

Using Social Media as an E-Commerce Medium: Determinants of Technology Acceptance to Use E-Commerce via Social Media

Kishore Raaj Suresh, K. Lavanya Latha

Abstract: Purpose – This research explores how social media can be used as an e-commerce medium for the consumer's technology adoption of social commerce (specifically related to Facebook). The study tested TAM derived variables social commerce perceived usefulness and social commerce perceived ease of use, in addition to that the study included and tested social commerce constructs like social commerce perceived shopping enjoyment, social commerce social influence and social commerce interactivity.

Methodology – A questionnaire was developed based on the available scales in the already-published literature. All model constructs requested participants to indicate their perceptions of five-point Likert-style responses. The data analysis was processed using Smart PLS. Measurement instrument constructs and the proposed model is tested for reliability and validity.

Findings – The smart PLS results suggest that social commerce users, attitudes towards social commerce is impacted mostly by perceived usefulness, perceived interactivity and perceived enjoyment, and an extended TAM model framework is proposed after testing and found to be compatible within threshold values.

Originality/value – There were not many studies related to technology acceptance of social commerce specifically based on e-commerce behaviour which made this study more unique based on Facebook page business by adding social commerce constructs and extending the TAM framework..

Keywords : Social Commerce, TAM, Perceived enjoyment, technology acceptance, Social media, E-Commerce..

I. INTRODUCTION

E-commerce is a type of transaction of products and services that are done through the internet, causing import or export of products. Internet networks are capable of efficiently connecting consumers and manufacturers. Web stores are functioning on the internet, and many internet users turn into customers. Electronic commerce is also known as "Internet Business". E-commerce has undergone several transformations with the coming of the latest hardware and software technologies and has developed

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considerably in the past decade. Thus, the tendency to purchase and sell electronic and virtual exchanges has grown all over the less developed nations. Meanwhile, social networks have begun to serve organisations. Their social networks and their increasing influence among various consumers throughout the world have shaped them into tools for advertising and e-commerce.

Social commerce combines both the social media impact and the technology acceptance of the modern web technologies for secured and interactive transactions like selling and buying of things. Using social influence and thereby designing the marketing content to suit the needs of modern age consumers e-commerce via social media makes it easy for consumers to purchase goods and services efficiently.

Social media is at its best in the current global scenario. Gone are the days where there used to be people sitting in front of televisions for knowing about new products and services. Young age group category people are the major players in social media. Social media now ah days have gone too far like even launching an e-commerce business with the help of their social media accounts. People do not need to know much to get adopted to the medium. Likes, comments and shares will quickly give an idea about a firm and its product. Social media gives a platform to connect with firms and customers in real-time and 24*7. Social media platforms now ah days also support transactions via bank accounts which make it easier for commerce business.

Six degrees was the first social media platform which allowed users to contact each other. Currently, there are plenty of valuable social media firms being functioning actively. There are many top-rated social media platforms like Facebook, Tumblr, Whatsapp, Instagram, etc., which have more than billions of active users worldwide. (SOURCE: Google Store). With social media, users can capture, create, edit and upload multimedia contents. The audiovisual aid content sharing makes it easier for business purposes as it makes easier to display their products by the recent electronic era.

Advantages of social media include continuous access, no-cost subscriptions, user-friendliness, real-time interaction between firms and customers, functioning round the clock and the benefits related to e-commerce. Disadvantages are the major drawbacks when it comes to social media. Security, Risk and Trust parameters are not taken seriously in social

media. Anyone can create an account and sell their products by creating a social media page. Fake accounts have made many social media platforms worthless and out of the game. Only COD mode of transactions is mostly possible when business opportunities as customers do not have hope on prepaid payments.

A. Aspects Of Social Media Commerce

Social Commerce: One of the essential benefits of e-commerce via social media is that the marketing contents can be made available for customers combining multimedia items like text audio video and images. It makes marketing more customer-friendly and easy to understand. Eg. YouTube Facebook, Instagram and Twitter. Social Commerce is the process of doing marketing activities by combining e-commerce and e-marketing. (Onn, W., & Soon, L. 2016).

Social Networks: Mobile commerce is the new sensation in the commerce industry. Social networks are used to promote mobile commerce by user interactivity. E-commerce firms create pages for their company and make a group to make interaction possible within and with users. The infrastructure is built through either by forming a tie-up with mobile carrier firms or building a unique strategic model for e-commerce via social media due to budget constraints.

