for in-store consumption for 20 minutes, after which the discount increases to 30%); (2) An utility-neutral discount strategy (UNC) provides the same discounts for consumers over a specific promotional period (e.g., 30% discount from 9am-5pm); (3) An utility-decreasing discount strategy (UDC) offers consumers with a decreasing discount over time (e.g., 30% discount for in-store consumption for 20 minutes, after which the discount decreases to 20%). These three different strategies for bargaining have different impacts on outcomes. Past research has studied the effects of scarcity and discount strategy on purchase intention (Kocher & Sutter 2006; Wu et al. 2012). However, to our knowledge, there is lack of theoretical and empirical insights on the collective influences of mobile coupon promotions under different time limitation, quantity limitation and discount strategies on consumers' purchase intention.

To address this research gap, we frame our study from a value-risk paradigm to examine how mobile coupon promotions that differ in time-limited scarcity messages, quantity-limited scarcity messages and discount strategies affect consumers' purchase intention. We postulate that time pressure (i.e., time-limited scarcity message) will increase consumers' perceived risk

in purchasing as the time to make a purchase decision reduces. Furthermore, we hypothesize that quantity-limited scarcity message that gives a perception that product is limited for purchase, will have a positive impact on consumers' perceived value of products, leading to a greater tendency to make purchase. We also aim to investigate whether different dynamic discount strategies induce (or reduce) consumers' perceived value of products and purchase intention. Our research model will be tested through an experiment of users of different mobile marketing scenarios. Specifically, we aim to address the following research questions: (1) Can time pressure, quantity limitation, and different discount strategy affect the consumer's purchase intention? (2) Which factors (value or risk) are more important in affecting the purchase intention?

2 LITERATURE REVIEW

In this section, we review literature related to discount strategy, perceived scarcity, perceived value/risk and purchase intention.

2.1 Discount Strategy

Price discount is considered a popular promotional strategy as the consumer can immediately receive the economic incentives (Grewal et al. 1998). Grewal et al. (1998) posited that price-incentive promotions could attract the consumer to the retail store, and therefore they have a positive impact on the consumer's perceived value, leading to greater purchase intention. Mobile coupon is one type of price-incentive promotion. In various price incentives, discount strategy is a mode of price negotiation between the consumer and the merchant. The consumer will not have purchase intention if they think that the discount offered is inadequate, and therefore the merchant may need to increase the discount to generate more sales. Drawing from the utility perspective, Liang and Doong (2000) suggested three price negotiation strategies: UIC, UDC and UNC. UIC offers a lower discount at the beginning and gradually increases the discount over time. In this case, the consumer feels that the utility obtained from price negotiation is increasing. UDC offers a higher discount at the beginning and gradually decreases the discount over time. This strategy leads the consumer to perceive lower utility gained as price negotiation is decreasing. UNC offers the same discount throughout the promotion period in which the utility obtained from price negotiation remains constant. These three discount strategies can be applied in mobile couponing.

2.2 Scarcity

Mobile coupons offer discount under a time constraint to induce perceived scarcity. Scarce commodities are more attractive than those with plenty inventory due to the specialty and uniqueness of the former perceived by the consumer (Brock 1968). Gierl et al. (2008) classified commodity scarcity into two types: quantity scarcity and time scarcity. Quantity scarcity refers

to quantity limitation imposed on product in two forms of manipulation: “limited edition” and “extremely low inventory”. Time scarcity means products are for sale only for a designated period, e.g. “Today Only” or “Season Only.” In this study scarcity is defined as a restriction in quantity or in time for the product sale. We manipulate scarcity by using two types of strategies: time limited and quantity limited. When products are provided in small quantity and limited time, sensitivity on limited quantity and time pressure are inevitable. Therefore, we argue that two kinds of perception are arising when consumers are faced with scarcity: quantity limitation and time pressure. Past research has studied the relationships between quantity limitation and consumer perceptions of product offers. Snyder and Fromkin (1980) posited that people will strive to own adequate uniqueness and choose scarce commodities to highlight their own uniqueness and social status. Lynn (1992) further pointed out that quantity-limited products can provide the consumer with a sense of superiority, and asserted that marketing personnel could manipulate quantity limitation to increase the consumer’s perceived value of products, services, and sales promotions, thereby generating purchase intention. Gierl et al. (2008) proposed that time-limited strategies give consumers no time to search for information or seek advice and therefore induce perception of time pressure, thereby generating greater consumer’s purchase intention. Aggarwal and Vaidyanathan (2003) investigated the purchase acceleration effect of time-limited coupons and found out that time limitation could positively stimulate the consumer’s purchase intention. Given that consumers believe the promotion concerned would soon sell out, they will quickly make their purchase.

