EFFECT OF PERFORMANCE EXPECTANCY, EFFORT EXPECTANCY AND PRICE VALUE ON CONSUMER'S BEHAVIOURAL INTENTION TOWARDS MOBILE APP-BASED SHOPPING

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ABSTRACT

Buying through mobile applications is a trend, which is emerging fast. Technological revolutions have contributed towards the upcoming of this medium for shopping purposes in comparison to brick-and mortar. Despite the growing penetration of this medium, awareness regarding factors responsible for such growth is important for decision makers, as this can benefit them to design their mobile apps in such a manner, where consumers find them more useful and easier to operate and prefer buying through them. Our study focused mainly on "UTAUT" (Venkatesh et al., 2003) theory because this can help us in understanding consumer's purchase intentions. We tried to gain deeper understanding about consumers' demographic variables, such as age and gender, with respect to the preference for mobile app-based shopping and also drivers to it, such as, performance expectancy, effort expectancy and price value. For the purpose a primary research was conducted with the help of a structured questionnaire. Data was gathered from 1498 buyers. Use of Multinomial Logistic Regression Model was made to examine the factors, which determine consumer's response to mobile app-based shopping. Findings of the study proved that with the judicious application of knowledge regarding these factors and consumers' demographic variables, marketers can successfully target their mobile apps to the desired audience.

Keywords: Mobile applications, Perceived expectancy, Effort expectancy, Price value, Behavioural intention

INTRODUCTION

In today's digital era, consumer's preference for buying has shifted from brick-and-mortar shops to buying through mobile applications. "It is a popular way for modern consumers to search and pay for their purchasing via mobile platform" (Hung, Yang, & Hsieh, 2012).

Mobile phones have been used extensively by people for variety of reasons, such as, exchanging messages and pictures through whatsapp, sending e-mails, booking air-tickets, movie tickets, making payments and playing games. In a consumer context, the use of mobile applications is emerging strongly. Chang (2015) describes mobile applications as "those software or applications for performing specific tasks or functions for the user which can be run on different mobile devices, including electronic devices, phones, and smart phones". At the same time, mobile shopping refers to "all the activities of consumers who use wireless Internet service when shopping and purchasing via a mobile phone such as searching, comparing, buying, or evaluating" (Ko et al., 2009). The portability of the medium and strong Internet connectivity through 3G and 4G has ensured that more and more people have started buying goods and services through mobile applications.

Despite the growing penetration of this medium, it is important for decision makers to understand the reasons responsible for such growth. As this can benefit them to design their mobile apps in such a manner, where consumers find them more useful and easier to operate and prefer buying through them. For years researchers have tried to explore the technological variables influencing consumer's behavioural intention towards mobile applications, while limited focus has been placed on identifying the individual characteristics of people, which influence their shopping through mobile applications. The literature on mobile apps and consumer behaviour has proposed several concepts and frameworks. Theories such as "reasoned action" and "planned behavior" (Ajzen, 1991) and models such as, the "technology acceptance model" (TAM) (Davis, 1989) and the "Unified Theory of Acceptance and Use of Technology (UTAUT)" (Venkatesh et al., 2003) have helped in understanding customer satisfaction, customer engagement or intention to purchase more effectively.

RATIONALE OF THE STUDY

Our study focused mainly on "UTAUT" because this can help in understanding the consumer's purchase intentions. "It also explains a large number of variances in consumer behaviour within the context of technology" (Kim *et al.*, 2016 a). We have adopted the basic constructs of perceived expectancy and effort expectancy from "UTAUT" (Venkatesh et al., 2003)and added price value as the third dimension to it. Further, the study focused on identifying the impact of age and gender on moderating the effect of perceived expectancy, effort expectancy and price value on

the behavioural intention of consumers. Use of Multinomial Logistic Regression Model was made to examine the factors, which determine consumer preference for mobile app-based shopping.

