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## **Gender Differences in Young Consumers' Intentions to Redeem Mobile Coupons Using an Application: A Case of 7-Eleven Convenience Stores**

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### **Abstract**

The purpose of this research is to examine 1) the factors influencing young consumer's intentions to redeem coupons using the 7-Eleven M-coupon application and 2) how gender differentiates the intentions to redeem coupons using the 7- Eleven M-coupon application. The quantitative method was employed in this study. The data were obtained from 760 young consumers of which 380 were males and 380 were females. These participants downloaded and redeemed coupons using the 7-Eleven M-coupon application to participate in the survey. Structural Equation Modeling (SEM) analysis was carried out by utilizing AMOS. Gender serves as the moderating variable and is used to conduct a multi-group analysis. The results indicate that all of the antecedents have positively affected young consumer's intentions to redeem coupons using the 7-Eleven M-coupon application. Performance expectancy was the most powerful antecedent of intentions to redeem coupons for male respondents. Perceived value was the second strongest factor of intentions to redeem coupons for male respondents. Effort expectancy was the third most important factor of intentions to redeem coupons for females.

### **Keywords**

Mobile Coupon Application, Redemption, Gender Difference

## **Introduction**

Mobile phones allow retailers to provide consumer shopping services. The effect of innovative mobile technology and services on the retail industry has changed the relationship of retailers with customers (Yang & Kim, 2012). This new mobile network is being used by several companies to create new opportunities (Jayasingh & Eze, 2010). Several companies are currently jumping on the digital sales advertising bandwagon, using creative marketing strategies to create new markets, and mobile promotions are being successively used by companies (Hsu et al., 2006). For businesses, sending discount coupons via mobile phone text messages or short message services (M-coupons) has become the latest trend in sales promotion (Hsu et al., 2006).

A mobile coupon (M-coupon) is a requested and/or mobile phone-delivered digital card that can be traded for a monetary discount when buying a product or service. It can transfer messages that include text, pictures, audio, and videos. The customer collects the coupon and stores it on their mobile device until he or she wants to redeem it (Jayasingh & Eze, 2010). M-coupons continue to be marketers' favorite marketing methods for motivating, enticing and encouraging consumers to try a product, attract new buyers, increase product recognition, boost sales, minimize consumer brand switching, create loyalty and help introduce new products. For these purposes, M-couponing is an enticing promotional tool for sales (Achadinha et al., 2014).

The promotion of M-coupons is also in the aggregation stage of consumers. The new mobile couponing application called M-coupons has emerged with the intensive use of smartphones to speed up the use of M-coupons. This software runs on smartphones and incorporates digital coupons from retailers for easy use of coupons by customers (Liu et al., 2015). In the academic field, scholars have focused primarily on M-coupon adoption and direct use, ignoring the important M-coupon application's roles in supporting the M-coupon use (Im & Ha, 2012; Jayasingh & Eze, 2009).

The major reason is that the M-coupon application is different from M-coupon: users can download and install M-coupon software on smartphones to scan, view, and choose M-coupons. If a customer wants to redeem an M-coupon at a merchant's premises, he or she only has to use the accompanying M-coupon program to store the coupon in his or her mobile phone and display it to the sales assistant for a discount or cashback. The M-coupon application allows its users to search for coupons that suit their desires and reduces the risk of impulse buying (Im & Ha, 2012; Liu et al., 2015).

The M-coupon application has been used as a tool to promote shopping malls, online market places and convenience stores. For instance, Alibaba, China's largest Internet corporation, has invested two rounds of funds in a local service provider to grow its M-coupon application, DDcoupon. Tencent, one of China's largest integrated Internet service providers,

has invested significant funds and capital to develop M-coupon applications (Liu et al., 2015). In Thailand, 7-Eleven, Thailand's largest convenience store, has developed new strategies, constantly improving its goods and services to keep up with such change. 7-Eleven has introduced and delivered new experiences to meet changing customer needs and retain existing customers while continuously expanding to new target groups through digital marketing. 7-Eleven has also used digital marketing online, including proprietary smartphone applications for sales promotions (CP All annual report, 2018). 7-Eleven has done an excellent promotional job, offering sales promotions almost every single day through coordinated marketing strategies, promotional themes, promotional materials and prices, and the company also carries out promotional advertisement distribution. 7-Eleven has also developed its own software for sending daily promotional messages (Wang, 2018).

7-Eleven acknowledges and tracks rapid technological change and the transition in the digital age as well as the non-cash culture of government and companies. Such factors have continuously affected daily life and consumer decisions. Comforts and access to goods and services play an increasingly important role in the buying behavior of consumers. Thus, 7-Eleven M-App has become the latest marketing tool, with many functions such as quest for vouchers, location coupons, storage vouchers, monthly promotions, special price vouchers and offers a simple and convenient way to collect and redeem coins. Customers can receive a special price coupon by purchasing a 7Gift coupon package via the 7-Eleven application and make payments through the 7-Eleven app's "Truemoney Wallet." The 7-Eleven app is very popular with approximately 5,600,000 downloads (CP All Annual Report, 2018).

Previous work (Ha & Im, 2014; Im & Ha, 2015) has focused mainly on smartphone coupons acceptability, but not the significant role of M-coupon applications in promoting the use of M-coupons. Furthermore, little has been studied about the behaviors related to mobile coupon redemption. If customers download and install the M-coupon software but do not use this to redeem the voucher for a discount, it is important to reconsider the main drivers of increasing sales, profit and market performance (Raghubir, 2004). This research is therefore trying to fill these gaps. Moreover, Gender is a significant variable used for marketing to consumer segments (Meyers-Levy & Sternthal, 1991) because it is easy to address gender differences as separate market segments for men and women (Frank et al., 2014) and seek to target the products/services to their specific needs. It complies with all criteria: easily identifiable, accessible information and large enough segments to create more profit (Kuruvilla et al., 2009). As times have changed, gender is more important to companies in the development of market segmentations and strategies. (Zeeshan, 2013).

Research on shopping has shown significant differences in the purchasing behavior among genders (Kuruvilla et al., 2009). Previous research indicates that shopping is generally a female activity (Buttle, 1992). Nonetheless, some researchers suggest that this

trend is progressively declining since men are more involved in shopping (Carpenter & Brosdahl, 2011). Men in the USA shopped more in many shopping outlets, such as grocery stores, supermarkets and convenience stores. Young men are more interested in shopping and many categories of products, once considered female, such as skin care, now offer male products (Kotzé et al., 2012). This means that marketers do not neglect male consumers. Understanding gender differences can help retailers establish an effective marketing strategy and to plan specific strategies for various customers by recognizing the moderating effects of gender (Chiu et al., 2005). Promotional tools are especially vital for marketing planners (Ndubisi, 2005).

Retail research has found that coupon proneness has a significantly greater impact on the intention of females to use M-coupons. However, Liu et al. (2015) argued that the gender differences have effect on behavioral intention to accept M-coupon application and the coupon proneness of females seems to have no substantially greater impact on behavioral intention than that of males. This finding suggests that the new form of M-coupon service may alter the consuming behavior of males which could encourage further research on couponing.

This research aims at integrating perceived value, the unified theory of acceptance and use of technology (UTAUT), personal innovativeness and coupon proneness into the study framework in order to fully understand product redemption of coupons using M-coupon applications. The perceived value in marketing, linked to competitiveness, is critical for the success of an organization (Liu et al. 2015), and reflects the difference between the overall consumption of services and the total cost of a product or service customers pay (Luo et al. 2018). Bawa & Shoemaker (1987) created a conceptual paradigm that indicates that the desire to redeem coupons has an impact on the perceived value that the net benefits of a coupon has. Such net benefits consist of economic and psychological benefits, expenses for substitution and expenses of effort. In addition, Blattberg & Nesline (1990) explained the economic and psychological benefits as face value savings and psychological benefits (e.g. recognition as a smart shopper). They explained the cost of substitution as the cost of opportunity that the consumer pays to redeem a coupon, rather than shopping elsewhere. They also described the effort costs as the costs for searching and handling the coupon.

