

Understanding factors affecting social commerce purchase behavior: A longitudinal perspective

Abstract

The use of social media has experienced a surge in popularity globally in recent years, with a rapidly increasing rate of adoption. Retailers are experimenting with various strategies to promote their products and services to customers, taking advantage of the popularity of these websites. Nevertheless, there is significant controversy within the scholarly and practitioners regarding the main motivations of consumers purchase behavior in the social commerce (SC) setting, as well as the effective techniques that may make them a viable alternative for future business endeavors. Drawing upon value motivation theory and prior research on privacy/security in the SC setting, our study developed an integrated model to understand the impact of utilitarian value, hedonic value, perceived privacy/security, and trust at social commerce platform (SCP) on purchase intentions via social media over time. This study employed two-wave data (“T = 736 and T+1 = 601”) and used the “cross-lagged panel” technique to analyze the “longitudinal data”. The results of this study offer meaningful insights about the cause-and-effect relationship and significant effect of utilitarian value, hedonic value, and perceived privacy/security on consumer trust and purchase intentions. Furthermore, it suggests that customer trust plays a mediating role on these relationships over time. This study offers meaningful implication for theory and practice.

Keywords: Social shopping behavior, Utilitarian value, Hedonic value, Perceived privacy/security, customer trust, Longitudinal examination.

1. Introduction

Social commerce expands e-commerce using social media and Web 2.0 tech for online businesses (Wu et al., 2023), and it is a burgeoning domain experiencing swift growth in popularity (Abdelmoety et al., 2022; Zhao et al., 2023). Social commerce was initially introduced when Yahoo launched a user-powered shopping platform called Shoposphere, which allows users to create their shopping communities and share product recommendations and reviews with others (Aboul-Dahab et al., 2021; Rothberg, 2005; Vinoi et al., 2024). In the Internet, social commerce emerged as a relatively recent online platform enabling customers to swap information, experiences, and opinions about a product or a service (Agag, 2019; Nakayama and Wan, 2019). While a universally accepted definition of social commerce is lacking (Agag et al., 2023a, Esmaeili et al., 2019), it generally pertains to integrating e-commerce functions within social media platforms, often utilizing Web 2.0 software and social networks for distribution purposes. Social commerce is currently regarded as a vital component in retailing; social networking has become a dominant strategy in the contemporary retailing industry, catering to the postmodern consumer's desire for personalized and communal brand interactions. In addition, “the COVID-19 pandemic” has profoundly impacted various retailers, necessitating the utilization of technology as a crucial factor for business survival, particularly in the social commerce setting (Abeds, 2020, 2022; Elshaer et al., 2024). The concept of SC has sparked an abundance of interest from researchers due to the swift growth of e-commerce (Agag et al., 2020; Helmy Mohamad et al., 2022; Pang and Zhang, 2024; Xu et al., 2023).

At the beginning of 2023, Algeria had 32.09 million internet users, representing a 70.9% internet penetration rate among the total population. By January 2023, Algeria had 23.95 million social media users, accounting for 52.9% of the total population (Agag et al., 2024a; Kemp, 2023). It is a significant market opportunity for retailers and industries to adopt social network sites to boost their sales performance. E-commerce has emerged relatively recently in Algeria. Simultaneously, it is experiencing growth and expansion. The e-commerce value is expected to reach revenues of

US\$1,068.00 million in 2023, with an 11.34% annual growth rate, and user penetration to e-commerce is projected to increase from 33.2% in 2023 to 36.2% by 2027 (Statista, 2023). Electronics, beauty and health, furniture, toys, and fashion are the most frequent products sold in e-commerce. Thus, with the rising number of social platform individuals and e-commerce infrastructure, social commerce may become a promising business for many retailers in Algeria. Even though social commerce has become increasingly popular, its use in Algeria is still in its initial stage, and only a small number of traders were able to build and operate a successful business out of social commerce (Agag et al., 2023b; Belghanami, 2022). There needs to be more comprehensive studies on the factors affecting behavioral intention toward social commerce in Algeria. This country possesses unique cultural aspects, norms, and economic development, which could challenge the generalization of existing theories on users' adoption of social commerce. While customers intent in social commerce has been studied in various cultures, such as the UK, USA, Taiwan, and Saudi Arabia (Elshaer et al., 2024; Khan et al., 2022; Mou and Benyoucef, 2021; Qin and De-Juan-Vigaray, 2021), this topic has not been explored in Algeria.

Gaining insights into customer behavior within social commerce is now vital for retailers striving to enhance consumer experience and gain access to their social connections (Agag and Eid, 2020; Zhang and Benyoucef, 2016). Multiple theories and frameworks have been developed to comprehend social commerce intention (Agag and El-Masry, 2016; Elshaer et al., 2024; Han, 2023; Lam et al., 2019; Zhao, Xu, et al., 2023; Zhao, Hu, et al., 2023), with “the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology” (UTAUT) being prominent, focusing on ease of use and perceived usefulness (Agag et al., 2019; Mou and Benyoucef, 2021). Instead, some studies adopt social science-based theories such as trust transfer theory (Han, 2023) and social learning theory (Agag et al., 2024b; Chen et al., 2017), recognizing the influence of peers' opinions, interactions, and perceived social pressures on consumer behavior in social commerce adoption. Psychological theories such as “the Theory of Planned Behavior (TPB) and the Theory of Reasoned Action” (TRA) highlight the significance of the beliefs, attitudes, intentions, and behavior chain in

this context. The most comprehensive and dynamic framework is “the S-O-R model”, which is initiated in the consumer behavior field considering the stimulus-organism-response chain of effect (Djafarova and Bovees, 2021; Kang et al., 2021; Yan et al., 2023).

Table 1 demonstrate prior research on social media and the different theories that has been utilized to explain and understand factors affecting consumers to social shopping behavior. Significant scholarly articles explore consumer behavior in relation to SCPs (Alghamdi and Agag, 2023a; Tseng et al., 2023) and the online community context (Abedini et al., 2023). Additionally, some investigations have found that customers trust towards social commerce platforms remains consistently low (Alghamdi and Agag, 2024; Tseng, 2023). If customer confidence in SCPs diminishes, customers may postpone or refrain from purchasing or utilizing SCPs, which could limit the expansion of SCP commerce. We perceive this as an issue since depending on seller-hosted systems for buying can limit the range of pre-buying information that customers depend on, hence promoting less than ideal purchasing decisions and allocation of resources. Our examination seeks to fill this research gap by examining the significant impact of perceived privacy and perceived security on customer trust and purchases intentions.