The structure of this paper is as follows: the first section contextualises the proposed model in the light of the literature review. Consumer differences among demographics and some drivers such as performance expectancy, effort expectancy and price value are discussed in relation to their impact on behavioural intentions informing consumers' preference for mobile app-based shopping over and above brick-and-mortar shopping. Thereafter, methodology employed for data collection and analysis is discussed. The concluding section discusses the findings as well as research limitations.

OBJECTIVES OF THE STUDY

- To empirically investigate the effect of performance expectancy on consumer's behavioural intention regarding mobile app-based shopping among age and gender groups.
- To explore the effect of effort expectancy on consumer's behavioural intention regarding mobile app-based shopping among age and gender groups.
- To measure the impact of price value on consumer's behavioural intention regarding mobile app-based shopping among age and gender groups.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The process of hypothesis development followed an extensive review of the researches done by various scholars given as under:

Mobile app-based shopping

Use of mobile technology is on rise these days. People use technology for different reasons. "The uses and gratifications theory (UGT) is widely employed to understand motivational needs in technology use" (Katz et al., 1974). UGT theory brings out the relationship existing between media and the people and explains clearly as to why people use a specific media for a particular purpose. (McQuail, 1985; Zillman and Bryant, 1985). In case of mobile apps, individuals may use it for personal entertainment or for the purpose of performing various tasks. Albarran's (2009) stated that, "people generally download mobile apps for entertainment, functional utility, or communication". Studies on motivations for the use of mobile phones emphasisedmainly on entertainment and utility besides including database services (Leung and Wei, 2000; Wei, 2008). "People with information seeking and entertainment motivations were likely to listen to others' opinions in adoption of mobile services" (Lee et al., 2010b). Given the mobility and accessibility of the mobile devices, these days consumers have even started using them for purchasing goods and services, but this dimension has not been explored deeply till now.

Therefore, the current study tries to measure the effect of performance expectancy, effort expectancy and price value on consumer's shopping through mobile applications.

Behavioural Intention and Technological Adoption Framework

"Behavioural intention is defined as an individual's intention to perform various behaviours" (Ajzen and Fishbein, 1975). It may be considered as "the individual willingness to use and continue to use a technology, and the factor that determines the usage of a technology" (Venkatesh, Thong and Xu, 2012). "Moderators like age, gender, experience, etc. have been influencing the customers' intention regarding the use of technology" (Natarajan, Balasubramanian and Kasilingam, 2017; Faqih and Jaradat, 2015). As Chhonker,Verma, and Kar (2017) observed that, the behavioural intention framework of understanding has evolved over the years to become "the dominant theory in the field of technology adoption". It includes the "Theory of Reasoned Action" (Fishbein and Ajzen, 1975), the "Technology Acceptance Model" (Davis, 1989), the "Theory of Planned Behaviour" (Ajzen, 1991) and the "Unified Theory of Acceptance and Use of Technology" (UTAUT) (Venkatesh et al., 2003) and "UTAUT2" (Venkatesh, Thong and Xu, 2012).

Given our interest in measuring the effect of consumer's performance expectancy, effort expectancy and price value as driving factors on the behavioural intention of consumers in preferring mobile app-based shopping among their demographic variables, the following theories are utilised in this paper:

UTAUT Model

Venkatesh et al. (2003) developed "UTAUT as a comprehensive synthesis of prior technology acceptance research". According to them, "UTAUT has four key constructs (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions) that influence behavioural intention to use a technology". Venkatesh et al. (2003) has defined performance expectancy as the benefits, which a consumer can enjoy by using a particular technology. Effort expectancy looks at the amount of ease with which the consumer can use the technology. Social influence tries to measure the amount of influence being exerted by friends and family members in making a consumer use a particular technology and facilitating conditions refer to the consumers' belief about the resources and support available to perform a behavior. According to "UTAUT" (Venkatesh et al. 2003), "performance expectancy, effort expectancy, and social influence are theorised to influence behavioural intention to use a technology, while behavioural intention and facilitating conditions determine technology use".