Venkatesh et al. (2003) proposed that the UTAUT model, experimenting with additional variables, could improve one's intent to use new technology and suggested that the UTAUT model could be extended to a wide range of applications and contexts. Growing customers' intention to redeem coupons using the M-coupon application reflects a new use of technology for customers that has been updated and expanded by Jennings (2014) to help the creation of UTAUT as a mechanism for understanding the intention of young adults to redeem mobile coupons. The UTAUT model consists of four core constructs: performance

expectancy, effort expectancy, social influence which are direct determinants of behavioral intention in IT; and facilitating condition which is a direct determinant of behavior to use IT. The conceptual framework in this research was modified because facilitating conditions did not influence the behavioral intention to redeem mobile coupons, but only affected the use behavior. In addition, these constructs are in turn moderated by gender, age, experience, and voluntariness of use (Venkatesh et al., 2003). This research focuses only on gender which has been used as a moderator in previous research conducted by Aguirre-Urreta & Marakas (2010) and Terzis & Economides (2011). These studies proposed gender as a moderator in the adoption of technology.

Personal innovation in IT is characterized as a term that depicts the degree of propensity of a person to adopt new IT technologies (Agarwal & Prasad, 1998). Innovative people with a strong sense of curiosity tend to try new things and lead the fashion trend. M-coupon applications are novel ideas that help to satisfy people's psychological needs. Individuals are therefore more likely to accept M-coupon applications (Liu, et al., 2015).

With regard to coupon redemption research, coupon proneness has been recognized as the main personality trait associated with coupon redemption behavior (Dickinger & Kleijnen, 2008). Coupon proneness is defined as an increased propensity to react to a discount offer since the discount offer coupon form positively affects purchase evaluations (Lichtenstein, et al., 1990). In addition, the proneness to use a coupon reflects the affection and desire of consumers for a coupon. Thus, consumers with a high degree of coupon proneness may attempt to search for redeem coupons by using the M-coupon application (Liu, et al., 2015). Research on digital coupons has generally reached the conclusion that proneness is an important variable which explains the intention to redeem a coupon (Chen & Lu, 2011; Nayal & Pandey, 2019).

Previous studies have explored factors that impact behavioral intention in technology, but less has been done to investigate gender differences that influence the intention to redeem mobile coupons via a smartphone application. Previous research has primarily viewed both males and females as a single category and assumed the same desires and reactions from both genders. This research is therefore trying to fill these gaps. This work looks at the moderating effect of gender on relations between perceived value, UTAUT, personal characteristics and behavioral intention of redeeming coupons using M-coupon applications to understand how males and females react to 7-Eleven M-coupons which are crucial for marketing planners.

## **Research Objectives**

1) To study factors influencing young consumer's intentions to redeem coupons using 7-Eleven's M-coupon application; and 2) to study how gender differentiates the intentions to redeem coupons using the 7-Eleven M-coupon application.

## **Literature Review**

### **Gender Differences in Shopping**

Several consumer behavior analyzes show that males and females differ in information processing (Palmer & Bejou, 1995) especially when males and females react differently to alternative consumption tasks and stimuli (e.g. photos versus words) (Meyers-Levy, 1989). Females respond to nonverbal stimuli with more associative, visual perceptions and more detailed explanations than males (Gilligan, 1982). Psychology literature on personality variations acknowledges gender differences linked to the propensity to indulge in imagination. Within the open / intellect domain of the Big Five personality traits, males tend to score higher on the intelligent trait that is characterized by perceived intelligence and intelligent involvement, whereas females tend to score higher on the openness trait that is characterized by aesthetic value and imagination (Mann & Liu-Thompkins, 2019).

Jackson et al. (2011) found that males and females exhibit different shopping attitudes and behaviors. Various studies have examined shopping behavior differences between males and females. For example, female shoppers are more involved, more likely to plan their shopping, more inclined to process product information, shopping more frequently, and more likely to seek price discounts than their typical male counterparts (Meyers-Levy & Sternthal, 1991). Females appear to be more meticulous with product details and are more sensitive to the offers than males are (Borges et. al., 2013). Females pays attention to details and look extensively at the attributes of the product and make impulse purchases. On the other hand, men tend to use simple decision-making, use less information and try competing brands for similar products (Reynolds, 2015).

As for technology adoption, females are likely to download retail applications and use them while shopping in a store while males do not prefer to do. For males, they feel that receiving mobile alerts from stores where they shop during shopping trips would improve their in-store experience more than females (Reynolds, 2015). Ha and Im (2014) found that females are more likely to use M-coupons than males, while males are more likely to use Quick Response (QR) codes than females.

For coupon proneness, Harman & Hill (2003) showed that women's overall use of coupons was greater than men. This finding was confirmed by Slyke et al. (2010) who found that coupon proneness was a more significant determinant of female e-commerce adoption than that of males.

Gender differences have been investigated in various studies on factors influencing technology adoption (Aguirre-Urreta & Marakas, 2010), online purchase intentions (Chiu, et al., 2005), online shopping motivations among adolescents (Jen-Hung & Yi-Chun, 2010), online customer experience (Pandey & Chawla, 2018), perception and preference towards sales promotion schemes (Krathik & Sudheer, 2014), Gen Y shopping behavior and responsiveness to use coupons (Hill et al., 2007), intention towards M-coupon adoption (Ha & Im, 2014); and intention to adopt M-coupon applications (Liu et. al., 2015).

### **Consumers' Intentions to Redeem Mobile Coupons Using an Application**

Several studies have examined the determinants of customer redemption of M-coupons in different ways. These studies have focused on identifying factors that influence consumers' intention to redeem M-coupons; these factors can be divided into four classes: 1) Gender Gap Factor 2) Technology Acceptance Factor 3) Personal Innovativeness in IT 4) Coupon Proneness and 5) Perceived Value Factor.

#### **1) Gender Differences in M-coupon Redemption**

Studies on IT adoption have shown that in adoption intention, males and females behave differently and have a different attitude towards technology. Males are more creative and more optimistic about using technology than females (Demirci & Ersoy 2008). In the context of the M-coupon applications, Liu, et al. (2015) empirically demonstrated that the gender gap has an impact on behavioral intent to implement mobile coupon applications. In addition, Ha & Im (2014) found evidence of gender differences in the relative intensity of perceived characteristics that influence attitudes toward redeeming M-coupons and concluded females are more likely to use M-coupons than males.

Earlier research suggested that males are less likely to use paper coupons because they need to expend a lot of energy and time gathering and saving coupons (Harmon & Hill, 2003; Hill & Harmoon, 2009). M-coupon applications help customers to get coupons quickly and easily. They don't need to collect coupons in advance and bring them when they want them redeemed. Therefore, while males in the past reacted less positively to coupons than females, their coupon proneness has almost the same effect as females on behavioral intention towards using M-coupon applications. This points to the possibility for M-coupon applications to change the past coupon-using behavior of males (Liu et al., 2015).

Liu et al. (2015) suggested that males are more inclined towards M-coupon applications because of their innovativeness. M-coupon applications may change the hesitancy of males to use coupons. The latest M-coupon applications include a large variety of coupons for female products, such as beauty salons and hair salons, but few coupons are explicitly geared toward males. Thus, M-coupon applications should provide coupons for males' consumption.

The examination of gender differences is important for M-application providers, in particular, because it leads to the purchase of products. M-application providers should know the success factors that affect the intention to redeem M-coupons, and recognizing gender differences in these success factors would allow M-app providers to target the redemption goal separately for males and females with different strategies.

## **2) Technology Acceptance and the Redemption of Coupons Using M-coupon Applications**

Researchers primarily apply cognitive and social decision-making theories when they want to find out about a consumer's acceptance of a specific problem. Two models stand out as the most commonly used; the Technology Acceptance Model (TAM) and the UTAUT model which is used to evaluate the behavioral purpose of using new technology. Similar models are increasingly being applied in the area of information and communication technology (ICT) due to the rapid growth of emerging technologies and applications (Pedersen, 2005). The TAM model was developed by David (1989) and its validity checked and validated for the purpose of consumers to take part in mobile marketing and M-coupons. It is assumed that the same result may be used for checking the intent to redeem digital coupons (Guo et al., 2019) and the intention of the user to redeem M-coupons (Dickinger & Kleijnen, 2008). Nonetheless, the TAM model focuses only on internal factors (perceived usefulness, perceived ease of use and attitude) that predict purpose and use behavior. Venkatesh et al. (2003) performed an empirical analysis to compare the eight existing models and then introduced a single model, the UTAUT model, which involves internal factors (performance expectancy, effort expectancy) and external factor (social influence, facilitating conditions) influencing intentions.

