Extension of META-UTAUT for examining consumer adoption of social commerce: Towards a conceptual model

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Abstract Social commerce is a relatively new subset of digital commerce where buying and selling is transacted via social media interaction. This study attempts to evaluate the suitability of a number of models/theories for understanding the factors affecting consumer adoption of social commerce. This paper first highlights the limitations of alternative theories and then discusses the strengths of the selected theory. Besides the core model, two external variables (Trust and Risk) are considered for extending the selected model for gaining a more comprehensive understanding of antecedents affecting the consumer's adoption behaviour.
Keywords: Social commerce, Adoption, TAM, Meta-UTAUT

1 Introduction

Social commerce generally refers to the activities and transactions of e-commerce via the social media environment using web 2.0 software (Liang and Turban, 2011). Due to the rapid growth and adoption of social media, different brands and businesses are taking advantage of this technology to understanding consumer needs. From the consumer's perspective, review and rating, recommendation and referrals, Forums and communities help customers in decision making when purchasing via social commerce (Featherman and Hajli 2016). From the seller perceptive, businesses and brands can reach to the customers' crossings the border. Moreover, marketing and promotional activities become more accessible and reachable using digital media. The businesses quickly understand consumers' demand and opinion through review, rating and feedback. This helps businesses to improve the product and services (Oragui, 2020).

The above discussion stating that social commerce is a powerful tool for businesses and customers. Over the past few years, scholars are given attention in developing different area of social commerce. Therefore, from the literature analysis of social commerce found that the majority of studies seem to have focused their efforts to examine antecedents of intention to adopt with minimal attempt to understand social commerce adoption behaviour. Moreover, minimal studies are utilized to advance adoption theories such as UTAUT. In order to provide a basis for further theoretical advances on this topic, this study aims to provide a review of theories and constructs utilized to examine social commerce adoption. The study also aims to propose a conceptual model by identifying and integrating external constructs (Trust and perceived risk) with an established adoption model.

Moreover, the study is hypnotizing the constructs for better understanding. It is noticeable that the hypothesis we considered also applied in different technology adoption studies. Therefore, this study is adopting those hypotheses and

implementing in social commerce studies due to strong effect of the variables. The relevance and importance of those constructs are discussed in this study. The study will be concluded by highlighting the limitations and potential avenues for future research.

2 Literature searches

The literature search was undertaken using Scopus database and the following set of keywords: "Social commerce" S-Commerce" OR "F–Commerce" AND "Adoption" OR "Acceptance" OR "Usage" OR "Use Behaviour" OR "Intention" OR Purchase". This keywords-based search was allowed in title, abstracts, and keywords of the search outputs. This search returned 184 articles. In order to focus on more salient work, we eliminated the conference papers, internet and newspaper blogs and only considered journal articles. Further filtering was conducted for identifying 111 quantitative studies (published between 2006 to 2019).

3 Dominant theories of social commerce adoption

There are several adoption theories and models have been used in social commerce studies; we are presenting and reviewing the most dominant and frequently utilised theories and models. Table 1 has presented some examples of the theory/model that discussed further. As shown in Table 1, the main focus of existing studies has been to utilise intention, usefulness, risk and trust as dependent variables regardless which theory have utilised and limited efforts made to the actual behaviour and post-adoption-related variables as dependent variables, which should be the focus of future studies.

Theory/Model	Source	Country	Highlights
TAM	Biucky et al. (2017)	Iran	The model explained 7% of the variance in intention to use and 20% of the variance in perceived usefulness.
TAM	Kim et al. (2012)	South Korea	The model explained 65.7% variance in the perceived usefulness of social commerce.
S-O-R model	Li (2017)	Taiwan	The model explained 65.4% of the variance in buying intention.
Trust transfer theory	Lin et al. (2017)	China	The model explained 38.5 %of the variance in social shopping intention and 36.7% of the variance in social sharing intention.
Social support theory	Hajli et al. (2015)	UK	The model explained 30% of the variance in the intention to buy and 28% of the variance in social commerce construct.
Social presence theory	Hassan et al. (2018)	Pakistan	The model explained 40.6% variance in trust-in-marketplace and 46.3% variance in social commerce purchase intention.