UTAUT 2

This theory states that, "individual intention to use technology depends on it being

perceived as useful, easy to use, and suggested by those whom one deems important". It also depends on "whether the needed resources to use the technology are present, the technology is fun to use, the price value of the technology, and if the users have a habit to use the technology" (Venkatesh, Thong and Xu, 2012). According to Venkatesh, Thong and Xu (2012), "individual differences of age, gender, and experience moderate the effects of these constructs on behavioural intention and technology use".

Demographic variables

Consumer differences are important constituents of consumer's attitude formation. The current study tries to measure the effect of facilitating conditions on the behavioural intention of consumers moderated by their age and gender.

Age

Age has been found as a significant factor in determining the adoption of technology. Being born in the digital era, "younger consumers are considered more technologically proficient" (Pieri and Diamantinir, 2010) as they are seen to adopt m-commerce and other mobile services more easily and quickly. "Older consumers tend to face more difficulty in processing new or complex information, thus affecting their learning of new technologies" (Morris et al. 2005; Plude and Hoy er 1985). "This difficulty may be attributed to the decline in cognitive and memory capabilities associated with the aging process" (Posner 1996). Hence, "compared to younger consumers, older consumers tend to place greater importance on the availability of adequate support" (Hall and Mansfield 1975). "At the early stages of using a new technology, younger men tend to exhibit a greater tendency to seek novelty and innovativeness" (e.g., Chau and Hui 1998). Followed by these observations, we decided to study the impact of age on our basic variables.

Gender

"Though some scholars have proposed that gender does not play an important role in the adoption of technology and the internet practices of men and women do not vary significantly" (Alreck and Settle, 2002; Bhatnagar, Misra and Rao, 2000), a considerable corpus of research has found that gender impacts business technology adoption in significant ways (Venkatesh and Morris, 2000; Goh and Sun, 2014; Leong et al., 2013). Broos (2005) observed that, "males tend to respond with more positive attitude toward technology than females". Yang (2005) agreed that, "men generally express favourable attitudes toward mobile commerce". Further, authors observed that,"males were the dominant users of e-commerce" (Rodgers and Harris, 2003; Hui and Wan, 2007). So, despite this fact that many studies have indicated that "gender has an impact on the adoption of technology for businesses" (Venkatesh and Morris, 2000) we felt the need for additional research on gender with regard to mobile apps-based shopping.

Performance expectancy

Performance expectancy in the "UTAUT" refers to the consumer's belief that the use of technology will help them in performing certain tasks in a better way. (Venkatesh et al., 2003). In other words, "the use of technology brings functional advantages" (Rogers, 1995). Market researchers have proved that when consumers find value and utility from the downloaded apps, they are even willing to pay for them (Arya, 2011). In other words, "if performance expectancy increases, users will be likely to continue to use mobile apps as it is individual's perception that the usage of system will improve their performance" (Min et al., 2008; Jambulingam, 2013). With regard to this dimension there are mixed reactions, as some of the researches have reported a positive relationship existing between performance expectancy and behavioural intention to adopt mobile commerce (Faqih&Jaradat, 2015; Liébana-Cabanillas et al., 2017), while on the other hand Zhang et al., (2012) reported no such significant relationship. A more recent study executed in Taiwan (Chou et al., 2018) indicated that,"performance expectancy significantly influenced the consumers behavioural intention in the mobile commerce environment". In the light of these varied perspectives, the study tried to measure the effect of performance expectancy on consumers'behavioural intention to adopt mobile commerce technologies keeping the effect of age and gender into account, the following hypothesis is proposed and shown in the Conceptual model 1 given below:

H1.1: There is a significant difference among various age groups in choosing performance expectancy as a factor for preferring mobile app-based shopping

H1.2: There is a significant difference between males and females in choosing performance expectancy as a factor for preferring mobile app-based shopping