Social media commerce is something which combines enterprise and social media. Enterprise is something which does transactions of products and services, and the primary goal is to earn money. The biggest enterprise revolutions which change the course of e-commerce are as follows.

Enterprise 2.0: The essential element of e-commerce via social media is Enterprise 2.0, which is used by most firms to perform their social commerce activity for enterprise needs. Enterprise 2.0 can be explained as the process of using social media to perform their e-commerce activities within companies, between firms and to establish contact with customers McAfee (2010). Enterprise 2.0 is also defined as combining web2.0 technologies and social media. Social commerce can be used to crowdsource, publish ads, share the marketing content, collaborate with consumers for the idea generation and many more.

Enterprise 4.0: 2017 was the biggest year in the field of e-commerce as enterprise 4.0 have been introduced and put into action. It is also called as Industrial revolution 4.0. The main aspects of E4.0 are giving technology acceptance training to the employees, drafting and sharing the ideas, features and issues of the product and services electronically. The discussion about company issues can be made remotely and virtually with the help of online services. (Moreira, F., Ferreira, M. J., & Seruca, I. 2018).

Electronic Word Of Mouth: EWOM is the critical initiator of commerce in social media. As e-commerce mostly works out by interaction with friends and family. If the product purchased is extremely good/bad the customers will make a massive impact on the decision making of their known people. Most people tend to purchase things by seeing the reviews in comments when the product is displayed in the social media platform. The social media transparency makes EWOM the top influencer in social commerce purchase.

Social Media Business: Social media business happens mostly by the respective platforms, pages and accounts. Anyone can create a business page on social media. It makes it easier for small scale firms, entrepreneurs and part-time job seekers a huge opportunity to start a business without much investment. There are many kinds of product and services transaction possible in social commerce. The limitations are that it should be low in cost services and products due to the global audience factor. The major social media players in the e-commerce business are

Facebook Business: FB business is the largest customers based social commerce platform. Pages are created based on the firm's name and authenticated with the badge if it belongs to a registered firm. Pages and as well as groups are created to display the products and services for both knowing the features and selling. Nowadays, Facebook is experiencing a significant drop in potential followers to Instagram. Facebook has a unique chatting messenger medium called FB messenger which makes it easy for chatting within customers and sellers.

Instagram Business: Instagram Business is the new sensation in the e-commerce business. Brought by Facebook, this platform is challenging Facebook in terms of social reach. The Ease of use is the key to using Instagram. There are no status and groups available on Instagram. The privacy options are better on Instagram than Facebook. The picture and short video mode marketing of products and services can produce more exceptional results on Instagram. Currently, Instagram business is already reaching e-business medium.

Whatsapp and Telegram Business: In the Indian context, these two social media platforms are also having a more significant impact as it is more personal and exclusive chats and purchases are made. Since one has to use the mobile number to create an account, it makes it more dependable too. Many home-based and part-timers mostly use these platforms for business.

Social Commerce related to India: India has the most significant customer base when the e-commerce platform and social media platform are combined. The young age people population percentage makes the country open for vast opportunities. India is on the phase of western trends adoption. The entry of e-commerce firms worldwide recently has proved the market opportunities in India. Offers and affiliation programs exclusive to India are being introduced by e-commerce firms. The most trusted social media platforms for e-commerce in India are Facebook, WhatsApp and telegram.

Technology Acceptance Model is used in this study because of its success rates in previous studies related to e-commerce. TAM is also easy to use as many articles have been published for getting the research gaps and instruments. Based on the extended TAM framework, research elucidates the precursors of consumers' attitudes of using e-commerce via social media, specifically facebook business. The research probed on social commerce consumer effort expectancies, social impact, performance expectancies and favourable conditions abreast e-commerce

trust and perceived risk. The research has also examined e-commerce buying intentions through social media. All the above precursors are elaborated in detail. The literature review section tells how this study was carried out. The findings are furnished, and these justify the proposed research questions via hypothesis followed the discussion about by the research implications.