Jennings (2014) amended and broadened the UTAUT to provide a framework for understanding the intentions of young adults to redeem mobile coupons. UTAUT incorporates four primary determinants of intention, use behavior, and up to four key relationship moderators. UTAUT argues that performance expectancy, effort expectancy and social influence are direct determinants of behavioral purpose in IT; and encouraging conditions are direct determinants of decisions to use IT, and that these structures are in effect moderated by gender, age, experience, and IT use voluntarily. This research's conceptual model was modified as facilitating conditions did not affect the behavioral intention to redeem mobile coupons and only affected use behavior (Venkatesh et al., 2003).

Performance expectancy is described as the level of benefits that consumers expect when using the 7-Eleven M-coupon redemption applications which will provide benefits for the shopping. Effort expectancy is defined as the ease of redeeming 7-Eleven mobile coupons by using an application; and social influence was defined as being affected by others who use the 7-Eleven M-coupon application (Indrawati & Haryoto, 2015).



### **3) Personal Innovativeness in IT and Redemption of Coupons Using the M-coupon Application**

According to Innovation Diffusion Theory (Rogers, 1995), personal innovation is considered to be one of the fundamental requirements for the differentiation of different acceptance classes in new technology. Agarwal & Prasad (1998) introduced a concept in the field of IT for personal innovation and described it as the ability of individuals to experiment with new information technology. They pointed out that personal innovativeness in IT played an important role in understanding the distribution and intention to use new IT. Personal creativity in IT can also have a direct effect on the decision of customers to embrace a new technology. Several studies have shown the relationships between personal IT innovation and the use of new technologies.

People with greater innovativeness prefer to embrace a tactile technology that improves technology more than people with less innovativeness in the sense of online shopping (Kim & Forsythe, 2008) and they are constantly searching for fresh ideas, and are able to cope with high levels of uncertainty (Wang et al., 2010). Earlier research has also shown the significant effect of innovativeness on internet shopping (Citrin et al., 2000; Ha & Stoel, 2004) and the adoption of mobile marketing activities (Rohm et al., 2012). Consumers who are highly innovative use the internet to search for clothing more than those who are less innovative (Ha & Stoel, 2004). People of high innovativeness can have more intent than people of low innovativeness to implement M-coupon services (Jayasingh & Eze, 2010).

Personal innovativeness in IT has been explored in various ways, such as: mobile payment systems for mobile telecommunications networks (Lu et al., 2008), mobile payment services (Yang et al., 2012), M-coupons (Ha & Im, 2014), mobile learning (Tan et al., 2014), and M-coupon applications (Liu et al., 2015). Moreover, personal innovativeness in IT was devised to investigate the consumer's behavioral intention towards M-coupon redemption and it was found that personal innovativeness could positively influence the redemption intention (Agarwal & Karim, 2015; Im & Ha, 2013).

### **4) Coupon Proneness**

The idea of coupon proneness stemmed from Webster (1965)'s work on deal proneness which revealed that housewives were prone to deals. They were found to purchase fewer items, but buy more brands and did not focus purchases on a single brand (Clark et al., 2013). As a marketing tool, coupons give shoppers an opportunity to purchase goods at lower prices and consumers whose attention is drawn by coupons are known as coupon prone buyers. Coupon proneness is regarded as effective oriented motivation to convince coupon prone buyers with inherent desire to use those coupons (Swaminathan & Bawa, 2005). For example, research into price deals shows that consumers can derive

psychological rewards from price savings from using coupons (Ashworth et al. 2005). Coupon-prone customers tend to check coupons for discounts and experience a sense of accomplishment while saving money (Dickinger & Kleijnen, 2008). In comparison to a behavioral one, coupon proneness is judged and regarded as a psychological structure (Clark et al., 2013). Coupons can be used for online shopping to encourage consumers to buy items on a daily basis (Sarkar & Khare, 2017). The proneness of coupons is basically a human trait that affects the redemption of coupons (Im & Ha, 2015). In the field of coupon redemption studies, coupon tendency was recognized as a key personality characteristic closely linked to coupon redemption (Dickinger & Kleijnen, 2008). Consumers with a high degree of coupon exposure tend to search for and redeem coupons by using an M-coupon applications (Liu, et al., 2015). Broadly, digital coupon research has concluded that proneness of coupons is a significant variable explaining the intention to redeem (Chen & Lu, 2011; Nayal & Pandey, 2019).

#### **5) Perceived Value and Redemption of Coupons Using the M-coupon Application**

The intention of redeeming a coupon is a function of a consumer's net benefit from using a coupon. The consumer's net benefit depends on the cost and benefits of using coupons (Ramaswamy & Srinivasan, 1998). The redemption of coupons is a commitment of customers to make full use of coupons depending on the way their prices and benefits compensate for the effort made to redeem them (Gonzalez, 2016). For M-coupons, time, expense and elastic quality and convenience are saved from the customer viewpoint, but the historically printed coupon is limited in its accessibility mode and in its various channels that present problems in selection, making it easier for consumers to forget printed coupons (Hsu et al., 2006). It includes multiple functions related to M-coupon use for M-coupon applications, including searching for coupons, finding nearby coupons, storing coupons, and sharing coupons (Liu et al., 2015). If a customer decides to sell an M-coupon to a seller, he or she only has to use the correct M-coupon application to store the coupon for a discount or cash back. A variety of M coupon applications are often combined with a location-based service, which allows consumers to quickly get coupons close to their current location (Im & Ha, 2012; Liu et al., 2015). In summary, if customers are aware of the worth of the M-coupon offer, they are expected to redeem it.

Perceived value is characterized as the subjective assessment of the trade-off between the advantages of a product or service and the sacrifices made for it by the customer (Liu et al., 2015). Perceived value has been seen as a multidimensional construct, which integrates monetary and non-monetary benefits (Dardak & Habib, 2010). Pura (2005) integrated earlier value studies conceptualized as a multi-dimensional construct and introduced six values including monetary value, social value, emotional value, conditional

value, epistemic value, and convenience value, as antecedents of consumers' willingness to use a location-based mobile service. These six value constructs embraced the potential value constructs within the mobile context and offered a well-established structure for the current study in the context of mobile coupon adoption to study the perceived value (Chung, 2011; Pura, 2005). Although technology adoption models and previous consumer-perceived value studies have been applied in mobile marketing studies, limited studies have focused on M-coupon services. In information system studies, perceived value has been used to explain user's adoption intention of wireless SMS (Turel et al., 2007). Although perceived value is an effective predictor of ICT adoption behavior, it has seldom been used to examine emerging ICT, such as M-coupon applications.

### **Monetary Value**

The monetary value in this research can be described as a consumer's understanding of financial benefits from the use of 7- Eleven M-coupon redemption programs. Coupon face value revealing the extent of money savings is a key determinant of the redemption behaviors of consumers (Nickels & Wood, 1997). It is more likely that a high face value voucher will be used because customers save more money from it. Similarly, while M-coupon applications aim to provide consumers with different coupons to reduce their consumption expenses, consumers may perceive their low value and not redeem the coupons if these coupons' economic returns are low (Liu et al., 2015).

### **Epistemic Value**

Epistemic value was defined as the use of a mobile phone coupon system to satisfy the interest, innovation, and need for information (Pura, 2005). In this research, it was defined as the functionality drawn from the contentment of interest, innovation, and need for information by using 7- Eleven M-coupon applications for redemption. Epistemic value reflects the benefits that customers obtain from experiencing new ideas or new products/services that a company provides. In the context of mobile coupon services, Chung (2011) examined the epistemic value and its purpose that the M-coupon service can be used by customers to try new ways of doing things and to test innovation out of curiosity. When the consumers use a M-coupon service, they have the opportunity to explore the surrounding areas, particularly the retail stores. Such usefulness may satisfy their need for novelty and curiosity.