Fig. 1. Conceptual model 1
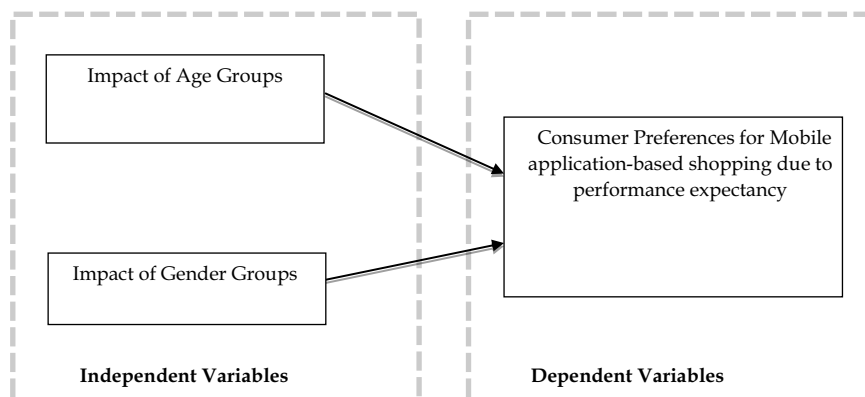
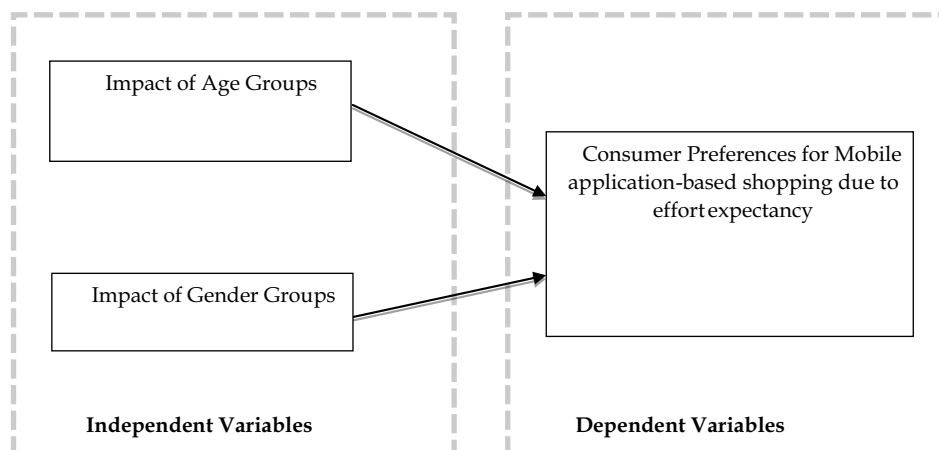All the hypotheses presented in this paper are Alternate Hypotheses.

Effort expectancy

"Effort expectancy is defined as the degree of ease in the use of technology" (Wang and Wang, 2010). As the technology becomes easy to use, its usage increases. "Users tend to prefer a simplicity-driven technology with maximised efficiency" (Agarwal and Prasad, 1999; Davis et al., 1989). Previous research shows that people prefer learning a new technology when it involves less of an effort. Furthermore, the "UTAUT" also posits that,"effort expectancy influences user intention either directly or indirectly through performance expectancy. Users feel that simplicity of technology generates self-efficacy of task performance with the technology" (Bandura, 1997; Davis et al., 1989). Though, some of the studies have not shown a direct relationship between effort expectancy and intention to use (Morosan and DeFranco, 2016; Oliveira et al., 2016). A more recent study executed in Taiwan (Chou et al., 2018) indicated that,"effort expectancy significantly influences the consumers behavioural intention in the mobile commerce environment".