Insert Table 1 about here

In addition, prior studies affirm the idea that purchasing via social media can offer both utilitarian and hedonic values (e.g., Alghamdi and Agag, 2023b; Jones et al., 2006; Wu and Li, 2018). “Hedonic shopping value” pertains to the satisfaction derived from the sensory, imaginative, and emotional elements of the shopping experiences. On the other hand, “utilitarian shopping value” refers to the efficient acquisition of product and/or information, emphasizing a “task-oriented, cognitive, and non-emotional outcome of shopping” (Alsuwaidi et al., 2022; Wu and Li, 2018). Utilitarian shopping value refers to the value derived from the practical aspects of a shopping trip, while “hedonic shopping value” refers to the value derived from the experiences themselves, regardless of practical

considerations (Alyahya et al., 2023a; Jones et al., 2006). Significantly, a considerable number of published studies has emphasized the need to further investigate the significant connections between retail outcome characteristics. Significantly, numerous studies have made calls to further examine the significant role of hedonic and utilitarian value in the social commerce setting (Alyahya et al., 2023c; Wu and Li, 2018). Therefore, our research responds to this call by exploring the relationships between hedonic value, utilitarian value, customers trust, and purchase intentions in the social shopping behavior environment. Accordingly, this paper aims to explore the following questions:

RQ1: “What is the influence of utilitarian, hedonic value, perceived privacy/security on social shopping behavior”?

RQ2: “Does customer trust mediate the link among utilitarian, hedonic value, perceived privacy/security and social shopping behavior”?

RQ3: “How do the utilitarian value-hedonic value-perceived privacy/security-trust- and social shopping behavior hypotheses hold up when tested utilizing the cross-lagged panel method (CLPM) of analysis of longitudinal data”?

This study makes theoretical contributions to the previous examinations in various methods. First, this examination provides a thorough analysis of how “utilitarian value, hedonic value, and perceived privacy/security impact customer trust and purchase intentions” in the social commerce setting. Furthermore, it investigates how customer trust plays a mediating role in the connections among these variables and buying behaviors. Therefore, our study responds to the call that has been made by prior research for further exploration of the significant role of perceived privacy and perceived security in the social commerce setting (e.g., Alyahya et al., 2023b; Tseng et al., 2023). This study also highlights the significance of CLPM in analyzing the lagging impacts of factors that influence consumers' social buying behavior. Prior research in this field has primarily produced descriptive findings, as indicated by research performed by Jones et al. (2006), Tseng et al. (2023), and Wu and Li (2018). This study applies the CLPM to quantify and analyze the causal impacts over time in the factors that influence

customer social purchasing behavior. The data used for analysis includes two waves of data obtained from retail consumers in 2022 (T) and 2023 (T+1).

This paper is structured as follows: The next section conducts a literature review on the theoretical lenses of our study. In section 3, we develop the conceptual framework and study hypotheses. Section 4 concerns the study method and section 5 demonstrate our study analysis and findings. Section 6 shows the discussion and implication of our study. Section 7 demonstrates the main limitations of our examination and directions for further examinations.

2. Literature review

2.1. “Social commerce”

While SC lacks a standardized definition, it typically implies integrating e-commerce initiatives within the social media setting, often utilizing “Web 2.0 software” and social networks (Abeds, 2020). SC is comprised of two main types. The first involves general social networking sites (SNSs) incorporating commerce features, enabling users to conduct online transactions. The second type includes traditional e-commerce websites that integrate social aspects, like "like" or "share" buttons, to enable social collaborations while shopping online. “Compared to traditional e-commerce”, social commerce has two main characteristics (Andonopoulos et al., 2023; Chen and Shen, 2015). First, it stands apart from traditional e-commerce by integrating “social media platforms such as Facebook”, X, Instagram, or WhatsApp and leveraging the key features of the social web, such as digital profiles, relational ties, and network transparency. Second, unlike conventional e-commerce, “social commerce” focuses on social media-driven commercial activities, allowing users to share consumption experiences freely, seek advice from online friends, and foster a sense of community rather than relying solely on the system-based structure of e-commerce (Chen and Shen, 2015; Sharma et al., 2023).

From the consumer power perspective, understanding buying behavior within a SC context becomes significant for retailers aspiring to boost consumer influence and leverage the potential of their social networks (Gutierrez et al., 2023; Zhang and Benyoucef, 2016). Many theories and models were leveraged to enlighten the success of social commerce from a consumer behavior perspective (Alyahya et al., 2022; Esmaeili et al., 2019). Despite the bulk of theories, some inconsistencies among studies exist (Alzaidi and Agag, 2022; Eid et al., 2020; Mou and Benyouicef, 2021). The following are some theories and models, but they are only a partial list. The most common theories used are the TAM. TAM emphasized that consumer intention to adopt social commerce is primarily determined by consumer attitudes, which are determined by ease of use and perceived usefulness since they are features of social commerce platforms. Motivation theory, in its turn, gained some attention in building theoretical foundations in the “social commerce” literature (Zhang and Benyoucef, 2016), suggesting that a consumer purchase intention in the SC context is determined by utilitarian and hedonic motivations (Akram et al., 2021; Eid et al., 2019; Sohaib and Han, 2023).

In the SC context, Hajli (2018) draws on insights from marketing and information systems literature to develop a novel model that improves our understanding of social commerce behavior. The model is examined, and the findings reveal that customers trust and purchase intentions are influenced by social commerce constructs (CSCs), which comprise (1) ratings and reviews, (2) referrals and recommendations, (3) and interest groups, forums and communities (Sheikh et al., 2019). For a more comprehensive overview, some studies have adopted S-O-R framework, developed by psychology researchers to identify and evaluate social commerce stimulus (e.g., visibility, guidance shopping, image, review quality; ease of use, interactivity) on organism (e.g., trust, experience, social presence, values), and the effect of organism on responses (e.g., purchase and continuance intention, user stickiness) (Elbaz et al., 2018; Shamim et al., 2024; Qu et al., 2023; Tuncer, 2021; Vazquez et al., 2023). Our study utilizes the utilitarian and hedonic motivations perspective to understand their effects on customer trust and purchase behavior.

2.2. Utilitarian and hedonic value perspective

Motivation theory gained some attention in building theoretical foundations in the “social commerce literature” (Elhoushy et al., 2020; Shaalan et al., 2022; Zhang and Benyoucef, 2016). As outlined by Babin et al. (1994), shopping values offered to consumers in the retail sector encompass two dimensions: utilitarian and hedonic shopping values. The study emphasized that hedonic shopping values can impact unplanned shopping behavior, whereas utilitarian shopping values do not have the same impact on such behavior (Babin et al., 1994; Selim et al., 2020). The term values refer to perceived incentives or benefits that motivate consumers to engage in social commerce, known as motivations. Utilitarian shopping values are typically derived from deliberate and task-oriented shopping experiences, representing a more purpose-driven and rational approach. On the other hand, hedonic shopping values emerge from irrational, emotional shopping journeys driven by increased excitement, fantasy fulfillment, and the desire for escapism (Qu et al., 2023).