### **Conditional Value**

Conditional value refers to the benefit obtained in a specific context or circumstance from the use of location-based mobile services (Pura, 2005). The conditional value is also regarded as the utility resulting from the use in a particular context or circumstance of a phone coupon system (Chung, 2011). In this study, condition value was defined as the usefulness drawn from the use of 7- Eleven M-coupon application to redemption.

M-coupon applications, unlike conventional vouchers, allow customers to browse for and view personalized promotional content based on their location. In certain specific situations and contexts, this utility can be appreciated and considered to be more beneficial. Consumers can adjust the timing and duration of receiving smartphone coupons and obtain personalized discount offers based on their favorite categories of products (Park, 2014). Conditional value is referred to in the context of the M-coupon application as the customized promotion and discount that would be obtained through the use of M-coupon application and the usefulness of M-coupons related to a specific time or date such as a birthday (Chung, 2011). Current research describes customization as the degree to which customers can tailor mobile coupon application distribution based on their requirements and needs.

### **Social Value**

Social value is described in this research as social approval and self-image enhancement among other individuals when using a 7-Eleven M-coupon application for redemption. In the context of M-coupon services, Chung (2011) described the social value of being impressed by other people as consumers who use M-coupon services to help them feel accepted by others, make a good impression on others, and give them social approval.

### **Emotional Value**

As reasons for consumers to use mobile services, emotional values such as happiness and fun have been identified (Dardak & Habib, 2010). Emotional value is viewed in the literature as one of the benefits gained from the redemption of coupons, based on the model by Bawa & Shoemaker (1987). Schindler (1989) stated that for some coupon consumers, feelings of success and productivity are also significant. Pura (2005) suggested the emotional value as the feelings or affective states created by the use of mobile services that was antecedents of customers' desire to use a mobile location-based service. In this study emotional value was viewed as the feelings or affective states created by the use of 7-Eleven M-coupon application for redemption.

### **Convenience Value**

Yoon & Kim (2007) indicated that there are three dimensions to characterize the practicality of ubiquitous computing technology: time, location, and execution. Therefore, convenience is the degree of expectation for customers that they can use technology to finish their work easily, conveniently, and efficiently. Convenience in this research was viewed as the impression of customers who use M-coupon applications universally and conveniently. M-coupon applications free consumers from the hindrances of collecting, carrying, and printing coupons, and allow consumers to search for and retrieve coupons easily. Such conveniences save tremendous time and effort for consumers and enhance the consumers' perceptions of value.

### **Research Model and Hypotheses**

#### **Performance Expectancy and Intentions to Redeem Coupons Using the M-coupon Application**

Venkatesh et al. (2003) defined performance expectancy as the extent to which an individual believes that the use of an information system will help him or her to achieve job performance benefits or the use of technology will bring benefits to consumers when performing certain activities. Venkatesh et al. (2003) have also proved that performance expectancy is the strongest predictor of behavioral intention to use IT and key predictors of the intention to adopt a technology. Performance expectancy has been explored in different contexts, such as mobile learning context (Wang et al., 2009), mobile services (Lu et al., 2009), app-based tour guides (Lai, 2015), diet food application (Okumus et al., 2016), and mobile applications for restaurants (Palau-Saumell et al., 2019). Moreover, Jennings (2014) found social influence was a model for understanding young adults' intention to redeem M-coupon. Hence, the following hypothesis was proposed:

**H1:** Performance expectancy will have a positive influence on intentions to redeem coupons using the 7-Eleven M-coupon application.

#### **Effort Expectancy and Intentions to Redeem Coupons Using the M-coupon Application**

Venkatesh et al (2003) define effort expectancy as the degree of ease related to the use of the information systems or new technology. The construct appears to be similar to the perceived ease of use variable of the TAM. In the technology adoption context, the effort and the performance expectancies are considered the most essential determinants for analyzing the technology usage behavior and the behavioral intention (Casey & Wilson-Evered, 2012).

Effort expectancy has been examined in various contexts, such as mobile learning (Wang et al., 2009), app-based tour guides (Lai, 2015), diet food application (Okumus et al., 2016), mobile applications for restaurants (Palau-Saumell et al., 2019). Grounded in UTAUT,

Lu et al. (2009) applied effort expectancy to determine what influences individual intention to adopt mobile technology and data service. Moreover, Jennings (2014) found social influence was a model for understanding young adults' intention to redeem M-coupon. Hence, the following hypothesis was proposed:

**H2:** Effort expectancy will have a positive influence on intentions to redeem coupon using the 7-Eleven M-coupon application.

### **Social Influence and Intentions to Redeem Coupons Using the M-coupon Application**

Venkatesh et al. (2003) described social influence as the degree to which a person perceives significant others (e.g., family and friends) to assume that a new information system should be used. Singh et al. (2010) discovered that individual decisions to adopt mobile commerce services were influenced by friends and family members. Social influence has been examined in various contexts, such as mobile learning (Wang et al., 2009), M-coupon (Jayasingh & Eze 2009), mobile entertainment (Leong et al., 2013), Facebook collaboration (Lin et al., 2014), TV streaming (Indrawati & Haryoto, 2015), and M-applications for restaurants (Palau-Saumell et al., 2019). Moreover, Jennings (2014) found social influence was a model for understanding young adults' intention to redeem M-coupon. Hence, the following hypothesis was proposed:

**H3:** Social influence will have a positive influence on intentions to redeem coupon using the 7-Eleven M-coupon application.

### **Personal Innovativeness in IT and Intentions to Redeem Coupons Using the M-coupon Application**

Agarwal & Prasad (1998) pointed out that personal innovativeness in IT played a significant role in understanding the spread of new information technology and the intention of the individual to use it. Individuals with a high level of personal innovativeness tend to see new technology as more enjoyable than those with a low level of innovativeness (Wang et al., 2010). Personal innovativeness in IT has been examined in various contexts, such as wireless mobile services (Lu et al., 2008), mobile payment services (Thakur & Srivastava, 2014), mobile learning (Liu et al., 2010; Tan et al., 2014), mobile service (Ha & Im, 2014), M-coupon (Ha & Im, 2014; Jayasingh & Eze 2009; Jayasingh & Eze 2010), and M-coupon applications (Liu, 2015). Hence, the following hypothesis was proposed:

**H4:** Personal innovativeness in IT will have a positive influence on intentions to redeem coupon using the 7-Eleven M-coupon application.

### **Coupon Proneness and Intentions to Redeem Coupons Using the M-coupon Application**

Coupon proneness is associated with a respondent's propensity for promotional offers (Dickinger & Kleijnen, 2008) that can be viewed as a more effective oriented motivation

to use coupons as coupon prone consumers are willing to use coupons (Swaminathan & Bawa, 2005). Coupon prone consumers are delighted to search for coupons like hunting for bargains, and feel a sense of achievement when they save money (Dickinger & Kleijnen, 2008). Swaminathan & Bawa (2005) claimed that there is a higher propensity for a consumer with higher coupon proneness to redeem coupons. M-coupon applications provide users with a better means for browsing, downloading and redeeming coupons. M-coupon applications are more likely to be used by people with higher coupon proneness than those with lower coupon proneness.

Liu (2015) showed that coupon proneness has a decisive effect on consumers' intentions to adopt M-coupon applications. Lichtenstein et al. (1990) also suggested that coupon proneness is positively related to actual behavioral coupon redemption. Hence, the following hypothesis was proposed:

**H5:** Coupon proneness will have a positive influence on intentions to redeem coupon using the 7-Eleven M-coupon application.

#### **Perceived Value and Intentions to Redeem Coupons Using the M-coupon Application**

The perceived value of M-coupon applications is an overall evaluation of utility assessed by its advantages and sacrifices. When customers find the advantages earned to be greater than the costs invested, they may find that M-coupon applications are beneficial. As a result, M-coupon applications will be used by consumers (Liu, 2015). Liu (2015) pointed out that perceived value has a positive effect on consumers' behavioral intention toward M-coupon applications. Chung (2011) also claimed that perceived value was positively related to consumers' intention to redeem M-coupons. Hence, the following hypothesis was proposed:

**H6:** Perceived value will have a positive influence on intentions to redeem coupon using the 7-Eleven M-coupon application.