After going through all this discussion, the current study tries to find out the effect of effort expectancy on consumers behavioural intention to adopt mobile commerce technologies, keeping the age and gender into account, the following hypothesis is proposed and highlighted in the Conceptual model 2 given as under:

H2.1: There is a significant difference among various age groups in choosing effort expectancy as a factor for preferring mobile app-based shopping

H2.2: There is a significant difference between males and females in choosing effort expectancy as a factor for preferring mobile app-based shopping

Fig. 2. Conceptual model 2

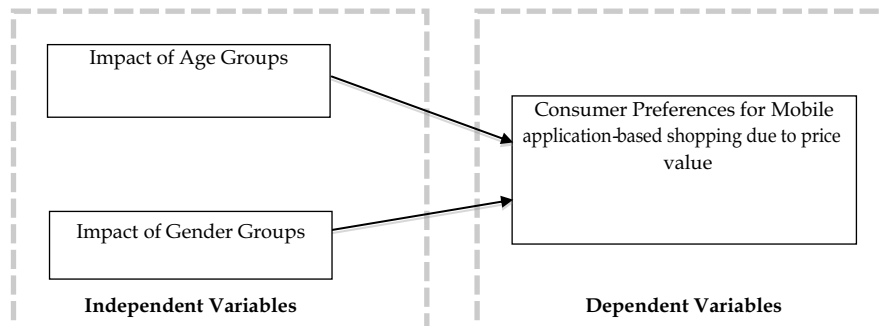All the hypotheses presented in this paper are Alternate Hypotheses.

Price Value

Price plays an important role in determining the consumers' use of technology, as they have to bear the cost associated with the purchase of devices. "The price value is positive when the benefits of using a technology are perceived to be greater than the monetary cost and such price value has a positive impact on intention" (Dodds et al. 1991). Thus, we have added price value as a predictor of behavioural intention to use a technology in our study, moderated by age and gender. Generally it is observed that, women pay more attention to the prices of products and services, and are more cost-conscious than men. As they are typically more involved in purchasing, it has been found that they are more responsible and careful with money than men are (Slama and Tashchian 1985). As (Deaux and Lewis 1984) proposed that, "older women are more likely to engage in such activities as taking care of their families", we draw the following hypotheses and project them in the Conceptual model 3:

H3.1: There is a significant difference among various age groups with regards to price value as a factor for preferring mobile app-based shopping

H3.2: There is a significant difference between males and females with regards to price value as a factor for preferring mobile app-based shopping

Fig. 3. Conceptual model 3

All the hypotheses presented in this paper are Alternate Hypotheses.

Methodology

Sample and Data Collection

In order to realise the above objectives, we conducted primary research with the help of a structured questionnaire comprising of multiple-choice questions. The questionnaire was developed using Google Forms. Subject matter experts were interviewed, and an initial questionnaire was constructed on the basis of their

feedback. This was then sent back to them for review. The questions for each construct were based on extensive literature review.

The survey was conducted using the purposive-sampling technique of non-probability sampling to test the hypotheses. The questionnaire was pre-tested on 50 respondents from different age, gender groups reflecting our target audience. The questionnaires were then floated and filled online by respondents above the age of 15 years based in the National Capital Territory of Delhi, India. We chose Delhi as it has a representative population from various parts of India. Overall, the questionnaires were circulated amongst 2000 respondents, of which 1,498 were found complete. The response rate for the survey was approximately 75 percent. The demographic characteristics of respondents are shown in Table no. 1.

Table 1: Demographic Profiles of Respondents

Sl.	Demographic profiles	Number	Percentage
1	Age (Years)	1498	100
1.1	16y – 25y	536	35.78
1.2	26y – 35y	330	22.03
1.3	36y – 45y	250	16.69
1.4	46y – 45y	216	14.42
1.5	Above 55y	166	11.08
2	Gender	1498	100
2.1	Females	748	49.93
2.2	Males	750	50.07

Table Source: Authors

Model Specification

Responses from the 1,498 completed questionnaires were compiled for analysis. The quantitative research methodology was employed. The multinomial logistic regression model was used to empirically investigate as to how some specific factors such as performance expectancy, effort expectancy and price value as drivers influence the preference for mobile-apps over brick-and-mortar markets for retail shopping among different age and gender groups of consumers. The multinomial logistic regression model was originally developed as,"a general alternative to probit model due to the work of Joseph Berkson in 1944" (Cramer 2002). According to Menard's "Applied logistic regression analysis", the "multinomial logistic regression is used often when categories are unordered and have more than two variables" (Williams, 2017). The rejection or acceptance of the hypotheses was determined by the results.

