Integrating the social support theory and technology acceptance model of social commerce websites

Integración da teoría do apoio social e o modelo de aceptación da tecnoloxía de sitios web de comercio social

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Abstract

The expansion of social commerce websites has gradually transformed most people’s lives in terms of social interactions during leisure time. Communication has been made easier due to the advancement of information communication technology due to the fact that information sources can efficiently assist in providing the information required. Nevertheless, the possibility struggling to understand online content exists as the information may have inaccuracies and biases. By combining the technology acceptance model (TAM) and social support theory (SST), this study has developed a detailed purchase intention model to analyse relationships related to social commerce websites. Trust has been examined as the mediator in this research. The study has employed an online quantitative approach and has conducted non-probability (convenience) sampling to recruit 392 respondents. The findings demonstrate that different SS forms (emotional and informational) contain significant relationships with the TAM, trust and purchase intention. Nonetheless, perceived usefulness and purchase intention reveal insignificant relationships. Meanwhile, trust significantly mediates the association between SS and TAM constructs in this proposed model. The results also show that the proposed model has achieved a good fit and clearly explains each relationship. Therefore, the integration and extension of constructs may serve as future research paths. The findings could also be applied by marketeers and practitioners when developing social commerce websites.

Keywords: Social support; perceived ease of use; perceived usefulness; trust; purchase intention.

JEL: M31.
Resumo

A expansión dos sitios web de comercio social transformou gradualmente a vida da maioría das persoas en termos de interaccións sociais durante o tempo libre. A comunicación facilitouse debido ao avance da tecnoloxía da información e a comunicación debido ao feito de que as fontes de información poden axudar de maneira eficiente a proporcionar a información requirida. Con todo, existe a posibilidade de ter dificultades para comprender o contido en liña, xa que a información pode ter inexactitudes e rumbos. Ao combinar o modelo de aceptación de tecnoloxía (TAM) e a teoría de apoio social (SST), este estudo desenvolveu un modelo detallado de intención de compra para analizar as relacións relacionadas cos sitios web de comercio social. A confianza foi examinada como o mediador nesta investigación. O estudo empregou un enfoque cuantitativo en liña e realizou unha mostraxe non probabilístico (conveniencia) para recrutar a 392 enquisados. Os achados demostran que diferentes formas de SS (emocionais e informativas) conteñen relacións significativas co TAM, a confianza e a intención de compra. Con todo, a utilidade percibida e a intención de compra revelan relacións insignificantes. Mentres tanto, a confianza media significativamente na asociación entre as construcións SS e TAM neste modelo proposto. Os resultados tamén mostran que o modelo proposto ha logrado un bo axuste e explica claramente cada relación. Por tanto, a integración e extensión de constructos pode servir como camiños de investigación futuros. Os especialistas en márketing e os profesionais tamén poderían aplicar os achados ao desenvolver sitios web de comercio social.

Palabras chave: Apoio social; facilidade de uso percibida; utilidade percibida; confianza; intención de compra.
1. INTRODUCTION

The advancement of information technology has transformed communication via web connectivity, allowing interaction with other internet users without time or space constraints (Harris & Rae, 2009). Collaboration among internet users promotes social activities in different areas, which offer more opportunities for companies to reach additional customers, promoting ideas, products and services, mostly on their websites. The activities also provide different insights into marketing and advertising events, which significantly transform e-commerce into social commerce. Stephen and Toubia (2010) defined social commerce as “the forms of internet-based social media that allow people to actively participate in the marketing and selling of products and services in online marketplaces and communities”.

Social commerce notably influences social interactions and supports website users, assisting them to share their experience with others (Liang & Turban, 2011; Wang & Zhang, 2012). Social commerce has the potential to rapidly increase profitability by enhancing sales. Liu, Chu, Huang and Chen (2016) postulate that social commerce websites expand at significantly rapid rates. According to a recent report by BigCommerce (2017), 96% of Americans occasionally make online purchases. Contrarily, Malaysia: Malaysia recorded a 65.7% penetration of the online market in 2022, which was predicted to rise to 76.8% by 2021. The country made US$ 10.12 billion in 2022 from the online commerce industry, which is anticipated to rise by 18.48% to US$ 16.83 billion by 2025 (Statista, 2022).

The popularity of social networking sites has allowed for substantial expansion in social commerce in the last few decades (Liang & Turban, 2011), which has transformed users’ thinking patterns from the individual mode to collaborative thinking. Social commerce development is related to users’ communication methods and their product review, where they give their own opinions or make suggestions, and share their experiences (Hajli, 2015). Social commerce also provides opportunities for users to support and exchange information (Hajli, 2013). Additionally, the benefit of adopting social media is improving information sharing, enhancing the effectiveness of managing customers’ relationship (Akman & Mishra, 2017). The effectiveness of website design strongly influences interaction, support and many other activities.