#### **Moderating Effects of Gender**

Based on the UTAUT and previous studies (Venkatesh & Morris, 2000), gender is believed to play a moderating role in influencing performance expectancy on behavioral intention. So, the influence of performance expectancy on behavioral intention depends on gender, resulting in that the effect will be greater for males and especially for younger males (Venkatesh et al, 2003). Moreover, Wang et al. (2009) studied the effect of performance expectancy on the behavioral intention to use mobile learning which was moderated by gender. They found that the effect was stronger for males than for females. Hence, the following hypothesis was proposed:

**H7:** The effect of performance expectancy on the intention to redeem coupons using the 7-Eleven M-coupon applications is stronger for males than for females.

Based on the UTAUT and previous research (Venkatesh & Morris, 2000), gender is assumed to play a moderating role in the influence of effort expectancy on behavioral intention. Therefore, the influence of effort expectancy on behavioral intention relies on gender, yielding that the effect will be stronger for females and noticeably for younger females (Venkatesh et al., 2003). Moreover, Wang et al. (2009) explored the effect of effort expectancy on the behavioral intention to use mobile learning which was moderated by gender. It was discovered that the effect was stronger for females than for males. Hence, the following hypothesis was proposed:

**H8:** The effect of effort expectancy on the intention to redeem coupon using the 7-Eleven M-coupon applications is stronger for females than for males.

Prior researchers have discovered that social influence is essential in shaping personal intention to use new technology. Moreover, it was suggested that females tend to be more responsive to the influence of others; and therefore social influence will be pertinent to females when they are willing to use new technology (Venkatesh et al., 2003). Moreover, Wang et al. (2009) studied the effect of social influence on the behavioral intention to use mobile learning which was moderated by gender. They found that the effect was stronger for females than for males. Likewise, Lin et al. (2014) revealed the result that females had a stronger relationship between social influence and behavioral intention to use Facebook for collaboration. Hence, the following hypothesis was proposed:

**H9:** The effect of social influence on the intention to redeem coupons using the 7-Eleven M-coupon applications is stronger for females than for males.

Research on IT adoption disclosed that males and females use different approaches to adopt new technologies and have a different attitude toward those technologies. Males are more innovative and more optimistic about the use of technologies than females (Demirci & Ersoy, 2008). In the M-coupon application context Liu, et al. (2015), it was empirically revealed that the effect was stronger for males than for females too. Hence, the following hypothesis was proposed:

**H10:** The effect of personal innovativeness in IT on the intention to redeem coupons using the 7-Eleven M-coupon applications is stronger for males than for females.

In buying activities, males and females have different behaviors. Compared to males, females use more coupons (Kwon & Kwon, 2007) and tend to make purchasing decisions based on promotions (Blattberg et al., 1978). These studies showed that females tend to use more coupons than males. As a result, females may be more prone to the use of coupons than males. M-coupon applications can fulfill their needs for coupon retrieval. Therefore, it is justifiable to claim that coupon proneness has a stronger effect on the behavioral intention to adopt M-coupon applications for females than for males (Liu et al.,



2015). In the M-coupon application context, Liu et al. (2015) assumed that the effect was stronger for males than for females. Hence, the following hypothesis was proposed:

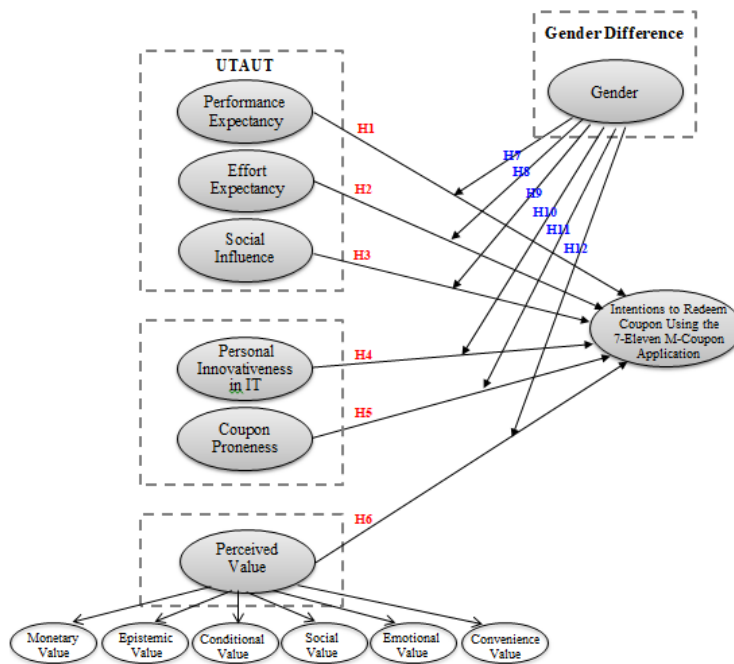
**H11:** The effect of coupon proneness on the intention to redeem coupons using the 7-Eleven M-coupon applications is stronger for females than for males.

Suki (2011) examined the effect of perceived value on purchase intention towards online music which was determined by gender. They found that the effect of perceived value was greater for males than for females. Moreover, Alhidari & Almeshal (2017) also claimed that the effect of perceived value was stronger for males than for females. Hence, the following hypothesis was proposed:

**H12:** The effect of perceived value on the intention to redeem mobile coupons using the 7-Eleven M-coupon applications is stronger for males than females.

### Conceptual Framework

All variables in this study can be drawn together to propose a conceptual framework illustrated in Figure 1 below



**Figure 1** Conceptual Framework

## **Methodology**

### **Sample Characteristics**

A focus on younger consumers attaches more "value" to mobile advertising in comparison to older audiences. They are more acquainted with new technology such as SMS, MMS, the internet and mobile applications. Younger consumers are open to mobile communication than older ones. Also, the growth of M-coupons is going to be driven by the phenomenon of couponing becoming widespread wherein coupons are accessible via social media like Facebook or other applications. Younger consumers use social media and applications more often than older consumers (Abhishek & Mathen, 2014).

The population in this study were consumers who lived in the Bangkok Metropolitan Region, aged between 18 and 34. Young consumers were selected because they have been identified as the representatives of mainstream mobile coupon users (Park, 2014) and early adopters of mobile coupon services (Im & Ha, 2012); and have had experience using the 7-Eleven M-coupon application. The number of consumers who have downloaded the 7-Eleven mobile applications in Thailand is about 5,600,000 (CP All Annual Report, 2018).

### **Sample Size**

For structural equation modeling, the sample size should be at least 10 – 20 times the number of the items (Hair et al., 2010). Since the proposed model has one dependent variable involving three items and seven independent variables involving thirty-five items. Thus, there are thirty-eight items ( $38 * 10 - 20 \text{ times} = 380 - 760$ ), which means that 380 - 760 is the required sample size. The sample size of 760 (collected from 380 males and 380 females) was used in this research to investigate the consumer evaluation of acquisition and transaction utility in M-coupon shopping contexts in which gender serves as the moderating variable (Im & Ha, 2015). Therefore, the abovementioned sample size was sufficient for multiple group analysis.

### **Data Collection Procedure**

Questionnaires were employed as a tool for data collection and 760 of them were distributed to 7-Eleven branches in the Bangkok Metropolitan Region from 1 – 30 September 2019. There are 4,556 branches of 7-Eleven in the area of study. A stratified sampling method was used in this study because the population was precise; that is, the number of consumers who have downloaded 7-Eleven mobile applications in Thailand was about 5,600,000. The stratified two-stage sampling scheme was utilized in this research. The Department of Local Administration, Ministry of Interior (2018) divides Bangkok Metropolitan Region into two administrative regions: (1) Bangkok district covering 50 districts that consist of inner-city, urban fringe city and suburb; and (2) Metropolitan district covering 5 provinces and 25 districts that consist of suburb growth city, industrial area and suburb city. Simple random sampling was

used in stages 2 and 3 in this research to random the districts and 7-Eleven branches of which 38 branches were randomly selected. The final sample size of branches was 20.

## **Data Analysis and Results**

**Demographic Analysis:** 760 questionnaires were distributed to 380 male and 380 female respondents. Among 760 respondents, the majority respondents of 205 (27%) were aged 21 – 23 years old, followed by 163 respondents (21.40%) aged 18 – 20 years old, 159 respondents (20.90%) aged 24 – 26, 96 respondents (12.60%) aged 27 – 29 years old, 81 respondents (10.70%) aged 30 – 32 years, and 56 respondents (7.40%) aged 33 – 35 years old, respectively.

