CONSUMER PERCEPTION TOWARDS M-COMMERCE WITH SPECIAL REFERENCE TO GUJARAT

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ABSTRACT

This study aims to investigate the key factors influencing consumers' perceptions of m-Commerce in Gujarat, with a focus on the roles of social influence, trust, and perceived cost. This study's sample size is 434 people, with a valid response rate of 78.91 percent. The proposed research model was tested using simultaneous multiple regression. According to the findings, perceived usefulness, social influence, and trust have a significant positive impact on customers' intentions, whereas perceived cost has a significant negative impact on consumer perception of m-commerce use. Furthermore, perceived ease of use has a negligible impact on consumers' attitudes toward m-commerce in Gujarat. the generalizability of this study's findings is limited: 1) Because this study is limited to Gujarat; 2) Other potential variables are not included in the model.

Keywords: M-commerce, consumer perception, Gujarat, E-commerce

INTRODUCTION

The phrase "mobile commerce" was first used in 1997 by Kevin Duffey to describe "the delivery of electronic commerce capabilities straight into the consumer's hand, anywhere, via wireless technology" at the beginning of the Global Mobile Commerce Forum. Mobile commerce is frequently referred to as "a retail outlet in your customer's pocket" by many. The industry for mobile commerce is worth $800 billion, with Asia accounting for over half of that total.[1] Mobile commerce, also known as m-commerce, involves using wireless handheld devices like cell phones and tablets to conduct commercial transactions online, including the purchase and sale of products, online banking, and paying bills. The use of m-commerce activity is on the rise. According to market research company Statista, mobile commerce sales in the United States are an estimated $431 billion in 2022.[2] Electronic commerce is a model where businesses or individuals transact business over the internet. Mobile commerce is a growing subset of this model. According to the Pew Research Centre, about 97% of Americans have a cell phone, and 85% of them have a smartphone, up from 35% in 2011. M-commerce allows for the purchase of a wide range of goods and services, including banking, investing, and the buying of digital music, books, and airline tickets. Numerous variables, such as improved wireless portable device computer power, an abundance of m-commerce applications, and the widespread resolving of security issues, have contributed to the rapid expansion of mobile commerce.[3] The variety of mobile commerce-ready devices is expanding. For instance, shoppers can make in-store purchases using digital wallets like Apple Pay and Google Pay without having to swipe cards, which is a hassle. Additionally, towards the middle to end of the decade 2010, social media sites like Meta (formerly Facebook), Twitter, Pinterest, and Instagram introduced "buy buttons" on their mobile platforms, allowing users to easily buy products from other merchants through these social media sites. Through mobile commerce, firms can reach more clients thanks to the portability of mobile devices. Customers may receive coupons and discounts from merchants. Customized shopping experiences can strengthen the relationship between the retailer and the customer.[4] M-commerce applications support GPS location monitoring to assist customers in finding things in their stores. M-commerce apps can further increase security because they support multi-factor authentication, which includes biometrics like fingerprint and retina scan identification. Even though m-commerce

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[1] https://en.wikipedia.org/wiki/Mobile_commerce
[2] https://www.statista.com/topics/1185/mobile-commerce/
[3] https://www.investopedia.com/terms/m/mobile-commerce.asp
[4] https://www.investopedia.com/terms/m/mobile-commerce.asp

has several advantages for both customers and businesses, most Americans still prefer to shop online. While 77% of American adults own a computer, just 15% of them use their smartphone as their only means of internet access, indicating that they have a broadband or cable service provider.[5]

Rise of M-Commerce in India

The e-commerce sector is expected to benefit from mobile e-commerce. In India, 70% of consumers prefer to use their mobile phones to make transactions, according to a recent study by PayPal.

In India, 51% of all internet sales are made using mobile devices. Only 43% of consumers worldwide prefer to make purchases using their mobile devices, but India remains at the forefront of e-commerce.