Cost savings, convenience, a wide selection of options, easy access to information, and customization influence utilitarian motivations. In contrast, hedonic values are shaped by elements corresponding to the sense of adventure, novelty, the enjoyment of social shopping experiences, relaxation, the social value linked with products, and the status they confer (Akram et al., 2021; To et al., 2007). The utilitarian and hedonic motivations have been used widely by researchers while investigating physical retail stores (Arnold and Reynolds, 2003; Ribeiro Coimbra et al., 2023) and e-commerce context (Almeida Lucas et al., 2023), while they are also quite valuable for social commerce context and live streaming (Wongkitrungrueng and Assarut, 2020). Founded in previous studies, utilitarian and hedonic motivations are complex constructs, and their relative significance may vary among cultures and contexts. This study seeks to examine the effect of utilitarian value and hedonic value on customer trust and purchase intentions.

2.3. Perceived security/privacy of SCP

Previous studies identified significant numbers of ethical issues (i.e., “privacy, security, reliability, and deception”) in the online shopping setting (e.g., Agag, 2019; Elbeltagi and Agag, 2016; Shehawy et al., 2024). Social commerce introduces risks to customers, including exposure to “fraudulent vendors”, theft, and unethical handling and exploitation of “personally identifying information” (PII). Paradoxically, the perilous consequences and the implicit consent of consumers that all of their digital communication is being gathered, monitored, interpreted, and exploited for data; so, the protection of information privacy is forfeited. Customers, however, continue to express issues on the safeguarding of their personal information by SCPs against third-party access.

In order to adapt to the transition from “social networking sites” (SNS) being used for product evaluations and reviews to “SCP” buying, digital platforms need to enhance their “privacy and security measures”, with a focus on prioritizing customers protections. Customers ought to be safeguarded from deceptive information, such as the dissemination of fabricated positive user reviews. In order to demonstrate the existing ethical issues in e-commerce platforms, we conduct a study on the development of customer trust in social commerce communities. The exposure of customers privacy and security violations (Fung, 2018; Shehawy et al., 2018; Wood et al., 2021), particularly in the case of the leading social networking platform (i.e., Facebook), has generated apprehension and skepticism among certain customers, undermining their confidence in the reliability of SCPs. A moral quandary arises when considering the utilization of customers clickstream data. SCP platforms offer users the opportunity to freely and conveniently express their opinions and ideas. However, these platforms also enable providers to engage in dubious practices such as extracting users’ data to create profiles and segments, targeting marketing content towards them, conducting market studies, and even selling compiled customers dossiers. When necessary, the documented “PII” can create a sense of vulnerability among users and, depending on the circumstances, may cause individuals to be reluctant to share, participate, and conduct transactions. Customers encounter a dilemma; they have the option to benefit from free services such as medical support groups, yet the act of revealing personal and sensitive information can also give rise to apprehension (Mekovec and

Hutinski, 2012; Tseng et al., 2023). Certain customers may harbor perpetual skepticism regarding the ability of SCP to safeguard their sensitive information. Security encompasses the measures, both in terms of technology, physical infrastructure, and established protocols, that ensure the confidentiality of transaction and PII. “The security of PII” is a customer concern that hinders the exchange of information on “SCPs”. The inclusion of financial transactions resolution has significantly increased the temptation for engaging in unethical conduct. Agag (2019) argue that privacy cannot be attained without sufficient security measures, and security methods alone cannot completely ensure privacy protection. Therefore, our study seeks to investigate the effect of perceived privacy and perceived security on customer trust and purchase intent.

2.4 Customer trust at SCP

In the absence of physical contact between involved parties in an online setting, consumers face high uncertainty and increased perceived risk compared to offline settings, which is what makes consumer trust primarily a critical factor for interactions and transactions (Al-Adwan and Yaseen, 2023; Corbitt et al., 2003; Han, 2023; Lee, 2016; Verhagen et al., 2006; Youssef et al., 2022). From a relationship marketing perspective, Morgan Hunt (1994) highlighted the vital role of trust in developing and maintaining successful interactions with customers. Trust can be defined as “the feeling of reliability and integrity in the exchange partner's behavior” (Morgan and Hunt, 1994). Trust is likely to play a decisive role for consumers contemplating social commerce as their preferred purchase method (Sharma et al., 2019; Tseng et al., 2023; Wang et al., 2022).

To comprehensively comprehend the trust nature in fostering fruitful commitment and positive consumer responses, researchers expanded and validated a multidimensional model in SC setting. For instance, Chen and Dhillon (2003), introduced a three-dimensional trust model for an online providers, including “competence, integrity, and benevolence”. “Competence” assesses a firm's capability to fulfill its promises. Integrity reflects the company's consistent, reliable, and honest conduct. Benevolence, the third dimension, gauges the company's willingness to prioritize consumer

interests over its own, demonstrating sincere concern for the well-being of its customers (Alrawad et al., 2023; Chen and Dhillon, 2003; Ferm and Thaichon, 2021).

Given the complex features of social commerce, it is assumed that numerous components could influence trust in social commerce (Nadeem et al., 2020; Qin and De-Juan-Vigaray, 2021). Sharma et al. (2019) conceptualized two main components of trust: trust in the company and the Internet. More extensively, in social-technical theory, a study conceptualized the trust dimensions in line with domains: “trust in social media, trust in e-commerce sites, trust in social commerce features, and trust in consumers” (Lin et al., 2019). Trust associated with interacting with e-vendor is defined as an “individual's willingness to rely on the behaviors of sellers in the social commerce platforms” (Aloqool and Alsmairat, 2022; Hajli, 2015; Lee, 2016; Zhao et al., 2019). The level of trust associated with online vendors has been identified as a positive indicator of consumers' likelihood to visit and make purchases on e-commerce platforms (Kwahk and Kim, 2017; Wang et al., 2022). Therefore, when consumers perceive online sellers as lacking trustworthiness and commitment, they avoid potential risks associated with their participation in commerce.

Customers who have a lack of trust in SCP or branded SCP applications are unlikely to engage in electronic transactions. Hajli et al. (2017), indicated that customers often encounter various uncertainties while assessing the content of social commerce platforms during pre-purchase buying. The primary cause of the confusion is from the fact that most of the “social commerce” content consists of unverified consumer-generated opinions and product endorsements. Trust concerns may develop when customers have limited opportunity to verify product information or when they perceive that the content is biased, such as in the case of sponsored testimonials. Trust is commonly believed to be present in a context that is characterized by uncertainty and risk (Bhattacharya et al., 1998), and it is acknowledged that trust is closely connected to uncertainty (Hardin, 2002). Due to the intangible character of SCPs transactions, it is necessary to establish customers trust in order to reduce uncertainty and risk in online contexts and buyer-vendor interactions (e.g., Agag et al., 2016).

Trust has been defined as a construct that can be viewed as either having a single dimension or multiple dimensions (Tseng et al., 2023). “Aiken and Boush” (2006) define trust as having two main dimensions: “credibility”, which refers to the conviction that the other party in the exchange is dependable, and benevolence, which refers to the notion that the exchange partners are motivated to achieve mutual benefits through the interactions. Furthermore, McKnight et al. (2002) pointed out that trust is commonly understood to include the aspects of “benevolence, integrity and credibility”.