Social interaction and integration on a website depend on network technology and accessibility to product information and whereby trust on information sharing is important. (Wang & Zhang, 2012). The interaction process facilitates mainstream activities, such as marketing (Stephen & Toubia, 2010), while influencing communities and societies via information sharing, which is a valuable aspect of social support (Lin et al., 2016). The initial stage of social commerce tends to impact social support behaviour in the form of seeking advice from fellow users regarding their own experiences. If users are deemed to have caring and responsible attitudes, they can make a fundamental contribution to social support. Hajli (2013) affirms that emotional and informational support are crucial elements for helping to reassure users. Meanwhile, online social support could also influence trust in a website (Hajli, 2013). Previous studies have discovered that the most effective approach towards difficulties encountered online is the provision of social support (Park et al., 2007). Nevertheless, only a limited number of studies have analysed social support in social commerce (Hajli & Sims, 2015), implying a need for more in-depth research in this field (Lin et al., 2016).

Although social commerce has been regarded as an area of technology undergoing constant change and rapid expansion in recent years, inaccurate information is frequent (Dube, 2010). For instance, fraudsters may post fake information sources and pictures to create fake identity (Lu et al., 2010), thus affecting users’ trust in the website. According to Azman (2018),
customers face potential challenges when making online purchases, namely differences between the advertised and the actual products, the failure to deliver the items. Jones and Leonard (2008) posit that insufficient trust regularly prevents customers from regularly shopping online. Prior researchers have also propounded that trust is a critical element online (Featherman & Hajli, 2015; Hajli, 2013, 2015), although very few studies have been conducted on this topic in social commerce (Hajli et al., 2016). Therefore, the impact of trust on purchasing trends should be investigated in the context of social commerce while analysing other factors influencing trust, including website design.

The literature has so far demonstrated that more research on trust is required to determine the appropriate methods needed to establish social support. For example, Corritore et al. (2003) identify four dimensions affecting online trust, namely honesty, expertise, predictability and reputation. Meanwhile, several other antecedents affect online trust, such as information quality, service quality, perceived usefulness and design (Cheung & Lee, 2013; Koufaris & Hampton-Sosa, 2004). Furthermore, the reputation, scale, and offline existence of a firm significantly influence consumer trust online (Jarvenpaa et al., 2000; Walczuch & Lundgren, 2004). Generally, customers shop online when the system is considered valid and easy to use (Bhattacherjee, 2001). Similarly, Chen and Barnes (2007) reveal that a useful, informative and straightforward website design influence consumer trust and purchase intention.

Several researchers (Tian et al., 2022; Zheng et al., 2021) have discovered a positive relationship between trust and intention to purchase organic food in a developing country. Nonetheless, little evidence exists regarding methods of emotional and informational support that can shape trust and lead to higher purchase intention. However, social support and relationship quality on social commerce intentions, which lead to use behaviour of social networking sites for social commerce (Sheikh et al., 2016). Specifically, The effectiveness of websites is crucial for businesses seeking to acquire the trust of consumers, who frequently and unexpectedly encounter technical issues on them. Rakuten (2010) indicates that 30% of online users fail to complete purchases, while Whirty (2017) highlights that 21% of websites load sluggishly with another 20% perceiving the ordering process to be confusing. Hence, more studies are required to bridge the literature gap in social commerce website design (Busalim & Hussin, 2016).

Several theories examine behavioural intention, such as the technology acceptance model (TAM), the theory of planned behaviour (TPB), and the unified theory of acceptance and use of technology (UTAUT). The TPB model is a self-interest theory generally employed for individual decision-making (Bertoldo & Castro, 2016), especially concerning technology-driven behaviour (Luna-Nevarez & Torres, 2015). Although the UTAUT model deriving from the TAM is more appropriate for technology usage owing to the integration of seven other models, this model is comparatively simplistic in its delineation of relevant relationships and its emphasis on moderating relationships (Shachak et al., 2019). Nevertheless, both the TAM and the UTAUT model are criticised for having narrow perspectives, the TAM having been developed earlier than the UTAUT model. As such, the TAM might not be pertinent in terms of providing a comprehensive understanding of social commerce, which demands an extension of the model. In contrast, the social support theory (SST) recommends external variables that are compatible with the TAM’s external variable for an extension. No previous studies have incorporated the TAM with the SST in social commerce research. Moreover, the integration of emotional support, informational support, perceived usefulness, perceived ease of use, trust, and purchase intention in a single framework is rare.

The current study, due to the fact that it addresses the existing research gap, aims to integrate the theoretical perspectives of the SST and the TAM to establish and empirically assess the determining factors of purchase intention on social commerce websites. In addition,
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It focuses on clarifying the relationships among the factors which influence trust and purchase intention in the context of social commerce. Our paper includes a literature review (Section 2) elucidating the theoretical background, research model and research hypotheses. It goes on to discuss the methodology and findings with the corresponding analyses. Lastly, it explicates the key findings, study limitations and theoretical and practical implications.

2. LITERATURE REVIEW

2.1 Theoretical underpinning

2.1.1 The SST and the TAM for analysing consumer purchase intention

The SST expounds on the behaviour of social relations in a community when information on well-being is accomplished (Lakey & Cohen, 2000). The theory explicitly illustrates how social support effectively helps patients deal with high-risk health conditions, reduces the impact of stress, and assists individuals to become more self-confident. Social support can be measured when an individual is offered assistance and is available for the social network. Winzelberg et al. (2003) have demonstrated how internet-based social support helps groups of female breast cancer patients, showing how feasible online networks are in encouraging bonds to form and effectively boosting their confidence levels. Thus, social support significantly impacts the technological behaviour of these internet users.