The Indian e-commerce market was worth $38.5 billion in 2017; by 2026, it is expected to grow to $200 billion. Mobile devices accounted for 34.5 percent of all e-commerce sales in 2017. The percentage is expected to reach 54% by 2023. Several of the most well-known mobile e-commerce platforms include Amazon, Flipkart, Nykaa, Myntra, Paytm, Snapdeal, and IndiaMart in India.[6]

LITERATURE REVIEW

According to earlier studies, m-commerce is an expansion of e-commerce (Ngai & Gunasekaran, 2007). Ngai & Gunasekaran (2007) claim that m-commerce is comparable to e-commerce with the exception that transactions take place in a mobile setting. However, other researchers disagree with this definition (Feng et al., 2006; Wei et al., 2009). They contend that since mcommerce is exclusively dependent on network medium and device, defining it as an extension of e-commerce is excessively restrictive. Because of its accessibility and mobility capabilities, m-commerce presents new business options in contrast to e-commerce (Wei et al., 2009).

Patel & Modi found that perceived usefulness, social influence and trust have significant positive impact on customers' intentions, whereas perceived cost has a significant negative impact on their intentions to use m-commerce. Moreover, perceived ease of use has insignificant impact on customers' intention to use m-commerce in Gujarat.

Donni et al. (2018) concluded that efficiency, privacy and price are the three important factors that any fashion industry in M-commerce should consider before marketing its products through mobile applications. Thus, businesses developing M-Commerce can come out with suitable value proposition for their M-shoppers based on the findings of this research.

Srivastava et al. (2021) identified factors that have direct and huge impact on the usage of M- commerce. This data can be useful to M- commerce players and all those business players who wish to go for an application-based business strategy in near future. Researchers have also identified the obstacles in using m- commerce and from the data it was found that computer literacy should be enhanced in order to get real benefit of M-commerce. More free Wi-Fi zones should be created to overcome accessibility issues while purchasing products online. Applications must be designed in such user-friendly way so that everyone can understand it very easily. To overcome the issue of safety, M-commerce players should provide more privacy safety options and cash on delivery payment mode. Many people find exchange and refund policies ambiguous, so to cope up this challenge market players should make easy to understand and quick exchange and return policies. Similar research can be extended to other cities of the country to generalize the findings.

Sharma & Madan (2020) found that mobile network service quality positively influences m-commerce adoption in today's world, as people are more concerned about technologies which have better service quality dimensions. The study also reveals that the most preferred network is 4G LTE and mostly used m-commerce portals are Paytm, PhonePe, Amazon and Flipkart.

Tripathi & Dave (2022) concluded in their research that in the pandemic situation having expanded the importance of e-commerce shopping trends among the buyers. Electronic shopping had made cashless transactions supportive, monetary, and ideal for customers to purchase from anywhere and anything during the pandemic situation. Web-based shopping or e-shopping customers consider this as it saves time, is more convenient, wide variety of products has easy price comparisons, and has no crowds.

According to Tiwari and Buse (2007), m-commerce should not be restricted to transactions with monetary value because this excludes additional m-commerce activities including free music and ringtone downloads, playing mobile games, and viewing mobile advertisements. Siau et al. (2001) assert that because of the peculiarities of mobile devices, m-commerce differs from e-commerce done over a wired internet connection. Because of its essential characteristics, including ubiquity, personalisation, adaptability, and dispersion, m-commerce has a considerably greater potential than e-commerce. Additionally, m-commerce expands the advantages of the web and provides special services and additional advantages as compared to e-commerce (Tsalgatidou & Pitoura, 2001). Simply said, m-commerce is thought of as e-commerce conducted through cellular devices (Varshney and Vetter, 2002).

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[5] https://www.investopedia.com/terms/m/mobile-commerce.asp
[6] https://www.milesweb.in/blog/startups/the-rise-of-mobile-commerce-in-india-and-how-to-get-started/

RESEARCH METHODOLGY

Sample

The information presented in this study is drawn from a larger body of research that was conducted in Gujarat to determine the major variables impacting consumers' m-commerce behaviour. The survey method was used. Mobile device users are the unit of study because they are more likely than non-users to adopt m-commerce in the future. Since the population was unknown, the researcher used a 95% level of confidence with a 4% tolerance error to calculate the sample size. As a result, it was discovered that the actual number of responders was 434 more than the necessary sample size of 196.

To collect the primary data needed for this research, a structured, open-ended questionnaire was created. 550 users of mobile devices who made up a convenience sample were given the questionnaire. Forty responders participated in a pilot test, and small adjustments were made as a result. The questionnaire's completion by the respondents was given as much time as necessary. A valid response rate of 78.91 percent resulted from 116 samples out of 550 being rejected owing to incomplete responses or missing data.