Multinomial logistic model has been used in previous studies in marketing, for "testing the efficiency of a new product strategy" (Hauser and Urban, 1977; Silk and Urban, 1978), "choice of store" (GenschandRecker, 1979), "variety seeking behaviour of consumers" (Lattin, 1987), "reference-dependent behavior" (Hardie et al.1993). Another important reason for the choice of the multinomial logistic regression model has been that it shows the relative impact of one variable by controlling the impact of all other variables used in the model.

ANALYSIS OF RESULT

The finding of the analysis is listed below in the preceding paragraphs:

Table 2: *Probability for preferring mobile app over other medium for shopping due to Performance Expectancy among Age and Gender groups*

	Variable	dy/dx	Standard Error
Age	26y - 35y	-0.224***	0.067
	36y -45y	-0.216***	0.071
	46y – 55y	-0.300**	0.131
	Above 55y	-0.216	0.223
Gender	Female	-0.048	0.048

Table Source: Authors
Note 1: *** & ** respectively refer to 1% & 5% level of significance.
Note 2: dy/dx refers to average marginal effects
Note 3: Base variable among age groups is 16y-25y age group and gender groups is male
Note 4: All the standard errors are robust in nature.

The results given above indicate the relative likelihood of preferring mobile app-based shopping over brick-and-mortar shopping due to performance expectancy among various demographic variables like age and gender groups. Analysis of each variable was carried out by controlling all others variables.

On the basis of the results achieved, we accept the alternate hypothesis H1.1, as it is statistically significant for all age groups except the above 55 years of age, implying that there is a significant difference among all age groups except above 55 years of age in considering performance expectancy as a driver for preferring mobile app-based shopping over brick-and-mortar shopping.

The findings listed in the above table clearly indicate the relative likelihood of preferring mobile app-based shopping over brick–and-mortar shopping among

various age groups, assuming that other demographic variable like gender is controlled. We noticed from the results that there is 22.4 per cent lower probability for choosing performance expectancy as a driver for the preference of mobile app-based shopping among the age group of 26–35 years as compared to the age group 16–25 years. Similarly, the age group 36–45 years has a lower probability of 21.6 per cent and the age group 46–55 years has a lower probability of 30 per cent respectively.

Similar analysis was undertaken for the next demographic variables, i.e. gender, by controlling other variable i.e. age groups. As per the above information, we found that the result is statistically insignificant and hence leads us not to accept the alternative hypothesis H1.2, implying that there is no significant difference between the male and female gender group in preferring mobile app-based shopping due to performance expectancy. As per the information given in the above table, it appears that females have lower probability for choosing performance expectancy as a driver for the preference for mobile app-based shopping by 4.8 per cent as compared to males.

Table 3: *Probability for preferring mobile apps over other mediums for shopping due to Effort Expectancy among Age and Gender groups*

	Variable	dy/dx	Standard Error
Age	26y - 35y	0.211***	0.069
	36y -45y	-0.019	0.079
	46y – 55y	0.161	0.121
	Above 55y	0.244	0.247
Gender	Female	-0.087	0.047

Table Source: Authors
Note 1: *** & ** respectively refer to 1% & 5% level of significance.
Note 2: dy/dx refers to average marginal effects
Note 3: Base variable among age groups is 16y-25y age group and gender groups is male.
Note 4: All the standard errors are robust in nature.

The results shown in the above table indicate the relative likelihood of preferring mobile app-based shopping over the brick-and-mortar shopping due to effort expectancy among various demographic variables like age and gender groups. As before, analysis of each variable was carried out by controlling all others variables. The results indicate that H2.1 is statistically significant for only one group that is, 26-35 years leads us to accept the alternative hypothesis, implying that there is a

significant difference among 26-25 and 16-25 age groups in considering effort expectancy as a driver for preferring mobile app-based shopping.