2.3 The Value-Risk Paradigm

Although perceived scarcity affects purchase intention, consumers do not buy product for scarcity per se. In most instances, consumers purchase product for its value. The valuation of product/service is a key reason for purchase and provides an important pretext for consumer satisfaction (Cronin et al. 2000). Zeithaml (1988) argued that the consumer’s assessment of the overall utility of a product is based on their perception of what is received and what is given. Perceived value is derived from the consumer’s evaluation of the difference between costs and benefits of individual alternatives. Dodds et al. (1991) measured the consumer’s perceived value by asking the following questions: (1) Did the product offer the best value for price? (2) Did the price of product provide economic benefits? (3) Was this purchase considered a very good deal? (4) Was the product’s price acceptable? (5) Was this product cost-effective? Past research indicated that perceived value has a positive effect on the consumer’s purchase intention (Chang & Tseng 2013; Kim et al. 2008).

In addition to the perceived value, another factor that may inhibit consumer purchase is the potential risk involved in the transaction. Perceived risk is defined as consumer perceived uncertainty due to some potential negative effects that cannot be predicted at the time of purchase (Bauer 1960). The consumer has a purpose for their purchase, and perceived risk is

created when they perceive that the purpose cannot be satisfied (Cox 1967). When customers face purchase choices, they will experience some levels of risk that cause pain and anxiety, and thereby influencing the purchase decision (Taylor 1974). Shimp and Bearden (1982) further stated that perceived risk will affect the consumer's preference and purchase intention. Past research finds that non-store retailing creates higher perceived risks than the traditional store does due to that former does not give the consumer a chance to inspect or test the product (Biswas & Biswas 2004). In online shopping, the two major types of risk affecting the consumer's purchase intention are performance risk and financial risk, meaning the higher the perceived performance and financial risks, the lower the consumer's purchase intention (Bhatnagar et al. 2000). Given the outcomes uncertainty, people tend to formulate their decisions based on the trade-off between perceived value and the associated risk. When the risk exceeds an acceptable level, consumers will use risk-reducing strategies to improve the utility of their purchase behavior (Dowling & Staelin 1994). The value-risk paradigm is a common framework that combines these two factors in making decisions. It has been applied in many business decisions, particularly in financial investments and project management. In this research, we apply this framework to understand how different promotional strategies affect purchase intention.

2.4 Purchase Intention

Purchase intention refers to the possibility of the consumer buying the product/service (Dodds, Monroe & Grewal, 1991) and it is a behavioral tendency. Schiffman and Kanuk (2000) postulated that purchase intention can be used to measure the possibility of the consumer buying the product: the stronger the purchase intention, the higher the purchase probability. In evaluation of marketing activities, purchase intention is a key component for predicting purchase behavior (Ajzen & Fishbein 1972) and can be used to verify the efficacy of marketing activities (Smith 1965).

3 RESEARCH MODEL

On the basis of the literature review, we propose a research model constituting six variables (i.e., time pressure, quantity limitation, discount strategy, perceived risk, perceived value and purchase intention) to examine the how mobile coupon promotions that differ in time-limited scarcity messages, quantity-limited scarcity messages and discount strategies affect consumers' purchase intention. Figure 1 shows our research model.

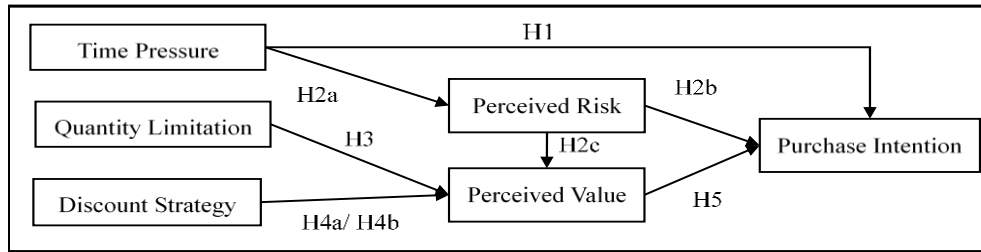


Fig. 1 Research model

Under time pressure, consumers experience a certain level of psychological stress which influences their purchase decision-making. Time-limited promotion strategies give consumers no additional time for information search or advice-seeking and therefore have a positive effect on increasing consumers' purchase intention (Gierl et al. 2008). Ward and Davis (1978) posited that time-limited promotions can trigger the consumer's purchase intention and indicated that discount coupon is an effective promotion strategy. Aggarwal and Vaidyanathan (2003) studied the purchase acceleration effect of time-limited coupons and reported that such promotion strategies can positively stimulate the consumer's purchase intention. They reasoned that consumers will not pursue searching for further information and make their purchase in short-run promotions. Therefore, we propose:

H1: Time pressure has a positive effect on purchase intention.

In some instances, Bhatnagar et al. (2000) suggested that consumers will perceive functional risk and performance risk under time-pressure since they do not have sufficient time for information search, and they are inclined to delay in making choice and purchase (Lin & Wu 2005). Furthermore, when facing purchase choice, consumers will perceive a certain level of risk that causes them pain and anxiety and affects their purchase intention (Taylor 1974). Cox (1967) also mentioned the higher the risk perceived by the consumer, the lower their purchase intention. Teas and Agarwal (2000) found that the consumer's perceived risk of promotion has a negative effect on the perceived value of the product concerned. Consequently, the study proposes:

H2a: Time pressure has a positive effect on perceived risk.