Hypothesis of study

H_0: Perceived usefulness has not a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_1: Perceived usefulness has a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_0: Perceived ease of use has not a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_2: Perceived ease of use has a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_0: Social influence has not a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_3: Social influence has a significant positive impact on consumers perception to use m-commerce in Gujarat.

H_0: Trust has not a significant positive impact on consumers perception to use m- commerce in Gujarat.

H_4: Trust has a significant positive impact on consumers perception to use m- commerce in Gujarat.

H_0: Perceived cost has not a significant negative impact on consumers perception to use m-commerce in Gujarat.

H_5: Perceived cost has a significant negative impact on consumers perception to use m-commerce in Gujarat.
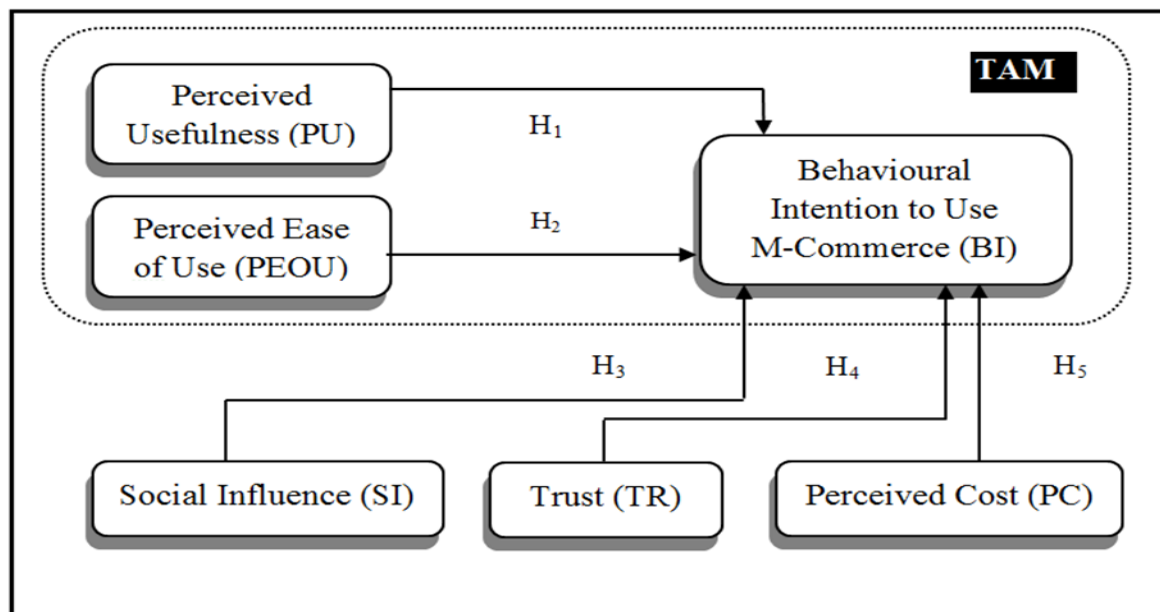

Figure I: Proposed Research Model

DATA ANALYSIS & RESULTS

Demographic Profile

Table I provides the demographic breakdown of the survey respondents (n = 434). Males make up the majority of the sample (n = 264, 60.83%). The findings also revealed that the majority of respondents (n = 286, 65.90%) are single, that the age group of 21 to 30 years is predominate (n = 238, 54.84%), that the majority have a bachelor's degree (n = 248, 57.14%), and that the majority have used mobile devices for more than 4 years (n = 308, 70.97%).

Table I Demographic Profile of respondent

Demographic variable	Category	Frequency	Percentage
Gender	Female	170	39.17
	Male	264	60.83
Age	≤ 20 years	24	5.53
	21-30 years	238	54.84
	31-40 years	152	35.02
	≥ 40 years	20	4.61
Education Level	Primary	8	1.85
	Secondary	12	2.76
	Diploma	18	4.15
	Bachelor	248	57.14
	Masters & above	148	34.1
Marital Status	Single	286	65.90
	Married	148	34.10
Use of Mobile Device	1-2 years	12	2.76
	2-3 years	114	26.27
	More than 4 years	308	70.97

Source: Primary Data

Scale Reliability

The reliability of the scale was examined before assessing the association between factors influencing customers' intention to utilise m-commerce and that intention. After then, the instrument was used to calculate the coefficient alpha (Cronbach, 1951). To determine whether items related to each construct are internally consistent and whether they may be used to measure the same construct or factor of m-commerce adoption, Cronbach's alpha was calculated.