II. THEORETICAL BACKGROUND

Previous researches have employed several models/theories to see the insights of the variables significantly affecting the acceptance of technology; some of these models/theories are Theory of planned behaviour, Diffusion of innovation theory and Technology acceptance model. These models or theories were extensions of Theory of Reasoned Action, which was obtained from earlier studies of sociology and psychology studies proposed, that is applied to foresee and elucidate behaviour and intention of humans in several areas. Individual's real behaviour leads to the individual's behavioural intention to perform and is conveniently measured with the help of the individual's attitude towards that Behaviour and the subjective norms. TAM, which is an extension of TRA, has got two main factors, such as perceived usefulness and ease of use which affect Individuals attitude and significantly impact Behavioural Intention and Actual usage Behaviour. The two significant determinants of TAM are also impacted by external variables; whose nature was not quoted but was left to future research and extension. (Davis 1989) (King and He 2006) (Fishbein and Ajzen 1975) (Wagneet al. 2013)

TAM has accurately predicted 40% of the variance in usage intention as well as Behaviour. Several types of research have approved TAM as a meritorious model to foresee the user adoption of various technologies. TAM was proved to be competent by many researchers.

Empirical studies, but it was not enough to elucidate intention to accept technology only by the TAM determinants such as perceived EOU and usefulness. Electronic commerce includes two dimensions, transactional and non-transactional, the user 's understanding to accept mobile commerce could be viewed as a multidimensional behavioural intention. Lately, mixed results were got in forecasting the acceptance of mobile services while using the TAM model showing the necessity to extend or modify the TAM model for e-commerce services. Thus, researchers have inferred the constraints of TAM and hinted that TAM needs to be added with extended variables related to social commerce in order to elucidate mobile commerce adoption.

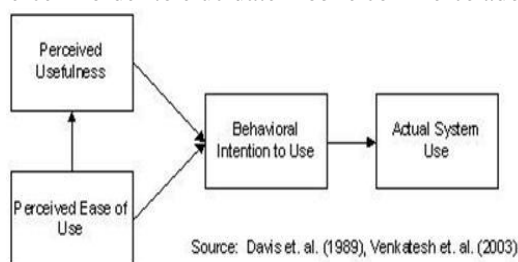


Figure - 1: TAM Model for IT Adoption

III. HYPOTHESIS CONSTRUCTION

A. Perceived Ease Of Use and Perceived Usefulness

(Davis 1989) Has characterised how easy a system can feel to an individual without effort and how useful it can be, and how much an individual thinks that an application can improve his or her efficiency in his or her work. To analyse the customer's e-commerce attitude and its consequences and the recognition for online shopping, TAM can be used. This consumers attitude is significantly affected by variables: e-commerce usefulness and e-commerce ease of use. The technology accepting consumers for using e-commerce wants to achieve their target from online purchases such as security, reliability, low cost, quicker process, and thereby choosing their required products and services from multiple options. For example. The client must be able to efficiently perform the following duties to achieve the stated advantages: the search of information, the ordering and the use of customer services. The following are all tasks. The earlier research showed that e-commerce was adopted by consumers who believe it is helpful to buy over the Internet and those who can do so quickly. There were many previous studies which found out that TAM constructs will significantly influence electronic commerce behavioural intention via social media. (Luna-Nevarez, C., & Torres, I. M. 2015) (Um, N. H. (2019).

This results in the following hypotheses:

H1: Social Commerce Perceived usefulness positively influences e-commerce behavioural intention via social media.

H2: Social Commerce Perceived ease of use positively influences e-commerce behavioural intention via social media.

B. Perceived Social influence

Perceived social influence in e-commerce context is defined as is the transformation of a customers behaviour following the interaction with other people, the benefit of e-commerce on par with traditional commerce present in the possibility offered to buy everywhere and every time, and the speed related to the fact that you do not go to the shop, but the shop comes to you. Online customers have got a more extensive choice; glancing at various websites is comfy when compared with going personally to many stores on foot. All the above features allow people to do comfortable shopping and also saves money. (Fulk J, Steinfield CW, Schmitz J, Power JG 1987). There were many previous studies which found out that perceived social influence will positively influence e-commerce behavioural intention via social media. (Romaniuk, J., 2012) (Cheung CM, Chiu P-Y, Lee MK 2011). This results in the following hypotheses:

H3: Social Commerce Perceived Social Influences positively influences e-commerce behavioural intention via social media.

C. Perceived Interactivity:

The level of possibilities to customer involvement with service is described as



perceived interactivity and also the customer's psychological state in the interaction process. There were many previous studies which found out that perceived social interactivity will positively influence e-commerce behavioural intention via social media. (Hajli, N., 2015) (Hajli, N., Sims, J., Zadeh, A.H., Richard, M.O., 2017) (Kim, S., Park, H., 2013) (Labrecque, L. I. 2014). This results in the following hypotheses:

H4: Social Commerce Perceived interactivity positively influences e-commerce behavioural intention via social media.