The findings listed in the above table clearly indicate the relative likelihood of preferring mobile app-based shopping over brick–and-mortar shopping among various age groups, assuming that other demographic variable like gender is controlled here. We noticed from the results that there is 21.1 per cent higher probability for choosing perceived effort expectancy as a driver for the preference of mobile app-based shopping among the age group of 26–35 years as compared to the age group 16–25 years. But, for the other age group of 36–45 years, 46-55 years and above 55 years, there is no significant difference with base group i.e. 16-25 years because these age groups have statistically insignificant result respectively.

Similarly, analysis was undertaken for the next demographic variables, i.e. gender, by controlling other variable i.e. age group. As per the above table, we found that the result is not statistically significant and hence leads us to not accept the alternative hypothesis H2.2, implying that there is no significant difference between the male and female gender group in preferring mobile app-based shopping due to effort expectancy as a driver. As per the information given in the above table, it appears that females have lower probability for choosing effort expectancy as a driver for the preference of mobile app-based shopping by 8.7 per cent as compared to males but this result is statistically insignificant in the above table.

Table 4 : *Probability for preferring mobile apps over other mediums for shopping due to Price Value among Age and Gender groups*

	Variable	dy/dx	Standard Error
Age	26y - 35y	-0.020	0.066
	36y -45y	-0.086	0.073
	46y – 55y	0.009	0.131
	Above 55y	0.169	0.229
Gender	Female	-0.074	0.049

Table Source: Authors

Note 1: *** & ** respectively refer to 1% & 5% level of significance.

Note 2: dy/dx refers to average marginal effects

Note 3: Base variable among age groups is 16y-25y age group and gender groups is male

Note 4: All the standard errors are robust in nature.

The results shown in the above table indicate the relative likelihood of preferring mobile app-based shopping over brick-and-mortar shopping due to price value as driver among various demographic variables like age and gender groups. Analysis of each variable was carried out by controlling all others variables.

The results indicate that H3.1 is statistically insignificant for all age groups shown in the table, and leads us not to accept the alternative hypothesis, implying that there is a no significant difference among all these age groups in considering price value as a driver for preferring mobile app-based shopping.

The findings listed in the above table clearly indicate the relative likelihood of preferring mobile app-based shopping over brick–and-mortar shopping among various age groups, assuming that other demographic variable like gender is controlled. We noticed from the results that there is 2 per cent lower probability for choosing price value as a driver for the preference of mobile app-based shopping among the age group of 26–35 years as compared to the age group 16–25 years. Similarly, the age group of 36–45 years has a lower probability of 8.6 per cent and likewise, the age group of 46-55 and above 55 years have higher probability of 0.9 and 16.9 per cent respectively, but all these results shown for all age groups in the above table are statistically insignificant.

Similar analysis was undertaken for the next demographic variables, i.e. gender, by controlling other variable i.e. age group. As per the above table, we found that the result is not statistically significant and hence leads us to not accept the alternative hypothesis H3.2, implying that there is no significant difference between the male and female gender group in preferring mobile app-based shopping due to price value. As per information given in the above Table, it appears that females have lower probability for choosing perceived price value as a driver for the preference for mobile app-based shopping by 7.4 per cent as compared to males, but this result shown in above table as statistically insignificant.

DISCUSSION

Theoretical contribution

The current study was undertaken to identify factors contributing to the growing usage of mobile applications for shopping purposes by the consumers. We kept "UTAUT" theory as our major theoretical base. By doing so we extended the generalisability of "UTAUT" theory from organisational to the consumer context. In the previous studies, technology acceptance and usage research was carried out in the organisational context where performance expectancy was the main driver of employees' using a particular technology.While in case of consumers' acceptance and use of mobile technology, other drivers, such as, effort expectancy and price value are also considered. Further, we tried to identify as to howage and gender

moderate the effect of all these three variables on the behavioral intention of consumers.