Table II: Reliability Statistics

Variable Name	No. of Statement	Cronbach's Alpha (α)
Independent variable		
Perceived Usefulness	4	0.904
Perceived ease of use	3	0.712
Social Influence	4	0.964
Trust	3	0.836
Perceived Cost	3	0.952
Dependent variable		
Behavioural Intention	4	0.826

In reliability analysis, the alpha (α) coefficient was calculated to find out the internal consistency of items on the scale. According to Nunnaly (1978) Cronbach's alpha should be 0.700 or above. Table II shows that the reliability result of all the constructs (i.e. IVs and DV) confirms that all the constructs / scales have good internal reliability (α > 0.700).

Multiple regression

Simultaneous multiple regression analysis was used to determine the important variables affecting consumers of Gujarat intention to use m-commerce. The perceived utility, perceived usability, social influence, trust, and perceived cost were the five independent variables in the research model for this study. The study model was determined to be significant (F=58.677, p 0.001), as shown in Table III. The explanatory power of the proposed research model was 58.20 percent (R^2 = 0.582), indicating that given independent variables may explain customers' propensity to use m-commerce up to 58.20 percent.

Table III: Results of Simultaneous Multiple Regression for Consumer perception to Use M-Commerce

Predictor Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	**Std. error**	**Beta**			**Tolerance**	**VIF**
(Constant)	1.319	0.379		3.475	0.001		
PU	0.250	0.049	0.279	5.130	0.000***	0.668	1.496
PEOU	0.104	0.054	0.087	1.931	0.055	0.984	1.016
SI	0.168	0.036	0.247	4.607	0.000***	0.689	1.452
TR	0.255	0.051	0.264	4.971	0.000***	0.702	1.425
PC	-0.169	0.054	-0.195	-3.156	0.002**	0.521	1.918

Note: Dependent Variable: BI; R = 763
R2 = 0.582; Adjusted R2= 0.572; F=58.677***, dfs = 5, 211; **p<0.01, ***p<0.001 BI = 1.319 + 0.250 (PU) + 0.168 (SI) + 0.255 (TR) - 0.169 (PC) + error

Perceived usefulness (p0.001), social influence (p0.001), and trust (p0.001) were found to have a significant positive impact on consumer perception to use m-commerce, however perceived cost (p0.01) had a significant negative impact. Perceived usefullness was the most predictable variable (r = 0.279; t = 5.130), followed by trust (r = 0.264; t = 4.971), social influence (r = 0.247; t = 0.247), and perceived cost (r = -0.195; t = -3.156). However, it was discovered that perceived ease of use was not significantly related to consumer perception to use m-commerce. Overall, there was enough statistical support for hypotheses H_1, H_3, H_4, & H_5. The results of a simultaneous multiple regression test to determine if consumers of Gujarat planned to use m-commerce are shown in Table III.

Moreover, table III displayed that all the VIF (variance inflation factor) values were well below than 10 indicating the absence of multi-collinearity. This is being a serious concern as it affects the estimation of coefficients (Hair et al. 1998).

FINDINGS & DISCUSSIONS
Examining the important variables influencing consumers perception of Gujarat behavioural desire to utilise m-Commerce is the main goal of this study. As shown in Figure II, the findings of this investigation revealed solid empirical support for the suggested research model and supported four of the five hypothesised correlations. Additionally, it has been noted that customers' inclinations to use m-commerce in Gujarat are statistically significantly influenced by perceived cost, perceived usefulness, social influence, and perceived usefulness.

The results suggest that if people find mobile commerce useful, they will use it. This is so that consumers of m-commerce may quickly get information and complete transactions at any time and location. Therefore, service providers and vendors should focus on creating a solid mobile commerce system that will satisfy their consumers' needs and give timely, accurate information. An interesting result of this study is that social influence is also found to be another important determinant of consumer perception to use m-commerce in Gujarat. As a result, the influence of their friends, family and social media may easily affect their decision to use m-commerce. Consequently, it is imperative for m-commerce services providers and vendors to consider this factor to encourage m-commerce adoption in Gujarat.
Furthermore, this study also found that perceived cost is one of the barriers that prevent consumers from using m-commerce. The result validates that an increase in the cost (i.e., cost of mobile handset, subscription fee and communication fee) may decrease the rate of m-commerce adoption. Hence, most of the respondents intend to use m- commerce if the cost of m-commerce is reasonable for them. In this regard, m-commerce service providers can reduce such cost through creative promotional and pricing strategies.