Table 1: Frequently used Theories/Models in social commerce

Technology acceptance model (TAM) is the most dominant theory that has been used in social commerce research. A total of 14 studies utilised TAM to understand various aspects of social commerce, such as purchase intention and consumer behavioural intention. Studies have highlighted that the main criticism of TAM includes it is over utilisation, integration with similar theories and its parsimonious nature as a limitation for understanding complex issues such as social commerce adoption as such TAM is deemed not to be a suitable model for social commerce research.

Within social commerce studies, the Stimulus- Organism-Response (S-O-R) model is the second most frequently utilised model. The S-O-R model has initially been used for understanding consumer behaviour within a store environment. Therefore, it is also considered as a potential model for social commerce consumer behaviour. Within social commerce research, a total of 10 studies have used the S-O-R model for understanding various aspects, including purchase intention. However, the main limitation of this model is that it is too broad and does not provide a specific list of constructs/variables; hence many studies use different constructs such as stimulus, organism and response, which makes it challenging to assess theoretical advances.

Social support theory is an appropriate theory in the context of social commerce. People come across online communities to obtain social support. Social support is defined as perceived care and support of members of a group (Cobb,1976), where individuals find supportive resources in relationships developed with a friend in the community (Wellman and Wortley 1990). Nine studies that have used social support theory have also examined the role of other constructs such as relationship quality, continuous intention, perceived value for determining continuance participation behaviour. This suggests that using only the role of social support is not sufficient for understanding social commerce adoption.

Therefore, some other theories that have been utilised for understanding social commerce adoption research include trust transfer theory (used in 11 studies), Social presence theory (eight studies) and Social exchange theory (used in six studies). Also, there are other dominant adoption theories, such as UTAUT, UTAUT2, and Meta-UTAUT) have not been utilised to any great extent. As these theories provide a more comprehensive view of adoption antecedents, they should be utilised by future studies to gain a better understanding of the antecedents of social commerce adoption.

4 Theoretical model selection

After carefully filtering the literature review, we found that the constructs of UTAUT are useful for examining the actual behaviour. However, UTAUT does not have a construct such as an attitude, which is an essential consumer-related attribute. Due to this, we considered Meta-UTAUT (Dwivedi et al., 2019) that includes the attitude construct as a basis for building a conceptual model for this study. There are several reasons for using Meta UTAUT. Meta-UTAUT shows that attitude plays a vital role in the acceptance and use of IT/IS by having a direct impact on behavioural intention as well as on use behaviour. Another reason for giving preference to Meta-UTAUT over UTAUT is that meta-UTAUT does not require to

use certain moderators. Past studies that have utilised UTAUT justified non-inclusion of moderators and excluded them from the development and testing of their theoretical models. As Meta-UTAUT provides a comprehensive yet straightforward alternative to UTAUT, it was selected as an appropriate base theory for this research. However, some aspects are lacking within this theory, which necessitates consideration of external constructs. Hence, the next section discusses and selects appropriate external constructs for integration with Meta-UTAUT.

5 Model extension and Hypotheses development

A literature review of the social commerce literature suggests that some of the variables relevant and essential to this domain are not part of the original Meta-UTAUT model. Therefore, from the literature analysis, we have found that some of the constructs are essential for the consumer adoption of social commerce. However, we are highly anticipating Trust and perceived risk as an additional construct with Meta-UTAUT. Trust and Perceived risk are seen in various technology adoption studies as well as these two constructs are also significantly found in social commerce studies as well. Table 2 is representing the significant and non-significant relationship of the Meta UTAUT constructs (performance expectancy, effort expectancy, social influence, facilitating condition attitude), trust and perceived risk with Behavioural intention/purchase intention. Also, the hypothesis which has proposed by various authors in social commerce studies. For example, Trust significantly influences purchase intention (Makmor et al., 2018). Therefore, the role of Trust and Risk is discussed below, and associated hypotheses are proposed.

IV	DV	Significant	No	Non-Sig	No
Trust	PI	Hajli et al. (2015) ; Gibreel et al. (2018) ; Makmor et al. (2018) ; Kim (2013) ; Hajli (2017); Lee and Choi (2014); Vongsraluang and Bhatiasevi (2017); Hassan et al. (2018); Li (2017); Zhao et al. (2019); Lin et al. (2017); Ng (2013); Tarmedi et al. (2018).	14	Williams (2018)	1
PR	BI	Farivar (2017, 2018); Biucky (2017);	3	Williams (2018); Gan (2017); Tello et al. (2018);	3
PE	PI	Lee and Choi (2014); Kim (2012); Biucky (2017); Featherman and Hajli (2016); Shin (2013); Williams (2018); Gatautis and Medziausiene (2014)	7	Gibreel et al. (2018)	1
PU	Attitude	Shin (2013); Cho and Son (2019)	2		