From the analysis, it is quite evident that the choice of performance expectancy as a driver for the preference of mobile app-based shopping was found to be decreasing with increase in age. These results are in conformity with the findings of Venkatash et.al 2003, where the authors have found that,"younger users are more likely than older users to adopt to new technology when it offers expected performances". At the same time, our results are in contradiction to the findings of Verkijika (2018), where the author stated that,"the performance expectancy has no direct effect on consumer behavioural intention", while our results supported the fact that consumers from both the genders were found choosing performance expectancy as a major factor for preferring mobile app-based shopping.

Further it was found that, there is a significant difference among various age groups in considering effort expectancy as a driver for preferring mobile app-based shopping. As young people were found quoting the fact that they prefer buying through mobile applications mainly because of less effort involved in it, while for older age-groups, effort expectancy did not make much of a sense as they don't mind going to the market, putting in the effort and buying from brick-and-mortar shops.

Similarly, there is no significant difference between the male and female gender group in preferring mobile app-based shopping due to effort expectancy as a driver. Our findings for the various age-groups are different, while for the gender they are similar to the findings of Venkatash et al. 2003, where they insisted on the fact that,"users consider easiness as the top priority in the use of mobile apps and apps which are easy to access, download, and use are key elements of continuance intention".

While there are studies that have examined "the role of value in consumer adoption of IT" (e.g., Kim et al. 2007), our research supported the importance of price value in consumer decision-making regarding technology use and the moderating effects of age and gender on it. Our results clearly indicated that there are no significant differences among all the age groups and gender groups with regards to price value as a driver for preferring mobile app-based shopping. This clearly indicates the fact that the cost effectiveness, or value for the price paid is a criterion followed by people of all age brackets and gender, while shopping through mobile apps.

MANAGERIAL IMPLICATIONS

Through the current study, we would like to give recommendations to the business practitioners to make the most of this emerging medium. They can successfully incorporate performance expectancy, effort expectancy and price value while

designing their mobile applications for young and emerging consumers in India. Performance expectancy can be ensured,by introducing more useful applications, rendering functional advantages and services, which are beneficial to the consumers. Effort expectancy can be introduced by making user-friendly apps, which are easy to access, download and operate.

Use of simple design, easy to understand expression and bilingual interfaces can add to the ease of operations. It is important to engage with consumers' interest by designing mobile apps, which provide convenience, truthful information, and captivating content for all demographics of consumers, such as younger and older groups as well as males and females.

As opposed to received wisdom, older age groups are also adopting m-commerce so their needs should also be kept in mind when designing mobile applications. Providing price value to consumers will also play a significant role, so marketers should ensure competitive prices, huge discounts, variety of promotional incentives, and loyalty bonuses to be given to their consumers to constantly engage them with apps and, in return increase their satisfaction. With the judicious application of knowledge regarding these factors and consumers' demographic variables, marketers can successfully target their mobile apps to the desired audience.

LIMITATIONS OF THE STUDY AND SCOPE FOR FUTURE RESEARCH

M-commerce is an area of great interest and this study will be found useful for industry experts as well as academicians. However, a major limitation is that the study is focused exclusively on India. Our respondents are all from Delhi: in terms of its focus, the study provides in-depth insights into customers' perceptions about mobile app-based shopping. Yet, we cannot extrapolate these insights to form a regional or national pattern of customer choices and preferences. Nonetheless, we hope the model we have used will allow for similar studies to be carried out in other regions and cities so that a substantial corpus of research becomes available on this dynamic subject.

Similarly, our study is quite granular in terms of segmentation of target groups. We have chosen demographic factors to achieve this depth of insight but doing so has meant that we have had to put aside, for the moment, cultural factors, which determine customers' perceptions towards m-commerce. We hope to be able to do research on cultural factors in the future.

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