However, perceived ease of use is found not to be significantly associated with consumers perception to use m-commerce. It is surprising that perceived ease of use has no significant impact on m-commerce adoption as evidenced in this study, while it has been validated as main behavioural belief influencing users' intention to adopt different technologies in both origin as well as extended TAM models. Since most of the respondents in this study are younger (between ages of 21-30 years), it is likely that they may have knowledge or experience of how to use different technologies. Hence, ease of use has not significant impact on their m-commerce adoption.
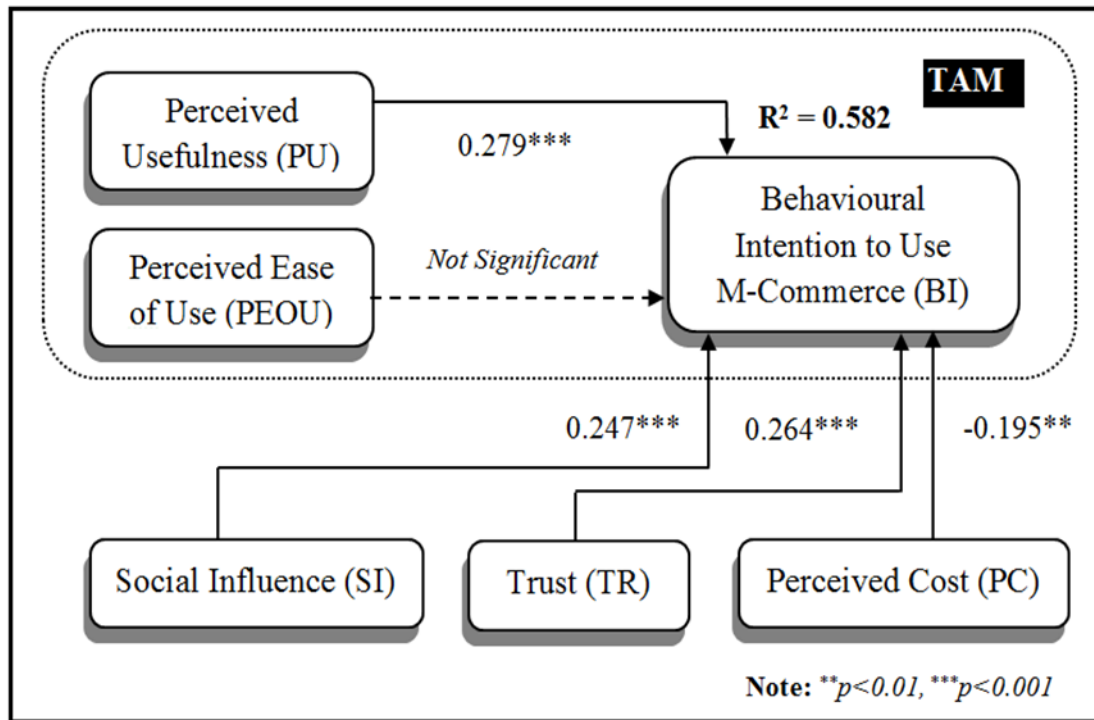
Figure II: Research Model with Regression Coefficients

LIMITATION OF STUDY

Future studies can be influenced by the limitations that the current study has shown. First off, this study is limited to the state of Gujarat alone. Therefore, its conclusions might not be extrapolated to other Indian states or other nations. As a result, in order to make more accurate generalisations, researchers may widen their geographic scope while researching multi-states and nationalities in future studies. Second, this study showed that perceived cost is a significant factor influencing the adoption of m-commerce. Therefore, it would be interesting to examine the costs charged by various mobile service providers to see whether or not lower pricing will lead to higher adoption rates among users. Third, as the model used in the current study is cross-sectional and only measures consumers perception at a particular point in time, future studies should adopt a longitudinal approach to predict consumers perception and behaviour over time. Fourthly, similar to earlier research on adoption, some factors that might have an impact on Gujarat's adoption of m-commerce were not considered in this study. As a result, future study should take into account additional variables that may affect the adoption of m-commerce, such as perceived enjoyment, self-efficacy, governmental assistance, etc.

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