A social media study has discovered that social elements positively impact technology, such as TAM constructs (Albayati et al., 2020). Social support can appear in a variety of socio-environmental categories that guide users when they wish to actively participate with online information systems. The procedures could serve as valuable tools for obtaining social support more easily, which is closely connected to and integrated with information technology. The majority of employees are expected to use online communities to encourage the adoption and use of technology. Social support determinants of network technology are also vital for identifying TAM elements deriving from consumer purchase intention (Bao, 2016). Furthermore, Bhardwaj and Aggarwal (2016) conceptualise social media’s role in the Internet banking system as a gauge of people’s technology adoption. Accordingly, Bao (2016) opines that social support is crucial and should be integrated with the TAM for consumer purchase intention.

Social commerce encompasses technological advancement utilising social networking sites to communicate with users via online social support platform. Gao and Kang (2010) pose the necessity of evaluating the degree to which technology usage supports social connection and integration by fusing sociology, psychology, and technology online. Alternative support systems to answer client inquiries regarding social support. In particular, social networking sites allow users to share videos, pictures and personal perspectives effortlessly twenty-four hours a day. Social factors have a big impact on user behaviour in terms of how useful technology is (Albayati et al., 2020). Furthermore, users can skim and scan the content in the material provided by the social network platform, which automatically compiles an encyclopaedia of priceless knowledge not found on other networks or websites (Bao, 2016). High levels of usability promote social integration and involvement on the social networking site, which is thought to be lively and appealing. Information deemed commercially valuable and supportive also significantly and positively impacts trust and purchase intention.
2.2 Conceptual framework

This study integrates the SST and the TAM as the theoretical base for developing and empirically appraising the factors that determine purchase intention on social commerce websites. The framework, which defines the ways in which social support improves social care and assistance when a user seeks it via platforms, should make it easier to understand the evolving social interactions among platform users. The relationships become active and sought-after when a website is highly accessible for sharing information, in terms of perceived ease of use and usefulness. The information supports recommendations or discussions and the possible sharing of commercial data to further enhance trust and maintain long-term relationships in the community. Besides this, it increases commercial activity tendencies, such as purchase intention. Hence, the research framework incorporates several constructs, which are illustrated in Figure 1:

![Figure 1. Conceptual framework](image)

2.3 Hypothesis development

2.3.1 Social support and the TAM

Cobb (1976), the founder of social support, defines the term as “information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations” (p. 300). Social support specifically explains individuals’ perceptions of situations where concern, respect and regard for others are involved, who feel that they have responsibility on a website. Many researchers consider that social support is a multidimensional construct (Dashti et al., 2016; Lin et al., 2016; Shanmugam et al., 2016), which has been empirically supported and highlighted by other researchers (Liang et al., 2011; Madjar, 2008; Xie, 2008). Being a part of a social network and social integration are both established forms of social support, and the terms are used interchangeably (House, 1987).

Academics across various disciplines have explored the social support concept, including psychologists, sociologists and health experts (Wang & Hajli, 2014). The TAM theory is described by Davis (1989) as the individual perception of acceptance and intention towards alternative technology. Users are more inclined to accept the online system and express personal feelings on it, the more accessibility is provided, in which case they perceive it to be
valuable. Users show higher confidence levels by way of participation and the provision of support (i.e., information and knowledge) if they are aware that the system is simple to use and informative. Nevertheless, few studies have been conducted on the connection between social support in emotional and informational forms, particularly for TAM constructs of perceived ease of use and usefulness. Only Bao (2016) has recently indicated the link between social support and the TAM.

Bhardwaj and Aggarwal (2016) have integrated social support factors and technology acceptance into a single model to examine online users’ intentions on social commerce websites based on their attitudes. Social interaction and integration on these websites considerably improve participation, noted after scrutinising behaviour related to privacy concerns and video sharing. Accordingly, those who use the internet to get emotional support are more at ease and don't have many privacy concerns. Participation becomes prevalent when they are willing to seek information and advice from friends and relatives or strangers. The information received on these sites can subsequently be read by others, which allows comprehensive and informative information to be gained, which may not be possible to achieve elsewhere. Two relevant hypotheses are proposed:

**H1:** Emotional support significantly influences perceived ease of use.
**H2:** Informational support significantly influences perceived usefulness.

### 2.3.2 Social support and trust

Social support is a multidimensional construct (Hajli, 2014) that originates from the SST. This study has utilised two main components, namely emotional and informational support. The former can be defined as having personal feelings, such as concern and understanding. The latter refers to individual perceptions, including cognitive feelings, belief, suggestions and ideas. As outlined in the SST, social relationships and the responses of specific individuals illustrate the priority to resolve some of the difficulties experience by others by promoting other individuals’ self-esteem (Lakey & Cohen, 2000). The primary components of social support are the ways that people encourage and assist others in feeling more confident and at ease in social situations. This interaction indirectly establishes trust between members within the same online community and addresses the psychological needs of everybody involved (Islam et al., 2018). Previous studies have revealed that social support is capable of developing circles of friends and trust among online members (Weber et al., 2004; Crocker & Cannevello, 2008). Other researchers have also discovered that the direct relationship between informational and emotional support significantly influences trust (Hajli, 2013, 2014).