For the education level, 566 (74.50%) held a bachelor's degree, followed by 124 respondents (16.30%) below a bachelor's degree, 69 respondents (9.10%) a master's degree, and 1 respondent (0.10%) a doctoral degree, respectively.

For the respondents' income, 388 (51.10%) received 10,000 – 30,000 baht per month, followed by 270 respondents (35.50%) less than 10,000 baht, 87 respondents (11.40%) 30,001 – 50,000 baht, and 15 respondents (2.00%) more than 50,000 baht, respectively.

For the respondents' occupation, 396 (52.10%) were students, followed by 215 private company employees (28.30%), 111 government officers/employees (14.60%), and 38 business owners (5.00%), respectively.

### **Measurement Model**

Questionnaires were completed by 760 respondents and the convergent validity was analyzed using confirmatory factor analysis. The result showed that the standardized factor loading of all items was above 0.6 (Hair et al., 2010) The Cronbach's values were higher than 0.7 which was included in the model ranging from 0.743 to 0.951. All were greater than the benchmark of 0.7 recommended by Spira (2012), which indicates a high reliability of the scales (Liu, 2015). Average variance extracted (AVE). The result showed that each construct exceeded 0.5 which was included in the model ranging from 0.610 to 0.905. All were greater than the benchmark of 0.5 recommended by Fornell & Larcker (1981). The construct reliability (CR), the result showed that each construct was above 0.8 that included in the model ranging from 0.854 to 0.966. All were greater than the benchmark of 0.8 recommended by Nunnally (1978). Hence, the convergent validity of scale is good (Lui & Wang, 2014). The factor loading, cronbach's alpha, AVE and CR values as show in table 1. Furthermore, the square root of the AVE of each construct and its corresponding correlation coefficients with other constructs were compared. The corresponding correlation coefficient of each construct was lower than the square root of the AVE, which indicates that the discriminant validity of the scales was acceptable (Liu et al., 2015) as show in table 2.

**Table 1** Results of standardized item loading, Cronbach's Alpha, AVE and CR

<b>Constructs / Items</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>AVE</b>	<b>CR</b>
<b>Intentions to Redeem Coupon Using the 7-Eleven M-Coupon Application</b>		0.874	0.800	0.923
I will always try to redeem coupon using the 7-Eleven M-coupon application	0.896			
I plan to continue to redeem coupon using the 7-Eleven M-coupon application frequently	0.920			

**Table 1** Results of standardized item loading, Cronbach's Alpha, AVE and CR (Continued)

<b>Constructs / Items</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>AVE</b>	<b>CR</b>
I intend to continue redeeming coupon using the 7-Eleven M-coupon application in the future	0.866			
<b>Performance Expectancy</b>		0.793	0.617	0.865
I believe that using 7-Eleven M-coupon application for shopping redemption that helps me search for discount more quickly	0.773			
Using 7-Eleven M-coupon application for redeeming that helps me accomplish shopping more quickly	0.763			
Redeeming coupon using the 7-Eleven M-coupon application would be useful for shopping	0.831			
If I use 7-Eleven M-coupon application for redeeming the product, I will increase my chances of getting the good promotion	0.773			
<b>Effort Expectancy</b>		0.880	0.806	0.926
I find to redeem coupon using the 7-Eleven M-coupon application is easy to use	0.907			

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
Learning how to redeem coupon using the 7-Eleven M-coupon application is easy for me	0.930			
It is easy for me to become skillful at using 7-Eleven M- coupon application for shopping redemption	0.854			
<b>Social Influence</b>		0.818	0.709	0.877
Friends' suggestions and recommendations will affect my decision to use 7-Eleven M-coupon application for shopping redemption	0.937			

**Table** Results of standardized item loading, Cronbach's Alpha, AVE and CR (Continued)

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
Most people surrounding with me use 7-Eleven M-coupon application for shopping redemption	0.637			
My close friends think I should use 7-Eleven M-coupon application for shopping redemption	0.918			
<b>Personal Innovativeness in IT</b>		0.860	0.756	0.902
I like to experiment with new information technologies	0.796			
If I heard about new information technology, I would look for possibilities to experiment with it	0.863			
I am usually the first to try out new information technologies	0.942			
<b>Coupon Proneness</b>		0.787	0.610	0.862
Redeeming 7-Eleven M-coupon application makes me feel good	0.748			
When I use coupons, I feel that I am getting a good deal	0.733			

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
I am more likely to buy brands for which I have a coupon	0.847			
I have favorite brands, But most of the time I buy the brand I have a coupon for	0.792			
<b>Perceived Value</b>				
<b>Monetary Value</b>		0.806	0.715	0.882
Redeeming 7-Eleven M-coupon application can save me a lot of money	0.792			
Redeeming 7-Eleven M-coupon application enable me to shop at a lower financial cost	0.858			

**Table 1** Results of standardized item loading, Cronbach's Alpha, AVE and CR (Continued)

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
Using 7-Eleven M-coupon application for shopping redemption that offers value for money	0.853			
<b>Epistemic Value</b>		0.873	0.797	0.922
I can use 7-Eleven M-coupon application for shopping redemption to test the new technology	0.790			
I use 7-Eleven M-coupon application for shopping redemption to experience a totally different traditional coupons	0.786			
Using 7-Eleven M-coupon application for shopping redemption to provide me with novelty	0.706			
<b>Conditional Value</b>		0.836	0.754	
7-Eleven M-coupon application would be provide customized coupons discount to me (to differ from each other customers) to offer for shopping redemption	0.801			

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
7-Eleven M-coupon application would be provide coupons discount to my preferences and needs to offer for shopping redemption	0.842			
7-Eleven M-coupon application would be provide coupons discount related to a specific time (e.g. my birthday) to offer for shopping redemption	0.743			
<b>Social Value</b>		0.915	0.854	0.946
Redeeming 7-Eleven M-coupon application would help me to feel accepted by others	0.917			
Redeeming 7-Eleven M-coupon application would make a good impression on other people	0.956			

**Table** Results of standardized item loading, Cronbach's Alpha, AVE and CR (Continued)

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
Redeeming 7-Eleven M-coupon application would be part of how I express my personality	0.920			
<b>Perceived Value</b>				
<b>Emotional Value</b>		0.951	0.905	0.966
I enjoy when using 7-Eleven M-coupon application for shopping redemption	0.871			
I feel pleasant when using 7-Eleven M-coupon application for shopping redemption	0.913			
I'm excited when using 7-Eleven M-coupon application for shopping redemption	0.868			
<b>Convenience Value</b>				
Redeeming 7-Eleven M-coupon application give me convenience	0.789	0.743	0.661	0.854

Constructs / Items	Factor Loading	Cronbach's Alpha	AVE	CR
Redeeming 7-Eleven M-coupon application enable me to redeem coupons at any time	0.883			
Redeeming 7-Eleven M-coupon application enable me to redeem coupons at any place	0.856			

**Table 2** Correlation coefficient matrix and square roots of the AVEs

	CP	EE	INT	PIIT	PV	PE	SI
CP	0.781						
EE	0.213	0.898					
INT	0.336	0.408	0.894				
PIIT	0.237	0.221	0.173	0.869			
PV	0.445	0.420	0.411	0.265	0.567		
PE	0.330	0.368	0.467	0.262	0.495	0.785	
SI	0.280	0.247	0.252	0.168	0.232	0.192	0.842

Note: CP = Coupon proneness, EE = Effort expectancy, INT = Intentions to redeem coupons using the 7-Eleven M-coupon application, PIIT = Personal innovativeness in IT, PV = Perceived V = Perceived value, PE = Performance expectancy, SI = Social influence

**Structural Model (Model Fit):** Goodness-of-fit indices for structural model as shown in Table 3. All of the model-fit indices exceeded the respective common acceptance levels suggested by previous research, demonstrating that the model exhibited a good fit with the data collected. Thus, the path coefficients of the structural model shall then be examined. This indicates that the discriminant validity of the scales was acceptable (Liu et al., 2015).