3. Conceptual framework and hypotheses development

Drawing upon “hedonic and utilitarian value perspective” (Babin et al., 1994) and prior studies in the social commerce context (e.g., Babin et al., 2005; Jones et al., 2006; Tseng et al., 2023; Wu and Li, 2018), our study developed an integrated model to understand factors affecting customer purchase intentions at SCP. Figure 1 demonstrates that both social “shopping value” (i.e., “utilitarian and hedonic value”) and perceived privacy/security act as a main driver of customer trust at SCP, which in turns influence customer purchase intentions at SCP.

Insert Figure 1 about here

3.1. Hedonic value, utilitarian value, trust, and purchase intentions

Prior research has established the impact of “hedonic and utilitarian motivations” on customers' purchasing decisions within the e-commerce setting. For instance, Sagala and Sumiyana (2020), incorporating both values into e-commerce platforms can boost business sustainability. Budiharseno (2020) discovered that both hedonic and utilitarian values substantially impact internet purchases in Indonesia. In the social commerce setting, Chen et al. (2017) confirmed that hedonic motivations (affective assessment) and utilitarian motivations (cognitive assessment) have a significant and positive effects on individuals' purchasing intentions. Similarly, Gan and Wang (2017) demonstrated that utilitarian, hedonic, and social values positively influence consumer purchase decisions. Moreover, Hashim et al. (2015) revealed that consumers' intention to adopt s-commerce determines

adventure, idea, gratification, sociality, and value, with hedonism being the most prominent. In the same setting, Kim et al. (2013) revealed that hedonic and social values play a role in shaping intentions to engage with SC. Akram et al. (2021) and Doha et al (2019) indicated that both “hedonic and utilitarian value” are key predictor of purchase intentions in the SC environment.

Previous examination has indicated that several attributes of customers, retailers, and platforms (Tseng, 2023; Yahia et al., 2018) are significant factors in establishing trust in online settings. The factors commonly studied as predictors of online trust include “reputation, perceived level of security, quality of service, and perceived usefulness” (Kim and Peterson, 2017). The majority of these values can be considered utilitarian in the context of online commerce, and they appear to impact a specific aspect of trust. Trust is a complex concept that encompasses both “cognitive and affective elements” (McAllister, 1995). Previous studies on the factors that contribute to trust in e-commerce/s-commerce have failed to consider all the utilitarian and hedonic values that can impact trust in both dimensions (Wongkitrungrueng and Assarut, 2020). "Cognitive trust" refers to the individuals' confidence in and willingness to rely on the other party's knowledge and ability to perform (Johnson and Grayson, 2005). In the s-commerce setting, this term pertains to customers' confidence in the accuracy of the information they receive, their trust in the online service provider's recommendations, their assurance of receiving the requested product, and their expectation of the product meeting their requirements. Therefore, customers should have more confidence and trust in the SCP to purchase via these social platforms. Thus, we propose:

H1: “Hedonic value has a significant positive impact on customer trust at SCP”.

H2: “Hedonic value has a significant positive impact on customer purchase intentions at SCP”.

H3: “Utilitarian value has a significant positive impact on customer trust at SCP”.

H4: “Utilitarian value has a significant positive impact on customer purchase intentions at SCP”.

3.2. Perceived privacy/security of SCP, customer trust, and purchase intentions

The prior research on the marketing ethics has long examined security concerns (Agag, 2019; Roman, 2007). In particular, social networking sites (SNSs) have faced criticism due to customers' occasional lack of faith in the security of these platforms (Tseng et al., 2023). Perceived security reflects customers confidence in the level of security provided by SNSs (Al-Omoush et al., 2022). Due to increasing worries about the inadequate security in SNSs, as highlighted by Khan et al. (2022), there is an ongoing requirement to assess customers' beliefs regarding the security of SNSs. Customers perceptions of security on SNSs refer to a customer's sense of control over their data and activities on the platform (Kim and Park, 2013). When customers perceive a sense of security and trust in a firm or online retailers, we anticipate an increase in their frequency of purchases, higher order sizes, and a reliance on the e-retailer to consistently deliver advantages. According to Alzaidi and Agag (2022), trust is formed by the presence of “safety, credibility, and security”. According to Shin (2010), the growth of customers trust is heavily influenced by the perception of security. Historically, assessments of customers perceived security (Wu et al., 2022) have focused solely on technical elements in order to gauge customers opinions of the “security of a technology platform”, such as "authentication and confidentiality". This research broadens the assessment of customers perceptions of security, building upon the work of Tseng et al. (2023), who define “perceived security” as the beliefs regarding the overall safety and welfare of customers. Moreover, Cutshall et al. (2022) contend that customers' overall views of security have an impact on the development of trust (Roman, 2007) and behavioral intentions (Agag, 2019). According to Agag et al. (2016), security has a significant effect on purchase intentions in the online retail setting.

The privacy issues in the SC environment are contingent upon the degree of identifiability of information, the recipients of this information, and the manner in which it will be utilized (Anic et al., 2019). Privacy typically pertains to the comprehension of how personal information divulged by the individual will be obtained and subsequently utilized, indicating the extent of an individual authority over personal information (Zhang et al., 2022). According to Shin (2010), giving system individuals the ability to control the privacy of their information is likely to create a sense of

confidence in SNSs. Privacy indicators valued by SNSs individuals encompass privacy seals and privacy declarations (Li et al., 2022). According to Shin (2010), when privacy systems show signs of protecting privacy and improving privacy measures, it can eventually result in the development of trust. Recently, Tseng et al. (2023) revealed that security and privacy concerns had a significant impact on customer trust at SCP and purchases intentions. Therefore, we posit:

H5: “Perceived privacy of SCP has a significant positive impact on customer trust at SCP”.

H6: “Perceived privacy of SCP has a significant positive impact on customer purchase intentions at SCP”.

H7: “Perceived security of SCP has a significant positive impact on customer trust at SCP”.

H8: “Perceived security of SCP has a significant positive impact on customer purchase intentions at SCP”.

3.3. Customer trust at SCP and purchase intentions

Previous examinations revealed that trust at SCP is a key driver of customer purchase behavior. For instance, Tseng et al. (2023) revealed that customer trust at SCP is a key predictor of purchase intentions. Numerous examinations suggested that trust plays a critical role in the success of social commerce (Al-Tit et al., 2020; Lee, 2016; Zhao et al., 2019). The meta-analysis study by Wang et al. (2022) found that trust has a more significant influence on purchase intention when compared with other factors. Furthermore, Attar (2021) revealed that the level of trust and surface credibility plays a substantial role in improving customers satisfaction and intention to purchase in the online context. Additionally, prior explorations suggested that customers trust has a significant impact on purchase intention (Othman et al., 2019; Shekhar and Jaidev, 2020) and continuance purchase intention in social commerce settings (Zhao et al., 2019). Another study showed that factors including reputation, information quality, and transaction safety, which constitute trust-building blocks, exhibit a significant role in improving purchase intentions in the SC environment (Maia et al., 2019). The findings align with prior e-commerce research, indicating that the seller's reputation reduces risk perception, enhances trust, and cultivates purchase intentions (Alrawad et al., 2023; Gvili and Levy,

2023; Karunasingha and Abeysekera, 2022). Hence, customers trust at SCP is a key driver of their purchase intentions. Therefore, we posit:

H9: “Customer trust at SCP has a significant positive impact on purchase intention”.