When medical information and contact details are provided based on medical conditions, social support is viewed as a significant factor of trust (Shanmugam et al., 2016). According to Ridings and Gefen (2004), most users participate on online platforms for guidance and information from peers. Liang et al. (2011) assert that individuals perceive calmness and warmth from messages on social networks when receiving informational and emotional support online. Zhao et al. (2019) have also demonstrated that these two forms of support can strengthen trust in the seller on social commerce platforms. The following hypotheses are postulated:

**H3:** Emotional support significantly influences trust.
**H4:** Informational support significantly influences trust.
2.3.3 Trust and the TAM

The TAM is highly appropriate for investigating user intentions when it comes to utilising any systems (Davis, 1989). Initially, the model was designed for predicting computer usage behaviour. Two of its factors are deemed to impact individual intention and usage, namely perceived ease of use and usefulness. The former is the extent to which an individual considers that the use of a particular any system is effortless. Meanwhile, perceived usefulness is the degree to which an individual perceives that the use of a particular any system can enhance work performance (Davis, 1989). The TAM theory is regarded as a unique theory with two salient beliefs, in which higher trust levels in technology usage could be connected to more favourable user responses to perceived ease of use and usefulness (Pavlou, 2003).

Gefen, Karahanna and Straub (2003) have incorporated trust into the TAM through constructs, such as perceived ease of use and usefulness. In addition, various studies have frequently reported the relationships between trust, perceived ease of use and perceived usefulness (Chircu et al., 2000; Gefen, 1997; Hallegatte & Nantel, 2006; Shanmugam et al., 2016). Gefen et al. (2003) have confirmed that trust significantly influences perceived usefulness for online shopping, while Basak et al. (2016) assert that trust significantly influences TAM constructs. Moreover, Hansen et al. (2018) and To and Trinh (2021) propose that perceived trust is positively correlated to perceived usefulness. Pavlou (2003) argues that trust exerts positive effects on perceived ease of use and usefulness. Hallegatte and Nantel (2006) concur with the results by demonstrating that trust significantly influences perceived ease of use and usefulness. Therefore, this study propounds the following hypotheses:

H5: Trust significantly influences perceived ease of use.
H6: Trust significantly influences perceived usefulness.

2.3.4 The TAM and purchase intention

Davis (1989) introduced the TAM to predict an individual's usage intention and acceptance of information technology. Consumer engagement is influenced by a user-friendly online system. (Gefen et al., 2003). Consumers exhibit higher favourability towards technology when the online system can be navigated effortlessly, hence leading to higher purchase intention. Previous scholars have discovered that TAM constructs significantly influence purchase intention (Cho, 2015), with multiple studies utilising the TAM to examine technology usage (Cho, 2015; Featherman & Hajli, 2015; Gefen, 2000; Gefen et al., 2003; Hajli et al., 2017; Li, 2010; Liébana-Cabanillas et al., 2015; Roca et al., 2009; Shen, 2013). Previous researchers (Cho, 2015; Moslehpour et al., 2018) have also demonstrated that purchase intention is significantly influenced by perceived ease of use and usefulness, including renewable technology purchase intention (Alam et al., 2021; Masukujjaman et al., 2021), and augmented reality technology (Alam et al., 2021; Alam et al., 2022). In summary, the usefulness and ease of use of an information system highly influences user purchase intention on social commerce platforms. This study hypothesises that:

H7: Perceived ease of use significantly influences purchase intention.
H8: Perceived usefulness significantly influences purchase intention.

2.3.5 Trust as a mediator

Trust has gained considerable traction in e-commerce (Gefen et al., 2003) and social commerce studies (Chen & Shen, 2015; Hajli et al., 2014; Ng, 2013), examined in various results,
with multiple studies conceptualising it in different terms. This study defines trust as a user’s beliefs about information delivered by social commerce websites. Gefen (2000) defines it as “a broad sense, which is the confidence an individual has in his or her favourable expectations of what other people will do, based in many cases, on previous interactions”. Meanwhile, certain academics regard trust as a mediator of electronic system transactions (Alshibly, 2015; Pavlou & Chai, 2002). The mediating impact of trust on individuals’ relationships with purchase intention has been thoroughly explored according to the bootstrapping results of the indirect effect (mediating effect) developed by Preacher and Hayes (2004). Essentially, the indirect relationship between the constructs is significant in assessing the mediating effect (Preacher & Hayes, 2004). Based on the relevant literature review, trust functions as a significant mediator, which has been hypothesised to mediate the associations between social support forms (emotional and informational) and purchase intention.

Trust has been included in the proposed framework due to the possible risks involved when engaging in Internet-based social commerce, including scams, security risks, fraudulent activities and misleading information (Azman, 2018). Information sharing and support between users on online platforms strengthen trust, thus encouraging online purchases (Bai et al., 2015). Crocker and Canevello (2008) have revealed that emotional and informational social support significantly impact trust, as social support is deemed a type of assistance employed by online users to resolve relevant issues about products or services on online platforms. The support establishes unique inter-individual trust, which reassures users wishing to purchase a product or pay for a service. To date, there are few studies on trust as a mediator in both relationships between emotional and informational support and purchase intention despite its significance in the online social commerce context. In health studies, the theory plays a key underlying role in offering encouragement and assistance for developing trust when discussing medical conditions. In this study, social support might reduce stress when self-esteem produces an indirect influence on trust and subsequently on purchase intention. Social support creates an attachment between users and enhances trust in online platforms (Crocker & Canevello, 2008).