H2b: Perceived risk has a negative effect on purchase intention.

H2c: Perceived risk has a negative effect on perceived value.

Brock (1968) proposed that scarce products are more attractive to consumers due to their perceived specialty and uniqueness. Lynn (1992) indicated that products of limited quantity create a sense of superiority for the consumer and that marketing personnel can manipulate the factor of quantity limitation to enhance the consumer's perceived value of products, services or promotions. As the supply of a quantity-limited product reduces with sales, consumers experience uncertainty of product availability and the perceived value of the product is enhanced (Bolton & Reed 2004). Furthermore, the consumer may have purchase intention out

of the fear of potential price rises or product unavailability (Wu *et al.* 2012). Therefore, this study hypothesizes:

H3: Quantity limitation has a positive effect on perceived value.

Grewal *et al.* (1998) indicated that price-based promotions will increase the consumer's perceived value, and create purchase intention. The larger the price discount, the higher the product value is perceived by the consumer and the stronger the consumer's purchase intention (Della Bitta *et al.* 1981). In this vein, we applied different discount strategies and degree of discount concession. According to previous literature fixed price discount over a specific period (i.e. UNC) can positively influence consumer's perceived value. If consumers know that the discount will increase over time (i.e. UIC), it is likely that they will perceive the products to be more valuable. Meanwhile, UNC that offers the same discount throughout the promotion period will be more effective in greater perceptions of value than UDC. Given that UDC offers a decreasing discount over time, consumer is likely to perceive that the discount is reducing and therefore decrease their perceived values toward products. This study proposes that the effects of discount strategy on perceptions of value are contingent on the degree of discount concession. This study therefore proposes:

H4a: A UIC discount strategy will result in greater perceptions of value than a UNC discount strategy does.

H4b: A UNC discount strategy will result in greater perceptions of value than a UDC discount strategy does.

Perceived value is the consumer's evaluation of the overall utility based on trade-off between the received and the given (Zeithaml 1988). Previous literature examined that perceived value can positively affect the consumer's purchase intention: the higher the perceived value, the stronger the purchase intention (Chang & Tseng 2013; Kim *et al.* 2008). Poor perceived value can result in loss of consumer purchase intentions. Thus, we proposed that perceived value of customers positively impact their purchase intentions. Consequently, this study proposes:

H5: Perceived value has a positive effect on purchase intention.

4 RESEARCH METHODOLOGY

To test our research model, we design a 2 (time pressures, High and Low) x 3 (discount strategies) x 2 (with and without quantity limitation) experiment. We conduct two stages of pre-test to find appropriate product types and scarcity messages. In the first stage, we measure the level of consumer involvement for different products in order to select the products that consumers are more willing to purchase. Products will be categorized into two types: high involvement and low involvement (Zaichkowsky 1994). To check the individuals' interest, we ask the subject whether they would consider buying this product with special promotion. The

results enable us to identify products that meet the individuals' general needs. The second stage is to determine the levels of time pressure and product limitation to induce the perceived scarcity. Questions on the boundary conditions for quantity and time limitations will be asked. Samples of experimental material are shown in Figure 2. Survey questionnaires are designed to collect data after the subject views the promotional material. The definition of constructs and reference of measurement items are shown in Table 1.

		
UDC/ Quantity Limitation/ High Time Pressure	UIC/ Without Quantity Limitation/ High Time Pressure	UNC/ Quantity Limitation/ Low Time Pressure

Fig. 2 Sample experimental material

Constructs	Definition	Reference of measurement items
Time Pressure	Psychological pressure created in consumers who have to make purchase decision due to time constraint.	Hahn <i>et al.</i> (1992); Wright (1974); Putrevu and Ratchford (1998)
Quantity Limitation	Restriction on the product quantity supplied with discount coupons.	Wu <i>et al.</i> (2012); Kocher and Sutter (2006)
Perceived Risk	The actual performance of the product/service does not match expectation.	Grewal <i>et al.</i> (1998)
Perceived Value	The value in both economic and psychological aspects that consumers perceive from the difference between benefits and costs of the product/service.	Wu <i>et al.</i> (2012); Grewal <i>et al.</i> (1998)
Purchase Intention	The possibility of the consumer willing to use or buy the product/service.	Wu <i>et al.</i> (2012); Grewal <i>et al.</i> (1998)

Table 1. Operational definition of constructs and measurement items

5 EXPECTED CONTRIBUTION

There is a growing body of Information Systems literature aimed at understanding consumers' purchase intention in mobile coupon. While previous studies have provided insight into consumers' purchase intention, research on understanding the impact of mobile coupon promotions under different time limitation, quantity limitation and discount strategies on consumers' purchase intention is inadequate. Therefore, our study has the potential to make important contributions. Theoretically, this study has formed a new model based on the value-risk paradigm to understand the impact of promotional strategies of mobile coupons. In practice, the findings of this study could help retailers and mobile service providers shape their mobile promotion strategies under different time limitation, quantity limitation and discount strategies.

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