3.4. “Longitudinal perspective”

Most of prior research analyzed cross-consumer data collected at a certain moment in time ("cross-sectional data"). This could be the reason for the conflicting relationships shown between social shopping value, perceived privacy/security, customer trust, and purchase intentions. To yet, there has been no examination of time-series data gathered from customers that may be utilized to comprehend the variables influencing customer social shopping behavior over time.

When examining cross-sectional data or considering the short-term perspective, there is a direct and positive correlation between social shopping value, perceived privacy/security, consumer trust, and purchase intentions. Time series data is essential for a good understanding of the connection, as indicated by Bernhardt et al. (2000) and Tseng et al. (2023). While immediate purchase intention may not be directly affected, long-term benefits are typically observed when initiatives are implemented to enhance the value of social shopping, perceived privacy/security, and customer trust (Jones et al., 2006; Tseng et al., 2023).

Retailers can observe the impact of social shopping value, perceived privacy/security, and consumer trust on purchase intention, providing that other factors remain constant over time. This characteristic is exclusive to “time-series data”. Nevertheless, “cross-sectional data” might be misleading as it compares one store to another, without considering that both retailers may encounter changes in their customers' purchase intention due to factors unrelated to social shopping value, perceived privacy/security, and customer trust.

The utilization of cross-sectional data demonstrates the correlation between the allocation of short-term resources towards improving social shopping value, perceived privacy/security, and customer trust. The impact of these expenses decreases over time. Attempts to enhance these elements may also require a certain amount of time to provide positive results. The influence of social shopping value, perceived privacy/security, and customer trust in period t on consumer trust in period t is evident. However, it remains uncertain if this will ultimately lead to a buy intention in “period $t + n$ ”. Hence, it is contended that “cross-sectional” research obscures the fundamental influence of social shopping value, perceived privacy/security, and consumer trust on purchase intention. An examination of the interactions between these factors necessitates a longitudinal approach.

4. Research method

4.1. “Sample and data collection”

We designed the study questionnaire in line with previous research in the SC setting. We used a reputable market research firm to gather data from consumers in Algeria. This marketing firm has access to a representative panel of customers made up of greater than 1.3 million registered consumers.

Brands and e-retailers have a significant presence on social commerce platforms (SCPs) like Facebook through their own branded fanpages. The present investigation investigated the Meta SCP (formerly known as Facebook). SCP variants encompass dimensions such as dimensions like as “size”, “reputation”, emphasis on information distribution or mutual engagement, “privacy policies”, and the volume and calibre of user-generated material. Nevertheless, its primary objective is to create associations among branded merchandise, branded shopping encounters, and potential or current customers (Kim and Park, 2013). Consequently, the findings presented here may be applicable to various SCP platforms. The social network platform selected for social commerce is Facebook, justified by two reasons. Firstly, Facebook's user base in Algeria reached approximately 22.45 million

users in early 2022, surpassing existing alternatives of social media sites. Secondly, the platform's advertising reach in Algeria covered about 82.3 percent of internet users, notably higher than the rest of the social media sites (Kemp, 2023).

The required data were collected at two-times intervals in August 2022 (T1) and August 2023 (T+1). At time T, we approached 1000 consumers who fulfilled the requirements of the required data. In total, 753 respondents were received at time T. We omitted 17 missing data, thereby 736 responses were available for our examination. At time T+1, same participants at Time T were contacted. We received 609 respondents; however, 8 missing data were omitted due to missing data. In total, 601 responses were valid for our analysis.

Table 2 shows the study sample for T and T+1. Most of respondent were male (46%), had a bachelor's degree (52%), and were using social networks for more than three hours per day (39%). We performed a pilot test using a sample of 50 consumers. Based on their recommendations, some minors change to some items were made to enhance the relevance and accuracy of the questionnaires.

Insert Table 2 about here

4.2. Measures

We utilized established and validated scales from previous research to measure this study constructs (see appendix 1). Specifically, “utilitarian value” was measured using three items adopted from Wu and Li (2018). Hedonic value was measured utilizing three items adopted from Wu and Li (2018). Trust at SCP was evaluated employing three items adopted from Lin and Lu (2011). Perceived privacy was measured employing three items adopted from Tseng et al. (2023). Perceived security was evaluated utilizing two items adopted form Tseng et al. (2023). Finally, purchase intentions were evaluated employing three items adopted from Nadeem et al. (2017). All items were assessed using five-points Likert scale.

4.3. Common method variance (CMV) and non-response bias

Following the guidelines of Hulland et al. (2018), this research included both a priori and post hoc procedures. In accordance with the priori technique, the survey questionnaire items for each variable were segregated into distinct sections. The study employed distinct response scales for both the independent and dependent constructs. The confidentiality of the respondents' identities was maintained (Hulland et al., 2018; Podsakoff et al., 2003). Additionally, a paired t-test was conducted on two randomly divided sets of data, which provided confirmation that there was no presence of non-response bias. The study additionally examined the post-hoc approach. The research included two inquiries within the marker variable. The correlations among the marker factor and the research factors are found to be statistically insignificant, as seen by the correlation coefficients ranging from -0.294 to 0.037, $p > 0.05$). Therefore, common method bias was not a major concern. Our study also conducted a test for non-response bias by comparing the means of study variables for early and late responses (Armstrong and Overton, 1977). The analysis revealed that there are no significant differences between the two groups.

4.4. Regarding our sample representative

The sample profile of the participants demonstrated in Table 2 align with the characteristics of current users of social commerce (Statista, 2022). Additionally, the samples profile aligns with prior research in the social commerce settings (e.g., George et al., 2023; Fu et al., 2020). Moreover, the sample size obtained (i.e., $T=736$ & $T+1=601$) exceeds the recommended minimum of 10 times the maximum number of connections pointing to any latent factor in the conceptual framework, whether they are inner or outside model linkages (Bentler and Chou, 1987; Hair et al., 2010). The “Kaiser-Meyer-Olkin” measure of sampling adequacy yielded a value of 0.83, surpassing the recommended threshold of 0.60. The “Bartlett's test of sphericity” provides a significant values ($\chi^2 = 1602.92$, $p < 0.01$), indicating that the use of a data compression technique like structural equation modelling can yield favorable outcomes.

4.5. Assessment of endogeneity

We conducted a thorough analysis of endogeneity biases to assure the reliability and validity of the findings. According to Hult et al. (2018), a significant number of users of PLS-SEM have disregarded this matter due to the predictive nature of PLS, which renders endogeneity insignificant. Nevertheless, the issue of endogeneity has been a substantial worry and poses a serious risk to the validity of the findings. Therefore, researchers should explicitly disclose any bias resulting from endogeneity in the results obtained by PLS-SEM (Latan, 2018). The Heckman test was conducted using the Stata software, and the results indicate that there is no presence of endogeneity bias in our research (Hult et al., 2018).