Existing studies have discovered the impact of informational and emotional support on trust (Gefen et al., 2003; Hajli, 2013, 2014). Furthermore, the relationship between both emotional and informational support and purchase intention could facilitate trust-building, the latter being a positive indication that social support increases user purchase intention on virtual platforms. Eriksson et al. (2005) claim that trust is the factor that most significantly influences online transactions. Hajli et al. (2017) have demonstrated the positive impact of trust on purchase intention in social commerce. Moreover, users are highly predisposed to engage more in social interactions on online platforms or utilise a system with higher trust levels, which increases purchase probability on social commerce websites. Recent studies (Tian et al., 2022; Zheng et al., 2021) have revealed a positive relationship between trust and intention to purchase an organic food in a developing country. Correspondingly, this study seeks to test the mediating impact of trust on the association between social support and purchase intention. It also assesses the relationship between trust and purchase intention and its impact on social commerce website activities. Consequently, it postulates the following:

**H9:** Trust significantly influences purchase intention.

**H10:** Trust mediates the relationship between emotional support and purchase intention.

**H11:** Trust mediates the relationship between informational support and purchase intention.
3. METHODOLOGY

3.1 Research design

This piece of research has quantitatively investigated the variables by distributing online questionnaires to consumers to assess the factors influencing online shopping decisions. To be exact, a cross-sectional survey was employed before drawing inferences from a population in a specific period.

3.2 Data collection and sampling

86% of Malaysia's population is active on social media, making up social media users. The research for this paper was conducted on the Facebook platform, a popular communication website, to reach a wide range of online shoppers. Facebook is the leading social media platform for sharing personal updates with friends and performing online transactions. It is a typical social commerce platform, where online purchases are made simpler thanks to social interactions and contact with Facebook friends. The sample frame of this study was Malaysians who use Facebook. The Facebook users were given a link to a survey where direct and anonymous feedback could be given.

This questionnaire enabled information to be collected and was an ideal way to reach many consumers performing online purchases as well cover a wide geographical area. The data was collected in November 2021. Due to the risk of subjects receiving the link not answering the online survey, they were sent at least two reminders. All respondents were informed that their participation was voluntary and would receive payment upon completion. The academic purpose of the study was also explained along with reassurance that any personal information given would be stored confidentially and not disclosed to other parties. Each respondent signed a consent form for voluntary participation before receiving the survey link from the researchers.

A test was done by using G*power, a software program, was run to determine the most suitable sample size. Vidaver-Cohen (1998) recommends the sample size to be 146 for six structures or predictors ($F=0.15$ for effect size, 0.05 for type I errors, and 0.20 for type II errors). According to Barclay et al. (1995), a general rule of thumb for sampling is to multiply 10 by the largest number of formative indicators employed. As such, this study required 300 participants with 30 measurement items. A total of 392 questionnaires were selected to lessen potential problems from a small sample size. All received responses were completed properly because all questions were set as mandatory in Google Forms. The non-probability convenience technique has been utilised in this study, which is the best option due to cost-effectiveness and a high likelihood of acquiring a sufficient number of respondents.

3.3 Data analysis

Construct items were adapted from the existing literature. A pre-test was conducted with three marketing and technology experts before the actual data was collected. The pre-test results demonstrated that the majority of measurement items represented the intended constructs. The experts involved in this study recommended improvements concerning the item wording, and so amendments were made accordingly. Subsequently, the SmartPLS software based on partial least squares structural equation modelling (PLS-SEM) was employed. As suggested by the experts, the software was optimised for exploratory research by focusing on prediction and estimation (Ramayah et al., 2018). The PLS-SEM is more appropriate...
than Covariance-based SEM for a relatively moderate sample size (Lowry & Gaskin, 2014). To prevent significant challenges, this study did not analyse any established model but instead proposed a comprehensive one. The PLS-SEM was also chosen due to its ability to examine larger constructs featuring complicated relationships. It did not contain bindings to fulfil the normal distribution of research results. In addition, a seven-point Likert scale ranging from 1 as strongly disagree to 7 as strongly agree was employed to measure the six variables. The items of emotional and informational support were adapted from Liang and Turban (2011), the items of perceived ease of use and usefulness were modified from Davis (1989), trust items were adapted from Han and Windsor (2011) and purchase intention items were modified from Liu et al. (2016).

4. RESULTS

4.1 Measurement model

The SEM approach was employed to analyse the collected data and examine several dependent variables (Allen, 1997). A reliability analysis was conducted to fulfil the study objectives before hypothesis testing. For the items fitting the respective constructs or the inter-correlation between the items, reliability was ascertained according to Cronbach’s alpha, composite reliability (CR), average variance extracted (AVE) and factor loading values. As recommended by Hair and Sarstedt (2013), the threshold values for AVE were 0.5, 0.7 for CR and 0.7 for factor loading. Meanwhile, the threshold value for Cronbach’s alpha was 0.7 (Nunnally, 1978), while loading exceeded 0.4 in accordance with the levels suggested by Norman and Streiner (1994). The details of the construct reliability analysis are shown in Table 1.