D. Perceived Enjoyment

Perceived enjoyment is the variable which defines the individual's actual quantity of using technology and thereby discerned to be purchase orientedentertaining excluding the consequences of performance that might be anticipated (Davis et al. 1992). Enjoyment was determined to the extent to which, in addition to any expected performance implications, the service is considered to be pleasant by itself. There were many previous studies which found out that perceived social interactivity will positively influence e-commerce behavioural intention via social media. (Um, N. H. 2019) (Mikalef, Giannakos &Pateli, 2012). This results in the following hypotheses:

H5: Perceived enjoyment positively influences e-commerce behavioural intention via social media.

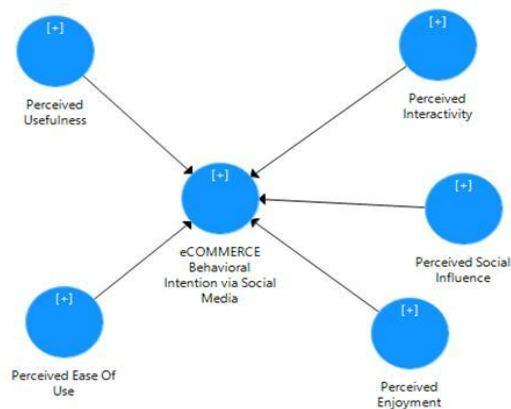


Figure 2: Research Framework

IV. RESEARCH METHOD

A quantitative method of study is being used. Data was gathered through social media platforms, and convenient methods for sampling are used. There were 297 valid data from the participants and data analysis was conducted. Table1 details the specifications of the respondents.

Thequestionnaireoftherespondentsistheprimarytoolfordat collection.Thestudyincluded questions regarding the customer’s satisfaction and loyalty. The research was

conducted in June 2019. For data and statistical analysis, Smart PLS 3.0 was employed. Cronbach’s Alpha, Average Variance Extracted and Composite Reliability (Pc) is estimated using SMARTPLS3. These coefficients measure the reliability and validity of the measurement scale used. The hypotheses of studies have been assessed using a linear SEM model.

V. RESULTS AND DISCUSSION

Table 1: Educational and Job Background

Educational Background	No	(%)
UG	140	47.14
PG	82	27.61
Research Scholars	39	13.13
Working	36	12.12
Total	297	100

A. Consistency and Reliability

Composite reliability or Cronbachs alpha for this model assesses the convergent validity. Some times Cronbach’s alpha under estimates scale reliability, and composite reliability is used as the measure of reliability. The composite reliability is above a preferred 0.5 value, according to Table 2. This demonstrates that the model is internally compatible. The Cronbach alpha is used to check those variable indices are convergent. All variables reliability (> 0.60) and Pvc>.5 can be viewed as reliable from Table2.

B. Structural Equation Modeling(SEM)

The research findings showed that the instruments constructs used and the proposed model is compatible. Social commerce Perceived usefulness, Social Commerce ease of use, social influence, Social commerce shopping enjoyment and inter activity were found to be positively and significantly influencing E-COMMERCE Behavioural Intention via social media. As Table 3, tabulated perceived usefulness and perceived shopping enjoyment are the topmost predictors of e-commerce Behavioural intention via social media (Fig. 3). SRMR results indicated that the model is compatible with research data collected, and the value was found to be 0.046 (<0.08).

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Table 2: Cronbach’s alpha, composite reliability and AVE values

	Cronbach's Alpha	rho_A	Pc	Average Variance Extracted
Social commerce EOU	0.908	0.914	0.936	0.785
Social commerce Enjoyment	0.833	0.836	0.923	0.857

Social commerce Interactivity	0.779	0.779	0.9	0.819
Social Influence	0.878	0.882	0.925	0.804
Social commerce Usefulness	0.953	0.955	0.966	0.878
SOCIAL COMMERCE Behavioral Intention via Social Media	0.949	0.951	0.964	0.869

Table 3: SEM path co-efficient

	eCOMMERCE Behavioral Intention via Social Media
SC-Ease Of Use	0.193
SC-Enjoyment	0.204
SC-Interactivity	0.176
SC-Social Influence	0.132
SC-Usefulness	0.228