5. “Analysis and results”

This research employed a path analysis technique utilising “the partial least square–structural equation modelling (PLS-SEM) approach”. This examination utilises “WarpPLS v. 7” (Kock, 2020) to implement a methodology for constructing and evaluating measurement and structural models in order to conduct hypothesis testing. Path analysis approach is a valuable technique for assessing the predictive validity of structural models, as revealed by previous examination conducted by Hair et al. (2017). The proposed method demonstrates efficacy in managing smaller datasets compared to “co-variance-based” “structural equation modelling” (SEM) and effectively accommodate the issue of “multicollinearity” in a complex-mediated (“longitudinal”) study (Hair et al., 2017). In accordance with the works of “Marcoulides and Saunders” (2006), the utilisation of “PLS-SEM” is justified based on the fulfilment of specific criteria. These criteria include the assessment of the longitudinal models' predictive capacity in establishing causal relationships, the presence of sufficient sample sizes of 736 and 601 for each respective period, the inclusion of six latent constructs, indicator loadings that meet the acceptable threshold of 0.847 or higher, and intercorrelations between constructs that meet the minimum acceptable value of 0.11. The inclusion of these characteristics is crucial for the

development and evaluation of structural models that possess sufficient predictive capability (Hair et al., 2017).

5.1. Validity and reliability of the study variables

We followed to the suggested “two-step” technique to “PLS-SEM”, as outlined by Anderson and Gerbing (1988). The initial stage of measurement development involved the utilisation of “confirmatory factor analysis” (CFA). The utilisation of CFA aids in the assessment of “the psychometric properties” of the items in both “T and T+1”, encompassing aspects such as “validity and reliability” (Brown, 2015). The overview of the findings obtained from the “CFA” conducted on the “T and T+1” datasets can be demonstrated in Table 3.

According to the findings presented in Table 3, the findings reveal a strong alignment among the estimated model and the observed data. This is evident from the statistically significant and satisfactory indicator loadings on their respective estimated components or variables for both T and T+1. Convergent validity is demonstrated when there is a strong alignment between the items and the specified constructs. The indicators cross-loadings onto other variables were found to be weak and statistically insignificant, indicating the presence of discriminant validity. Table 3 additionally presents the permissible values, specifically those over 0.70, for the composite reliability. The aforementioned values indicate that the items and their associated constructs exhibit homogeneity, consistency, reliability, validity, and statistical utility in the context of developing and evaluating structural models (“Bagozzi et al., 1991; Fornell and Larcker, 1981; Hair et al., 2017; Kock, 2020”). The values of the “full collinearity variance inflation factor” (“FCVIF”), which range from 1.014 to 2.073, fall below the established threshold of 3.3 (Kock, 2020). This indicates that “multicollinearity” is not a concern in the analysis. Table 4 presents the intercorrelations among the factors utilised in the ensuing investigation. The diagonal elements at the topmost portion of the matrix represent the “square root of average variance extracted” (AVE) values, which are significantly larger than the intercorrelation coefficients. These values serve as additional evidence of satisfactory discriminant

validity of the construct (“Hair et al., 2017; Kock, 2020”). Table 3 presents a comprehensive overview of significant statistics, encompassing the “mean values” of the key components. The statistics indicate that the average values of the constructions in “T” were notably greater than those in “T+1”.

Insert Tables 3 & 4 about here

5.2. CLPM of path analysis

The second phase of “PLS-SEM” assesses the “predictive validity” of the “structural models” put forth by hypotheses H1 to H9. The current study employed a Cross-Lagged Panel Model (CLPM) to analyse “longitudinal data” (Alghamdi and Agag, 2024; Anderson and Kida, 1982; Roxas, 2022). This statistical approach allowed for the examination of the “significant direction and magnitude” of the temporal order of a set of variables across two distinct time periods. Consequently, this analysis facilitated the establishment of valid cause-effect relationships between the variables under investigation. The CLPM, as described by Anderson and Kida (1982), is a quasi-experimental design that offers a reliable method for evaluating factors in a repetitive manner and subsequently determining the value of the “temporal precedence” of one factor over another (“Martens and Haase, 2006”). This method is designed to identify the variable that is responsible for producing large impacts on another variable, or conversely, to identify cases of reverse causality. According to CLPM, when the independent variable X1, denoted as “X measured in t1”, is considered as the causal factor for the dependent variable Y1, denoted as “Y measured in t1”, it is expected that “X1” would also serve as a reliable temporal predictor for “Y2”, denoted as “Y measured in t2”. It is crucial to note that the magnitude of the association between variables “X1 and Y2” should exhibit a substantial and statistically significant difference compared to the impact of “Y1 on X2” (specifically, when “X is assessed at t2”). This comparison is necessary to eliminate the “possibility of reverse causation” and to develop the temporal primacy, or “causal effects”, of “X over Y” (Anderson and Kida, 1982). The assumptions of the CLPM, as proposed by Selig and Preacher (2009), encompass “synchronicity, stationarity, and stability”. Synchronicity is defined as the simultaneous measurement of focal factors

at a specific time point (e.g., t1) (Kenny, 1975). Our research involved the simultaneous measurement of HED, ULT, PRV, SEC, TRUST, and INT, at two time points, “t1 and t2”. This approach ensured that the data collected adhered to the assumption of synchronicity. The condition of stationarity necessitates that the structural model of HED-ULT-PRV-SEC-TRUST-INT exhibits no significant temporal variation. Stability pertains to the substantial durability of the links among the variables across a period of time, as evidenced by noteworthy autocorrelations of HED, ULT, PRV, SEC, TRUST, and INT between “t1 and t2” (Kenny, 1975). Table 5 displays the outcomes of the “CLPM” analysis.

Insert Table 5 about here

Model A serves as the foundational “stationary model”, illustrating the anticipated connections among the six constructs. It is estimated separately for T1 and T2. All of the intratime path coefficients linking HED-ULT-PRV-SEC-TRUST-INT are statistically significant. The confirmation of stationarity was obtained through the utilisation of the “Fisher's z test of difference” (Diedenhofen and Musch, 2015). This test was carried out to compare the path coefficients of the relationships between HED-ULT-PRV-SEC-TRUST-INT. The resulting z values were 1.430 ($p = 0.32$) and 1.120 ($p = 0.41$) respectively. Based on “the Fisher z-test” findings at a significance level of 0.05, it may be inferred that there are no statistically significant disparities. This suggests that the data exhibits sufficient and appropriate stationarity.

Model B is the “baseline model”, wherein the variables' values in “T1” exhibit autocorrelation with the values in “T2”. The present model illustrates the “autoregressive paths”, which serve to demonstrate the “relative stability” of the variables employed in the exploration (“Kenny, 1975; Martens and Haase, 2006”). The last three models are “cross-lagged models” that demonstrate the “stability models” by gradually including variables one by one to forecast the corresponding

dependent constructs at T2. “The cross-lagged structural models” demonstrate the relative strength of one variable as a temporal driver or causal factor of another (“Martens and Haase, 2006”).