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<th>Construct name</th>
<th>Item</th>
<th>Loading</th>
<th>Cronbach’s alpha</th>
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<td>.878</td>
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</table>
4.2 Discriminant validity

This paper employed the Fornell-Larker criterion and heterotrait-monotrait (HTMT) ratio to test discriminant validity. All constructs (see Table 3) attained an AVE value higher than 0.5, which suggested acceptable convergent validity (Fornell & Larcker, 1981; Barclay et al., 1995). The results also indicated that the square root of AVE values diagonally was higher than other constructs not diagonally (Fornell & Larcker, 1981). Henseler and Sarstedt (2015) recommend the HTMT ratio to assess discriminant validity owing to higher sensitivity from 97% to 99%. The most optimal threshold value for the HTMT ratio is below 0.85 (Kline, 2015). As a result, all constructs had HTMT ratios under 0.85, indicating that they fulfilled the requirement with low cross-loadings in the reflective model (see Table 2).

Table 2. Discriminant validity through the Fornell-Larker criterion and HTMT ratio

<table>
<thead>
<tr>
<th></th>
<th>ES</th>
<th>IS</th>
<th>PEOU</th>
<th>PI</th>
<th>PU</th>
<th>TRUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES</td>
<td>0.846</td>
<td>0.783</td>
<td>0.467</td>
<td>0.510</td>
<td>0.484</td>
<td>0.491</td>
</tr>
<tr>
<td>IS</td>
<td>0.736</td>
<td><strong>0.900</strong></td>
<td>0.539</td>
<td>0.496</td>
<td>0.498</td>
<td>0.554</td>
</tr>
<tr>
<td>PEOU</td>
<td>0.397</td>
<td>0.487</td>
<td><strong>0.857</strong></td>
<td>0.566</td>
<td>0.715</td>
<td>0.397</td>
</tr>
<tr>
<td>PI</td>
<td>0.488</td>
<td>0.433</td>
<td>0.516</td>
<td><strong>0.901</strong></td>
<td>0.420</td>
<td>0.495</td>
</tr>
<tr>
<td>PU</td>
<td>0.458</td>
<td>0.438</td>
<td>0.677</td>
<td>0.389</td>
<td><strong>0.854</strong></td>
<td>0.417</td>
</tr>
<tr>
<td>TRUST</td>
<td>0.426</td>
<td>0.511</td>
<td>0.322</td>
<td>0.428</td>
<td>0.388</td>
<td><strong>0.811</strong></td>
</tr>
</tbody>
</table>

Note: ES = Emotional support, IS = Informational support, PEOU = Perceived ease of use, PU = Perceived usefulness and PI = Purchase intention. The bold off-diagonal values are the square roots of AVE. The italic values to the right of the off-diagonal bold values are HTMT values and the values to the left of the diagonal values are the correlations between the constructs.
4.3 Non-response bias and common method bias (CMB)

The t-test was performed in the study to analyse the differences between early and late survey respondents. The results revealed an insignificant difference in gender and age between the two respondent groups. Therefore, the possibility of the sample having non-response bias was discarded. By adhering to the recommendations of Podsakoff et al. (2003), common method bias (CMB) concerning self-reported cross-sectional data was addressed through an operationalised Likert scale. Harman’s one-factor test, which accounted for 50% of data variation, was employed to generate a static factor from all primary structures (Harman, 1976). The first component was responsible for 36.21% of the variation. A correlation higher than 0.9 indicates CMB, although the strongest relationship between perceived ease of use and purchase intention was actually 0.728. Hence, CMB was not an issue in this study.

4.4 Hypothesis testing for direct relationships

Hypothesis testing is a critical step in quantitative research enabling research questions to be answered and allowing the significance of the study to be ensured. The findings indicate that emotional support significantly influences perceived ease of use ($\beta=0.258$, $t=5.562$, $p<0.001$) while informational support significantly influences perceived usefulness ($\beta=0.269$, $t=5.752$, $p<0.001$), thus supporting H1 and H2. Furthermore, the results have revealed that trust is significantly influenced by emotional support, informational support, perceived ease of use and perceived usefulness. The significant relationships between emotional support and trust ($\beta=0.121$, $t=2.404$, $p=0.008$), informational support and trust ($\beta=0.209$, $t=5.107$, $p<0.001$), trust and perceived ease of use ($\beta=0.180$, $t=3.894$, $p<0.001$) and trust and perceived usefulness ($\beta=0.195$, $t=3.967$, $p<0.001$), thus supporting H3, H4, H5 and H6. Perceived ease of use also significantly and positively impacts purchase intention ($\beta=0.321$, $t=6.651$, $p<0.001$). A strong relationship has been identified between trust and purchase intention ($\beta=0.290$, $t=5.850$, $p<0.001$). Thus, H7 and H9 are supported. Nonetheless, perceived usefulness significantly influences purchase intention ($\beta=0.034$, $t=0.089$, $p<0.464$), hence rejecting H8. The findings of the study suggest that certain consumers are not influenced by the usefulness of social commerce platforms when it comes to purchase intention. Nevertheless, the social commerce platform could be employed to seek information sources for future reference. The hypothesis testing outcomes are displayed in Table 3.