SMARTPLS3 Bootstrapping method to calculate the implication of PLS coefficients. Table4 illustrates the results of testing hypotheses; at.05 significant level, all t values were found to be >1.96 and thereby found essential for compatibility. The proposed hypotheses have all been supported. The findings showed that SC perceived usefulness, SC perceived shopping enjoyment and SC perceived ease of use are top most three predictors of e-commerce Behavioural intention via social media positively and significant ($p < 0.05$) (Table 4). Observations have external loads larger than 0.5 ($P < 0.05$) and Outer weights of observations are below 0.05 ($P < 0.05$) and are therefore endorsed.

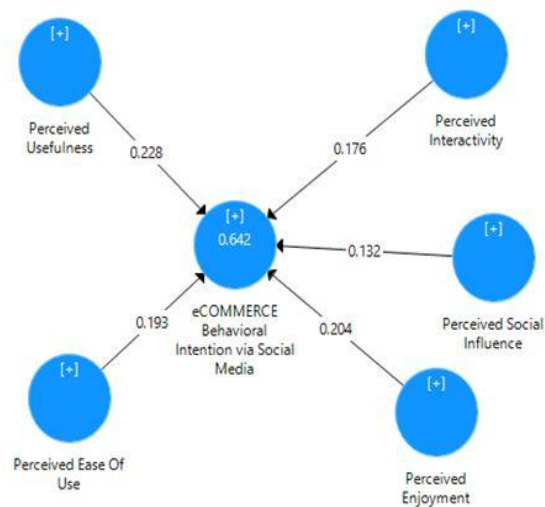


Figure 3: Structural Equation Modeling (SEM) Results

Table 4: Bootstrapping Results

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Social Commerce Perceived Ease Of Use ->e-COMMERCE Behavioral Intention via Social Media	0.193	0.193	0.078	2.479	0.014
Social Commerce Perceived Enjoyment ->e-COMMERCE Behavioral Intention via Social Media	0.204	0.202	0.096	2.124	0.034
Social Commerce Perceived Interactivity ->e-COMMERCE Behavioral Intention via Social Media	0.176	0.176	0.075	2.334	0.02
Social Commerce Perceived Social Influence ->e-COMMERCE Behavioral Intention via Social Media	0.132	0.132	0.055	2.43	0.015
Social Commerce Perceived Usefulness ->e-COMMERCE Behavioral Intention via Social Media	0.228	0.232	0.072	3.159	0.002

VI. CONCLUSION

Research confirms that the significant predecessors of the e-commerce behaviour intention via social media are perceived ease of use, social influence, usefulness, enjoyment and interactivity. The most positively impacting social commerce predictors of the intention to pursue commerce through social media are perceived usefulness, enjoyment

and ease of use. The findings indicate that consumer’s intention to use e-commerce via social media is most impacted by the usefulness they get from purchase activities via social media which will make them benefited from performing their intended goals. Customers are also more concerned about interactivity and social influence which tells that firms must be



concentrating on campaigns and suitable customer relationship management activities. The results also give an essential insight that companies must encourage customers to involve in their campaign activities like referral discounts and offers on repeated purchases to make them socially influenced and thereby resulting in purchase and loyalty. Firms must make their brand look classy, premium and trendy in social media in order to make commerce activities successful via social media. Firms also must make themselves authenticated in the form of badges, ticks and premium accounts in order to make customers believe they are dependable.

VII. IMPLICATIONS LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Research has implications both towards academics and managerial insights. This is one of the unique studies which studied the impact of facebook business page from an e-commerce perspective. TAM related to social commerce was proposed, which gives academicians to extend further and work on finding the reliability of the proposed model. The study was carried out only within the UT of Pondicherry, and the respondent's profile was mostly young age group which makes a significant limitation of the study. Future studies can be carried out for different cultures and age group. Other technology acceptance model like UTAUT can be used expanded and tested which will make the social commerce study more significant. The respondent's number and the time of the study were limited, and hence future studies can be carried out by expanding the time duration of collecting data and by covering more significant populations. One more limitation is that as Trust, Security and Risk constructs have been studied abundantly in earlier works of literature related to social commerce this study did not test those constructs. Future studies can also extend the proposed model with those security constructs. Future studies also can be done by using qualitative methods, thereby discovering new variables for technology acceptance of social commerce.

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