Model E is the ultimate model in the analysis of CLPM, which encompasses the baseline models as well as the “cross-lagged effects” of the pertinent factors at Time 1 (T1) on the relevant factors at Time 2 (T2). The model has satisfactory “goodness of fit indices”, indicating that it possesses enough predictive capability for hypothesis testing.

5.2.1. Hypothesis 1: HED–TRU

HED1 demonstrates a statistically significant positive effect on INT2 ($b = 0.50^{**}$), exhibiting a medium effect size. Conversely, INT1 has an insignificant effect on HED2 ($b = 0.08$), with a small “effect size”. “The Fisher's z value” of 1.4310 ($p > 0.05$) provides support for the temporal primacy of HED over INT, thereby verifying hypothesis H1.

5.2.2. Hypothesis 2: HED–INT

The analysis of the CLPM reveal that there is a statistically significant positive association among HED1 and TRU2 ($b = 0.32^{**}$) with a medium effect size (0.29). Conversely, the impact of TRU1 on HED2 is indicated to be weak and not statistically significant ($b = 0.11$). “The Fisher's z value” of 3.0285 ($p = 0.001$) suggests that the beta coefficient for the links among HED1 and TRU2 is much larger than the beta coefficient for the links among TRU1 and HED2. This finding rules out the possibility of reverse causality and provides support for the hypothesis that HED has a positive causal effect on INT, supporting H2.

5.2.3. “Hypothesis 3”: UTL–TRU

UTL1 demonstrates a statistically significant positive effect on INT2 ($b = 0.62^{**}$), exhibiting a large effect size. Conversely, INT1 has an insignificant effect on UTL2 ($b = 0.12$), with a small “effect

size”. “The Fisher's z value” of 2.0945 ($p > 0.05$) provides support for the temporal primacy of UTL over INT, thereby verifying hypothesis H3.

5.2.4. Hypothesis 4: UTL–INT

The analysis of the CLPM show that there is a statistically significant positive association among UTL1 and TRU2 ($b = 0.51^{**}$) with a medium effect size (0.47). Conversely, the impact of TRU1 on UTL2 is indicated to be weak and not statistically significant ($b = 0.08$). “The Fisher's z value” of 1.3049 ($p = 0.001$) suggests that the beta coefficient for the links among UTL1 and TRU2 is much larger than the beta coefficient for the links among TRU1 and UTL2. This finding rules out the possibility of reverse causality and provides support for the hypothesis that UTL has a positive causal effect on INT, revealing support for H4.

5.2.5. Hypothesis 5: PRV–TRU

PRV1 demonstrates a statistically significant positive effect on INT2 ($b = 0.43^{**}$), exhibiting a medium effect size. Conversely, INT1 has an insignificant effect on PRV2 ($b = 0.10$), with a small “effect size”. “The Fisher's z value” of 2.5038 ($p > 0.05$) provides support for the temporal primacy of PRV over INT, thereby verifying hypothesis H5.

5.2.6. Hypothesis 6: PRV–INT

The analysis of the CLPM show that there is a statistically significant positive association among PRV1 and TRU2 ($b = 0.66^{**}$) with a large “effect size” (0.58). Conversely, the impact of TRU1 on PRV2 is indicated to be weak and not statistically significant ($b = 0.09$). “The Fisher's z value of” 2.1028 ($p = 0.001$) suggests that the beta coefficient for the links among PRV1 and TRU2 is much larger than the beta coefficient for the links among TRU1 and PRV2. This finding rules out the possibility of reverse causality and provides support for the hypothesis that PRV has a positive causal effect on INT, indicating support for H6.

5.2.7. Hypothesis 7: SEC–TRU

SEC1 demonstrates a statistically significant positive effect on INT2 ($b = 0.33^{**}$), exhibiting a medium effect size. Conversely, INT1 has an insignificant effect on SEC2 ($b = 0.13$), with a small “effect size”. “The Fisher's z value” of 3.2175 ($p > 0.05$) provides support for the temporal primacy of SEC over INT, thereby verifying hypothesis H7.

5.2.8. Hypothesis 8: SEC–INT

The analysis of the CLPM reveal that there is a statistically significant positive association among SEC1 and TRU2 ($b = 0.61^{**}$) with a large “effect size” (0.55). Conversely, the impact of TRU1 on SEC2 is found to be weak and not statistically significant ($b = 0.05$). “The Fisher's z value of” 1.9382 ($p = 0.001$) suggests that the beta coefficient for the links among SEC1 and TRU2 is much larger than the beta coefficient for the links among TRU1 and SEC2. This finding rules out the possibility of reverse causality and provides support for the hypothesis that SEC has a positive causal effect on INT, indicating support for H8.

5.2.9. Hypothesis 9: TRU–INT

The analysis indicates that TRU1 has a statistically significant effect on INT2 ($b = 0.23^{**}$), with a medium effect size. However, there is no significant association among INT1 and TRU2 ($b = 0.12$). “The Fisher's z value”, which was calculated to be 1.9203 ($p > 0.05$), providing support for the temporal priority of TRU over INT, hence verifying the hypothesis H9.

5. Discussion and conclusion

5.1. Key findings

The main aim of this study was to explore factors affecting customer social shopping behavior over time. Drawing upon the “utilitarian and hedonic value2 perspective as well as prior research in the social commerce setting, we developed an integrated model that includes social shopping value

(i.e., utilitarian value, hedonic value), perceived privacy/security, customer trust at SCP, and purchase intention. A longitudinal data was collected at “two waves” (“T = 736 and T+1 = 601”) and analyzed using the CLPM.

The results revealed that customers perceived security and privacy towards SCP were the strongest predictors of purchase intention. Prior research revealed that customers security and privacy towards social commerce platforms play a critical role in influencing their purchase intention (Tseng et al., 2023). This result also expands previous marketing examinations in the online retail setting (e.g., Agag, 2019, Roman, 2008) by exploring the impact of customers privacy and security concerns in influencing customers purchase intentions in the social commerce setting. Given the susceptibility of faceless technology platforms to system failures, customers are inclined to evaluate the security of the transactions app. Consequently, our study also investigates the development of customer trust in the SCP. Consistent with previous studies (Abbas et al., 2023; Han, 2023; Tseng et al., 2023), this paper found that customers who perceive the “SCP infrastructure” as secure and protective of their privacy are more likely to trust it.

A more comprehensive analysis of these findings indicates a significant correlation among “hedonic and utilitarian value” and purchase intentions. The findings indicate that customer trust is primarily influenced by the “non-product-related”, pleasurable elements of shopping rather than the traditional practical elements that retailers have traditionally concentrated on, such as “merchandise variety, convenient location and store hours, and competitive pricing”. Conversely, the utilitarian shopping value has a stronger correlation with purchasing intentions. This finding is in line with Jones et al. (2006) who pointed out that purchase intentions are more influenced by utilitarian value than hedonic value. In addition, our analysis revealed that customer trust at SCP is a key driver of their purchase intentions. This finding aligns with Tseng et al. (2023) who revealed a positive impact of customer trust at social commerce platforms on customer purchase intentions.