**Table 3** Goodness-of-fit indices for structural model

Fit Indices	recommended by	Benchmark	Value
<b><i>Absolute fit measures</i></b>			
CMIN ( $\chi^2$ )			168.405
DF			157
CMIN ( $\chi^2$ )/DF	Hair et al. (2010)	< 3	1.073
GFI	Hair et al. (2010)	> 0.90	0.981
RMSEA	Marcoulides & Schumacker (1996)	< 0.05	0.01
<b><i>Incremental fit measures</i></b>			
AGFI	Gefen, Krahana, & Straub (2003)	> 0.80	0.967
NFI	Bentler, (1992)	> 0.90	0.981
CFI	Bentler (1992)	> 0.90	0.999

**Hypothesis Testing (Results of the Structure Model for Overall Data)**

The results of the hypothesis test were presented in Table 4. The results illustrate that all the core hypotheses are supported. The performance expectancy was ranked first as the most important independent variables having effects on the dependent variable because it had the highest path coefficients value ( $\beta_1 = 0.385$ ), followed by perceived value, effort expectancy, social influence, coupon proneness and personal innovativeness in IT, respectively. The  $R^2$  value for intention to redeem 7-Eleven M-coupon application was 0.417 which was beyond the criteria of 0.2 recommended by Cohen (1992).

**Table 4** Hypothesis testing of structure model for overall data

	<b>Hypothesis / Relationship</b>	<b>Path Coefficients</b>	<b>t statistic</b>	<b>Result</b>
H1	PE → INT	0.358***	8.469	Supported
H2	EE → INT	0.145***	3.712	Supported
H3	SI → INT	0.143***	3.662	Supported
H4	PIIT → INT	0.131**	2.995	Supported
H5	CP → INT	0.138***	3.299	Supported
H6	PV → INT	0.255***	6.602	Supported

Note: PE = Performance expectancy, EE = Effort expectancy, SI = Social influence, PIIT = Personal innovativeness in IT, CP = Coupon proneness, PV = Perceived value, INT = Intentions to redeem coupons using the 7-Eleven M-coupon application,

### **Hypothesis Testing (Results of Moderating Effects)**

Following the procedure suggested by Steenkamp & Baumgartner (1998), the moderating role of gender was investigated through a hierarchical procedure in the multi-group analysis. A significant difference ( $t = 3.84$  at  $p\text{-value} = 0.001$ ) indicates a statistically significant difference between males and females. The  $R^2$  for intention to redeem coupons using the 7-Eleven M-coupon application increased from 0.417 to 0.452. The testing results of the multi-group analyses were presented in Figure 2, Figure 3, Table 5 and Table 6.

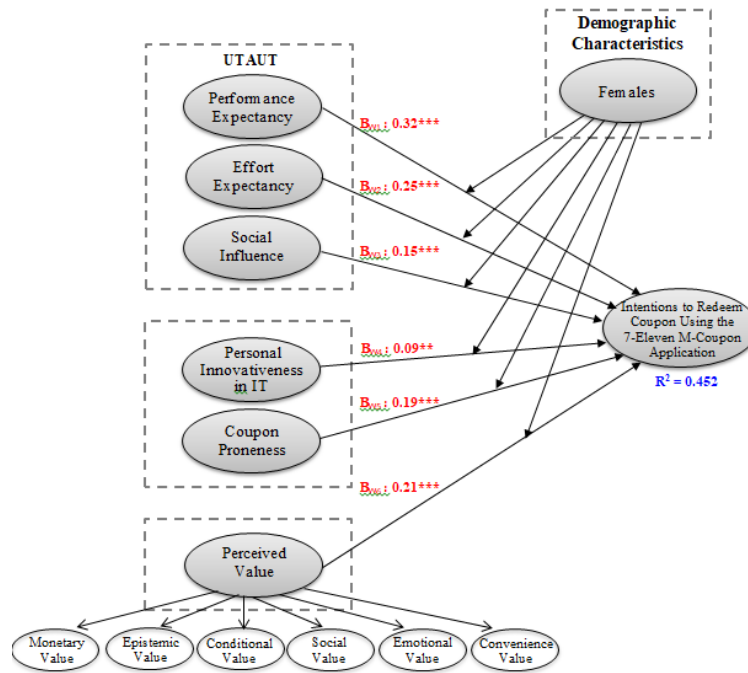


Figure 2 Testing results of the structural model of females

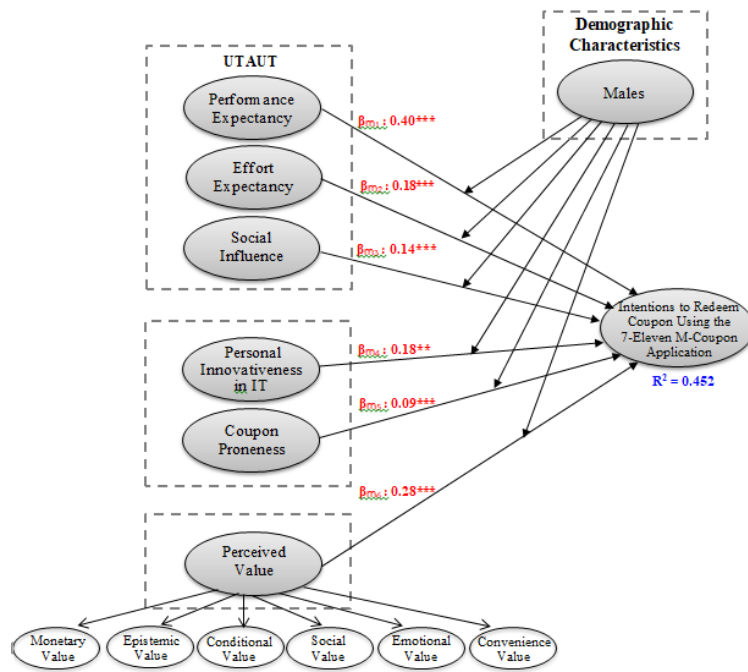


Figure 3 Testing results of the structural model of males

**Table 5** Hypothesis testing of moderating effects of gender

	<b>Relationship</b>	<b>hypothesis</b>	<b>Result</b>
H7	Performance expectancy → Intentions to redeem	Males > Females	Supported
H8	Effort expectancy → Intentions to redeem	Females > Males	Supported
H9	Social influence → Intentions to redeem	Females > Males	Supported
H10	Personal innovativeness in IT → Intentions to redeem	Males > Females	Supported
H11	Coupon proneness → Intentions to redeem	Females > Males	Supported
H12	Perceived value → Intentions to redeem	Males > Females	Supported

**Table 6** Gender differences

	<b>hypothesis</b>	<b>Entire Sample(β)</b>	<b>Males(β<sub>m</sub>)</b>	<b>Females(β<sub>f</sub>)</b>
H7	Performance expectancy → Intentions to redeem	0.358	0.40	0.32
H8	Effort expectancy → Intentions to redeem	0.145	0.18	0.25
H9	Social influence → Intentions to redeem	0.143	0.14	0.15
H10	Personal innovativeness in IT → Intentions to redeem	0.131	0.18	0.09
H11	Coupon proneness → Intentions to redeem	0.138	0.09	0.19
H12	Perceived value → Intentions to redeem	0.255	0.28	0.21

**Discussion**

Knowledge of gender differences in these success factors would enable M-application providers to separately optimize redemption intent for males and females.

The results show that performance expectancy is the most powerful antecedent of the intention to redeem coupons using the 7-Eleven M-coupon application, thereby confirming the previous literature on UTAUT in the mobile internet context (Wang & Wang, 2010). This was significant for both male and female groups. Nonetheless, it was more significant for males than for females. This finding confirms research conducted by Aguirre-Urreta & Marakas (2010). Earlier studies showed that male customers are less likely to use paper coupons as they need to spend a great deal of effort and time on obtaining and saving coupons (Hill & Harmon, 2009) but M-coupon applications help young male customers to quickly and easily receive coupons and these customers do not need to acquire coupons in advance. Therefore, young male consumers believe the 7-Eleven M-coupon application helps them

search for a discount more quickly and finish their shopping more quickly. They are also more likely to benefit from product promotions.