<table>
<thead>
<tr>
<th>Path</th>
<th>Hypothesis</th>
<th>Beta value</th>
<th>T-statistic</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES → PEOU</td>
<td>H1</td>
<td>0.258</td>
<td>5.562***</td>
<td>Significant</td>
</tr>
<tr>
<td>IS → PU</td>
<td>H2</td>
<td>0.269</td>
<td>5.752***</td>
<td>Significant</td>
</tr>
<tr>
<td>ES → TRUST</td>
<td>H3</td>
<td>0.121</td>
<td>2.404**</td>
<td>Significant</td>
</tr>
<tr>
<td>IS → TRUST</td>
<td>H4</td>
<td>0.209</td>
<td>5.107***</td>
<td>Significant</td>
</tr>
<tr>
<td>TRUST → PEOU</td>
<td>H5</td>
<td>0.180</td>
<td>3.894***</td>
<td>Significant</td>
</tr>
<tr>
<td>TRUST → PU</td>
<td>H6</td>
<td>0.195</td>
<td>3.967***</td>
<td>Significant</td>
</tr>
<tr>
<td>PEOU → PI</td>
<td>H7</td>
<td>0.321</td>
<td>6.651***</td>
<td>Significant</td>
</tr>
<tr>
<td>PU → PI</td>
<td>H8</td>
<td>0.034</td>
<td>0.464</td>
<td>Insignificant</td>
</tr>
<tr>
<td>TRUST → PI</td>
<td>H9</td>
<td>0.290</td>
<td>5.850***</td>
<td>Significant</td>
</tr>
</tbody>
</table>
4.5 Hypothesis testing for mediation effects of trust

This study has appraised the mediating effect of trust as few studies have assessed it as a mediator of the relationship between social support (emotional and informational forms) and purchase intention on social commerce websites. While investigating the mediating effects, this piece of research has also implemented the bootstrapping approach suggested by Preacher and Hayes (2008). The results demonstrate that trust significantly and indirectly impacts emotional support and purchase intention, with a 95% bootstrap confidence interval (CI0.95=0.112, 0.021), which indicates a partially-mediation. A significant indirect mediating effect of trust has also been reported on the relationship between informational support and purchase intention, with a 95% bootstrap confidence interval (CI0.95=0.166, 0.071). As such, the relationships between emotional and informational support and purchase intention have been partially mediated by trust, shown through the bootstrapping procedure, with 5,000 non-parametric re-samplings (Preacher & Hayes, 2004, 2008), as illustrated in Figure 2.
5. Conclusion

The aim of this paper is to thoroughly research the determinants of trust and the relevant impact that they have on purchase intention in the context of social commerce websites. The study also makes theoretical and practical contributions by explicating the factors that can influence consumer trust and purchase intention. The four examined constructs were chosen because they were expected to elucidate the importance of trust in social commerce, taking into account that social support significantly influences the TAM. This study highlights social factors and technological networks as the key attributes for establishing consumer trust and purchase intention, the SST and TAM being integrated in particular to fulfil the study's objectives. Indeed, multiple dimensions of social support conceptualisation have been revealed to significantly impact both TAM and trust. Network technology designs also expand related behaviour and subsequently increase purchase intention on social commerce websites.

More research needs to be conducted to examine the relationships between social support and the TAM constructs regarding purchase intention in social commerce. Nevertheless, previous studies have suggested that the connections between social support and TAM constructs significantly affect intention (Bao, 2016). Furthermore, Bhardwaj and Aggarwal (2016) have integrated social support with the TAM to measure the effectiveness of social commerce buying intention. The recommendations outlined in previous studies have been incorporated into this study by delineating the substantial effect of the associations between emotion and perceived ease of use and between information and perceived usefulness (H1 and H2). The relationship between emotional support and informational support also significantly influences trust (H3 and H4), which is consistent with prior findings discovering a significant relationship between social support and trust in social commerce (Crocker & Canevello, 2008; Hajli, 2013; Reychav & Weisberg, 2010). The availability of different information sources, including experience and knowledge, influences trust when a tendency for social support exists (Bai et al., 2015). Hence, supportive relationships and problem-solving mechanisms result in indirect trust-building (Shanmugam et al., 2016). The combination of social commerce with technological and social factors is considered effective for increasing purchase intention.

The results indicate that trust significantly influences perceived ease of use and perceived usefulness (H5 and H6). Similarly, other studies reveal that trust significantly impacts both constructs (Alsajjan & Dennis, 2010; Chircu et al., 2000). This mediator is crucial in online purchase behaviour as higher engagement is observed when users consider the information to be trustworthy, useful and accessible on the website. In addition, the results demonstrate that trust has a significant influence on perceived ease of use and purchase intention (H7 and H9), which parallels previous marketing literature on the positive impacts of perceived ease of use (Cho, 2015) and trust (Hajli, 2013; Pavlou, 2003) on purchase intention. Nevertheless, an insignificant influence has been revealed for the correlation between perceived usefulness and purchase intention (H8) as has also been the case in previous studies (Dachyar & Banjarnahor, 2017; Ramayah & May-Chiu, 2007).