SI	BI	Gatautis and Medziausiene (2014) ; Sheikh et al. (2017); Farivar et al. (2017); Chen and Shen (2015); Li and Ku (2018)	5	Sheikh et al. (2017); Cheng et al. (2019)	2
Attitude	PI	Yeon et al. (2019); Lin and Wu (2015); Hajli (2015); Cho et al. (2019); Shin (2013)	5		
EE/PE OU	BI	Gatautis and Medziausiene (2014); Sheikh et al. (2017); Biucky et al. (2017); Kim (2013); Featherman and Hajli (2016)	5	Gibreel (2017); Sheikh (2017)	2
FC	BI	Gatautis (2014); Sheikh et al. (2017); Lin and Wu (2015); Hajli et al. (2015)	4		

Table: 2 Relationship of the Constructs of Meta UTAUT

Legend: **IV:** Independent variable; **DV:** Dependent variable **PI**: Purchase intention; **BI:** Behavioural intention; **PR:** Perceived risk; **PE:** Perceived expectancy; **PU:** Perceived Useful; **SI:** Social influence; **EE:** Effort expectancy; **PEOU:** Perceived ease of use; **FC:** Facilitating condition.

5.1 Trust

Trust is a complicated aspect to define traditionally and treated both as a unitary and multidimensional concept (Mcknight et al. 2001). Trust is one of the essential aspects of e-commerce studies. This is because when rules are not satisfactory, consumers reduce the risk by relying on trust (Gefen and Straub 2004). Personal data security and reliability are also anticipated as factors in the middle of trust on the internet (Alshibly, 2015). Due to the necessity of trust, 15 social commerce studies are hypothesised trust with behavioural intention. Therefore, 14 studies are found a significant positive relationship with purchase intention. This indicated that trust a vital element on the internet. Therefore, many other technology acceptance studies have also integrated trust and found a significant relationship. Such as Slade et al. (2014) found positive significant between trust in provider and intention to use mobile payment. Also, Beldad and Egner (2017) examined trust in continuously used of fitness app and found a significant positive result. Considering importance of trust in electronic transactions and its consistent role in significantly influencing consumer intention, the following hypothesis is proposed: *H1: Trust significantly influence consumer's behavioural intention to adopt social commerce*

5.2 Perceived risk

According to Beaty et al. (2013), the Perceived risk is the uncertainty involved in the process of buying services or product. In social commerce, consumers can share product information with the community and explore the experience with others, which may lead to intrusion of privacy (Herrando et al., 2017). Risk related to product quality and originality, vendors/seller's authenticity and payment can influence consumer behaviour. Considering risk as an important element of

technology adoption, many studies examined this construct. For example, Kesharwani and bisht explored perceived risk and found negative significant on internet banking adoption. Therefore, in social commerce studies risk has hypnotised with behavioural intention in the limited number of times and found three studies found negative significant and three found negative non-significant relationship. Therefore, this is suggesting that further work need to be conducted to clarify and establish the role this construct for influencing behavioural intention. Literature provides empirical evidence that the higher the risk lower the intention of adopting social commerce-related applications. Considering that the following hypothesis is proposed: **H2:** *Perceived risk negatively influence consumer's behavioural intention to adopt social commerce*

6 Conclusion

Social commerce is now an active research area, and in the last few years, different areas of social commerce have been explored. We have found that TAM, S-O-R model and social support theory have been widely used within social commerce adoption research. However, they pose certain limitations towards further theoretical advances on this emerging topic. For this reason, this study proposed an alternative theory (Meta-UTAUT) as a base model due to the advantages offered by this model, as discussed in this paper. However, Due to lack of space, we could not elaborate on the core model (Meta-UTAUT). Therefore, future study will go deep into the model for better and understanding. We have proposed to integrate constructs such as trust and perceived risk as an integral addition to the Meta-UTAUT model. However, there are some other constructs; for example, hedonic motivation, cost, innovativeness are relevant for social commerce adoption. In future study will count those variables as well. We have mentioned earlier that most of the studies in social commerce are analysis consumer intention rather than actual behaviour. However, for further step, we will collect the data from an actual consumer who adopted and purchased from social commerce. This will give a clear result of actual adoption.

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