Perceived value is the second strongest predictor of intentions to redeem coupons using the 7-Eleven M-coupon application. The result of this research confirms the study conducted by Park (2014). This was significant for both male and female groups, but it was more significant for males than for females. The findings confirm Alhidari & Almeshal (2017). Hence, the increase of the perceived value of the M-coupon application for young male consumers can be contributed to the improvement of their redemption behavior. Specific aspects of condition value which are regarded as customization are value propositions of mobile application (Liu et al., 2015). Consequently, M-application providers can expand the coverage range of coupons to advance the service value so that young male consumers can always receive coupon service. Furthermore, the 7-Eleven M-coupon application has not customized coupons to shoppers but provides the same coupons for all shoppers. So, it should provide tailored coupons based on young male consumers' location and profiles or specific coupons with unique specials to cater to individual needs, buying behavior or a specific time which can also effectively boost young male consumer's intention to redeem coupons using the 7-Eleven M-coupon application.

Effort expectancy is the third important factor of intentions to redeem coupons using the 7-Eleven M-coupon application. This means that the majority of young consumers think that the redemption of coupons using the 7-Eleven M-coupon application should be easy to use, thereby confirming the previous literature on M-applications (Palau-Saumell et al., 2019). This was significant for both male and female groups. However, it was more significant for females than for males, thereby confirming the previous study conducted by Aguirre-Urreta & Marakas (2010). Moreover, Venkatesh et al. (2003) found that females seem to be cautious about the technological effort expended in the early stages of new behavior. Thus, young female consumers will positively intend to redeem coupons using the 7-Eleven M-coupon application if it is viewed as an efficient application for searching coupons which are convenient to use and redeem, saving time for customers. Young female consumers are worried about the amount of time and effort required for learning and using it. Besides, if its usage involves sophisticated user interfaces, slow response, complicated to get M-coupons, difficult to redeem M-coupons or inconvenient connecting procedures, then its benefits would be significantly reduced.

Social influence is the fourth important factor of intentions to redeem 7-Eleven M-coupon application. This study confirmed Jayasingh & Eze (2009) and Jayasingh & Eze (2010). This was significant for both male and female groups, but it was more significant for females, thereby confirming the previous study completed by Hwang (2010). Given that young female consumers are important influencers and decision-makers in the family decision-making process, it is logical to assume that promoting M-application providers can be done more easily by targeting potential female customer segments. The young female customers also

put more trust in family and friends' support. They can also bring in their family and friends and accomplish the company's marketing aim. M-application providers may suggest that social rewards be presented to members of young females if they recommend using and redeeming M-coupon applications to their friends.

Coupon proneness is the fifth important factor of intentions to redeem the 7-Eleven M-coupon application, thereby supporting the study conducted by Gonzalez (2016). This was significant for both male and female groups, but it was more significant for females. These findings support the previous study conducted by Harmon & Hill (2003). For mobile coupon service, female shoppers are more likely to search for and use mobile coupons to save money than their male counterparts (Im & Ha, 2015). Young female consumers tend to be more price-sensitive than young male consumers during the launch of some new promotion campaigns or customers' benefits. M-application providers should focus on young female shoppers primarily. Once young female shoppers perceive the usage and redemption of coupons using the M-coupon application as beneficial, they may use their social influence to persuade their peers to redeem coupons using the M-coupon application, thus facilitating the extension of intention to redeem coupons using the M-coupon application.

Finally, personal innovativeness also has a significant influence on the intentions to redeem coupons using the 7-Eleven M-coupon application, thereby confirming the previous work of Ha & Im (2014). This was significant for both male and female groups, but it was more significant for males. These findings support Müller-Seitz et al (2009). Once individuals begin to use M-coupon applications and become familiar with them, they may begin to persuade their colleagues and friends to use M-coupons. M-application providers can promote M-coupons to potential young male early adopters who are likely to have a higher level of personal IT innovation. When the number of M-coupon application users reaches a critical mass level, there is expected to be a significant increase in the number of subsequent M-coupon application users.

## **Theoretical Implications**

In the past few years multiple studies were carried out related to the behavior of consumers' intentions to redeem M-coupons, nevertheless, little work has been carried out to explore the gender differences which influence the intentions to redeem mobile coupons via a smartphone application. Instead, previous studies treat males and females as a single group and assume the same preference and reactions from both genders. Therefore, this research explores the moderating impact of gender on relationships between perceived value, UTAUT theory, personal innovativeness, coupon proneness and the behavioral intention to redeem coupons using the M-coupon application to understand how male and female customers react to intentions to the 7-Eleven M-coupon application which is vital to marketing planners.

## **Practical Implications**

The results of the structural model have different plausible operational guidelines for M-application providers, as well as for retailers and marketing managers;

First, M-application providers should offer location-based discount coupon advertising alerts while shopping. The discount coupon should fit the customers' needs or their buying behavior to provide more convenience and opportunities for young male consumers to use and redemption the M-coupon application. When young male consumers walk into 7-Eleven stores, they should never buy anything that was not already on their list. So, before the young male consumers leave home, they can use the 7-Eleven M-application to search for any coupons that fit their needs and represent products they would likely buy. The customers pre-select the products in the application and purchase them just like the buyers would without a coupon. Make sure to keep their receipt handy when the customers leave the store. After they get home, log into the 7-Eleven M-application again and choose the option to redeem those coupons. The young male consumers will have to scan the barcode on the item and their receipt, and then they should get a credit for the purchase within a day. This process should take only a few minutes. They can cash out using their True Money wallet and get real money back or they can get reward points on their All Member cards.

Second, M-application providers should offer tailor-made discount coupon promotions based on the location and profiles of young male consumers, or specific coupons with unique specials to differentiate each customer based on buying behavior or specific times (such as a birthday) and should be sent to consumers when needed. The redemption rate can be significantly improved by the relevance and timeliness of the M-coupon and the tailored promotion of the discount coupon. Moreover, this result of this study demonstrates that young consumers not only use the M-coupon application for utilitarian benefits (e.g. monetary) but also for hedonic benefits (e.g. emotional and epistemic value). Saving money is therefore not the only purpose for the young consumer to redeem M-coupon applications. In addition to offering coupons,

M-application providers should attempt to increase young male consumer's perceptions of entertainment value to attract more consumers for example, to create gaming challenges on the application for prizes to attract more consumers.

Third, it is recommended that M-application providers should promote user-friendliness and convenience to redeem M-coupon applications. User-friendliness is also essential for young female consumers who play a vital role in the success of the M-coupon application. This could make young females perceive the M-coupon application as easier to use, resulting in adoption of the application. At the same time, consumers can share coupons on their social media and get access to offline activities arranged by application providers, which could bring them much delight, especially young female consumers.

Fourth, M-application providers should consider the incentives for referrals such as friends getting friends to download the 7-Eleven M-coupon application. They could receive special benefits (e.g. get reward points on their All Member cards, receive cash back through their True Money wallet). Moreover, it is suggested that M-application providers should offer special privileges to young female customers on the condition that they recommend or share M-coupon promotional materials to their peers, convince their peers to use the coupons on mobile application to purchase their interested items; and ask their peers to review the use of those coupons and join the competition for prizes.

Fifth, young female consumers should be seen as key targets for developing and promoting the 7-Eleven M-coupons, particularly to increase the frequency of coupon redemption. M-application providers should offer special deals and coupons to young females when they enter a store. This is ideal for those who purchase a lot, but are unsure where to buy specific products. Once customers collect enough points, they can exchange the points for gift cards at selected retailers. They can also score points for sharing on social media, taking surveys, and other actions. They could earn anywhere from 50 to 200 points (for example), for walking into a store, with bonus points for other actions.

Sixth, M-application providers can initiate a M-coupon campaign to increase the frequency of coupon redemption for young male consumers while inventing alternative strategies to introduce an M-coupon application to late majority adopters and laggard consumers. M-application providers should create an M-coupon application which is suitable for young male customers' vibrant lifestyles. This is believed to help convince the later adopters to adopt the latest technology. Furthermore, M-application providers can take measures, such as word of mouth recommendations, to accelerate the spread of their service based on current users.



## Limitations

There are certain limitations to this research. Firstly, the moderating effects of gender were primarily examined while other demographic/situational variables such as age, education, and experience may also be considered. Secondly, the scope of this study was limited to the M-application of 7-Eleven which is a convenience store. Hence, the conclusions may not be identical to some other business research to which a different model is applied.

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