The influence of perceived usefulness on purchase intention is highly significant in this study, which contradicts past findings (Masukujjaman et al., 2021; Alam et al., 2022). For a website, the former factor does not essentially drive the latter, although a user’s perception might be beneficial as a valuable information source. Meanwhile, trust significantly impacts the relationships between emotional and informational support and purchase intention, which consistently reflects the principles of the SST and the TAM. When users converse on online platforms in the context of effective social support, those who are engaged are more inclined to place their trust on social commerce platforms and increase their personal purchase intention.
on them. The study further expounds that emotional support plays a crucial role in enhancing the relationship between sellers and users on social networks.

5.1 Theoretical implications

This study makes several theoretical contributions to the existing literature. To be specific, an alternative framework has been developed integrating the SST and the TAM to determine the influence of social factors on the latter construct. Gao et al. (2010) have allowed social technology to be supported by integrating psychological, sociological and technological considerations online, although the theory and model have previously been integrated under social commerce and individual model contexts. Moreover, the study contributes to existing social commerce literature by including three different variables in the TAM, namely emotional support, informational support and trust. Liang et al. (2011) identify social factors such as social support while Bhardwaj and Aggarwal (2016) combine the TAM with social network features, such as informational, emotional, network, tangible and esteem forms of support. Bao (2016) suggests integrating social support with the TAM as the former is a key determinant of trust; by doing so, it could ascertain the extent to which technology is accepted and help understand purchase intention on social commerce websites. Furthermore, the integrated framework has been tested empirically in the Malaysian setting to analyse the social commerce trend. The proposed constructs in the framework have achieved high model fitness ($R^2 = 0.67$ for purchase intention). However, the study has not discovered a significant relationship between perceived usefulness and purchase intention unlike past studies have. Therefore, this study results might encourage future academics to retest the same model in other settings to test all the hypothesised relationships.

5.2 Practical implications

This study provides several practical contributions. The proposed framework demonstrates potential benefits to businesses in applying this research concept to social commerce websites. Of particular importance is that the paper offers a greater understanding of how different social support forms could be implemented and the corresponding impact that they could have on users’ purchase intentions for Internet-based businesses. It also reveals that a range of forms of social commerce support, such as emotional and informational assistance, are pivotal to enhancing users’ trust and purchase intention. This trust improves when companies introduce modern technological features, including simplicity of usage and usefulness, to their respective social commerce websites. Online platforms can include detailed descriptions of products or services, such as prices, materials and features. As a consequence, integrating social support via a thorough procedure with social and technological features can serve as the foundation of users’ trust. By increasing the attractiveness and reliability of websites, online companies can strengthen their corporate image and encourage their customers to purchase relevant products. For instance, they can highlight products on special offer with eye-catching artwork and engaging information. In addition, they can take a range of actions to attract more customers to participate in social commerce website activities, such as live streaming on Facebook with a charismatic presenter for live shopping. Companies can also provide specific product information based on customer preferences or launch tailor-made activities that facilitate interaction.

High-quality information that companies obtain from users enables them to perform analyses and improve website content. The positive impact of information technology on social
commerce, especially in terms of how effortless navigation is on online platforms and how useful the online system is, could enhance consumer purchase intention. Nevertheless, this study demonstrates that perceived usefulness does not significantly influence purchase intention, which suggests that respondents are not familiar about platform usability. As such, marketeers should propose alternative uses of social media or develop tutorials so that the perceived usability of their platform increases. For example, marketers could offer alternative payments and delivery options. Furthermore, social commerce platforms execute additional marketing strategies on a frequent basis which are cost-effective to improve organisations’ prospects and profits. The findings should encourage newly established companies to make extra efforts to maintain amicable relationships with their customers via social commerce platforms in the hope of expanding their consumer base. Enterprises could apply innovative business strategies to promote their latest products or services with the aim of gaining higher revenue or making profit while forming sustainable relationships with customers. In sum, increasing purchase intention via innovative business strategies could add economic value to newly established businesses during initial ventures on social commerce platforms.

5.3 Limitations and future lines of research

This paper has some limitations, which paves the way for an alternative strategy for future research. As this is a pilot study, future researchers could increase the number of respondents and conduct a comprehensive empirical study. Given that some of the respondents were students, the findings might not be generalisable to the entire population. Future academics could widen the scope of research by integrating other theoretical elements of the TAM and social support to determine consumer purchase intention on social commerce platforms. It has been observed that several existing theories underlying the social support concept include social integration and social interaction theories (Lakey & Cohen, 2000). Thus, this study recommends that future researchers incorporate the theories with the TAM, which might provide valuable insights into the theoretical implications of raising consumer purchase intention on social commerce websites. Moreover, external variables, such as subjective norms, are not considered to be comparable to the TAM. Future lines of research on social commerce may wish to incorporate the theories for a more comprehensive understanding while excluding the relationship between perceived ease of use and perceived usefulness to create a simpler model.

Author contribution

Conceptualization, N.M.; data curation, S.S.A.; formal analysis, N.M. and M.M.; investigation, M.H.A.; methodology, Z.K.M.M.; project administration, N.M.; software, M.M.; supervision, S.S.A.; validation, M.H.A. and S.S.A.; writing—original draft, N.M. and S.S.A.; writing—review & editing, N.M., M.H., and S.S.A. All authors have read and agreed to the published version of the manuscript.

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Integrating the social support theory and technology acceptance model of social commerce websites