Finally, by utilizing longitudinal data and employing the CLPM approach, our analysis offers valuable insights into the strength, consistency, predictive capacity, and dependability of the connections between HED-ULT-PRV-SEC-TRUST-INT, as demonstrated in the “validated structural models”. This research confirms “the positive and causal lagged influences” of HED-ULT-PRV-SEC-TRUST on INT, as well as the effects of TRU on INT. It discounts the possibility of reverse causal interactions, which prior examinations on the same topic using “single-wave cross-sectional data” did not consider (e.g., Jones et al., 2006; Tseng et al., 2023).

5.2. Theoretical implication

This paper offers contribution to the evolving understanding of customers behaviors in social commerce environment. It provides valuable insights for scholars and managers in e-commerce, specifically in North African countries. The study offers a novel understanding of the underlying mechanism that shapes consumer behavior by delving into the variables that explain customers social shopping behaviors.

First, this research contributes to existing literature on marketing ethics and online shopping behaviour (Agag, 2019; Hajli, 2018; Nadeem et al., 2021) by offering an integrated model and conducting an empirical examination of customer technology utilization processes within the realm of social commerce. Numerous examinations emphasize the significance of ongoing investigations into customer privacy and security issues (Agag et al., 2016; Tseng et al., 2023), trust development, and other variables that impact purchase intentions (Hou et al., 2021; Tseng et al., 2023; Yao and Xu, 2022). Our research confirmed that customers purchase intention is influenced by the assessment of “transaction and information privacy, transaction security, and trust” in utilizing the social shopping platform. Customers that had more convictions on the “privacy, security, and reliability” of a SCP also indicated a greater inclination to make a purchase.

Second, an additional contribution lies in the reaffirmation of tripartite customers values, encompassing both hedonic value and utilitarian value within the realm of social commerce.

Consumers value allows online retailers to implement methods that set them apart from competitors. This involves combining the emotional appeal of hedonic value with the practical benefits of utilitarian value, with the aim of building customer trust and encouraging more purchases (Jones et al., 2006; Wu and Li, 2018). Therefore, our study affirms that these values may be utilized in online social commerce and have a crucial role in establishing customer trust at SCP.

Furthermore, our study is the initial one to empirically explore the impact of social shopping value, perceived security/privacy, and customer trust on purchase intention over time. This paper makes contributions to the previous studies by enhancing our comprehension of the dynamic relationships among a range of potential outcomes, such as purchase intentions, a range of “potential responses”, such as customer trust, and a range of potential predictor “conditions”, such as hedonic value, utilitarian value, and perceived security/privacy, over time. This allows us to acquire a deeper understanding of the dynamic process by which many factors influence customer purchase intentions at SCP over a period of time. Due to the limitations of its understanding of intricate social buying behaviors, we establish a strong theoretical basis to investigate the factors that influence purchase intention using longitudinal data.

5.3. Practical implication

This research offers valuable insights for designers of “social media and e-commerce platforms” as well as retailers. Firstly, our study propose that SCP business initiatives should prioritize the enhancement of privacy and security measures for customers information shared on brand fan sites. Retailers must recognize that converting social media engagement metrics (i.e., “likes, shares, wows, and hearts”) into tangible purchases is challenging unless they prioritize platform security to satisfy customers concerns. Customers attitudes towards privacy concerns, security concerns, and trust at SCP, which are influenced by ongoing investments in social platform security, can lead to a favorable shift in customers interests in online shopping and increased reliance on “SCPs” as the main shopping platform.

Second, our study suggests that in order to sustain customers interests in SCPs, it is crucial to implement robust safeguards that foster a sense of security and comfort for customers when engaging in activities such as “reading and posting comments about branded products”, as well as purchasing products and services. These safeguards should effectively mitigate any “negative emotions” and issues related to unwanted privacy infringements and “security breaches”. For instance, a client who purchases “skin cream” for an uncommon ailment does not desire to be repeatedly exposed to advertisements for this specific product category. Our study supports the implementation of “SCP practices” that provide “secure postings, encrypted financial transactions”, and regular audits to ensure “compliance with privacy and data protection policies”. Branded fan sites housed on “SCPs” should actively promote the sharing of information and foster positive word of mouth, allowing customers to freely discuss “products/services and build trust in both the products and the SCP shopping channel”. Consistent and active sharing of SCPs, as well as active involvement, are reliable indicators of future SCP buying.

Third, the utilitarian value experienced by customers is motivated by a sense of achieving their goals during the shopping journey, such as acquiring desired things or getting relevant information. Customers who have successfully completed their shopping at a specific SCP are more willing to recall their achievement and consider revisiting the same SCP when they have comparable shopping requirements in the future. Therefore, it is logical to associate assessments of utilitarian worth with a greater probability of intending to make a purchase in a social commerce setting that is becoming more and more characterized by similar options and choices. Nevertheless, it is uncertain whether achieving success in product acquisition will also result in the customer eagerly anticipating future visits to the SCP.

Finally, “hedonic value” denotes the online shopping emotional values and has been demonstrated to have a stronger correlation with customer trust. It has also been found to be associated with purchase intentions, but not much more than “utilitarian value”. A more abstract interpretation of the

outcomes may indicate that specific results are mostly influenced by the subjective experiences that shape our daily lives, many of which revolve around emotions and consumption. Holbrook (1986) argues that “emotion is the one key linking pin that holds together the entire consumption experience” (p. 23). Consumption is believed to be closely linked to the creation of imaginative perceptions of reality. In social commerce context, customers engage in a form of virtual "consumption" where they mentally experience products that they may or may not actually buy. They also engage in role-playing, pretending to be someone else in order to fulfil a desired role.

6. Limitations and future research directions

Despite the meaningful implications of this study, the findings of this examination must be interpreted in relation to specific constraints. First, our study explored the main determinants of social shopping behavior in Algeria. Therefore, future examinations could test our proposed model using data from different cultural contexts which enable us to generalize the results on other different cultures. Second, our study focused on examining the influence of hedonic, utilitarian value, perceived privacy/security, and customer trust on purchase intention. Future examinations are needed to include other variables such as customer satisfaction and users' identity to improve the predictive power of our proposed model (Tseng et al., 2023). It worthy also to explore the moderating role of demographic factors and personality traits on these links (Alimamy and Nadeem, 2022). Third, we focused on specific social commerce platform (i.e., Facebook) to explore these relationships. Further study is needed to test our model using different social commerce platforms which enables us to generalize the results on other social commerce platforms. Finally, our exploration is based only on perceptual assessments, which is a drawback that should be addressed in future studies. By employing objective metrics, researchers can acquire a more comprehensive understanding of the true impact of these factors on purchase intentions.

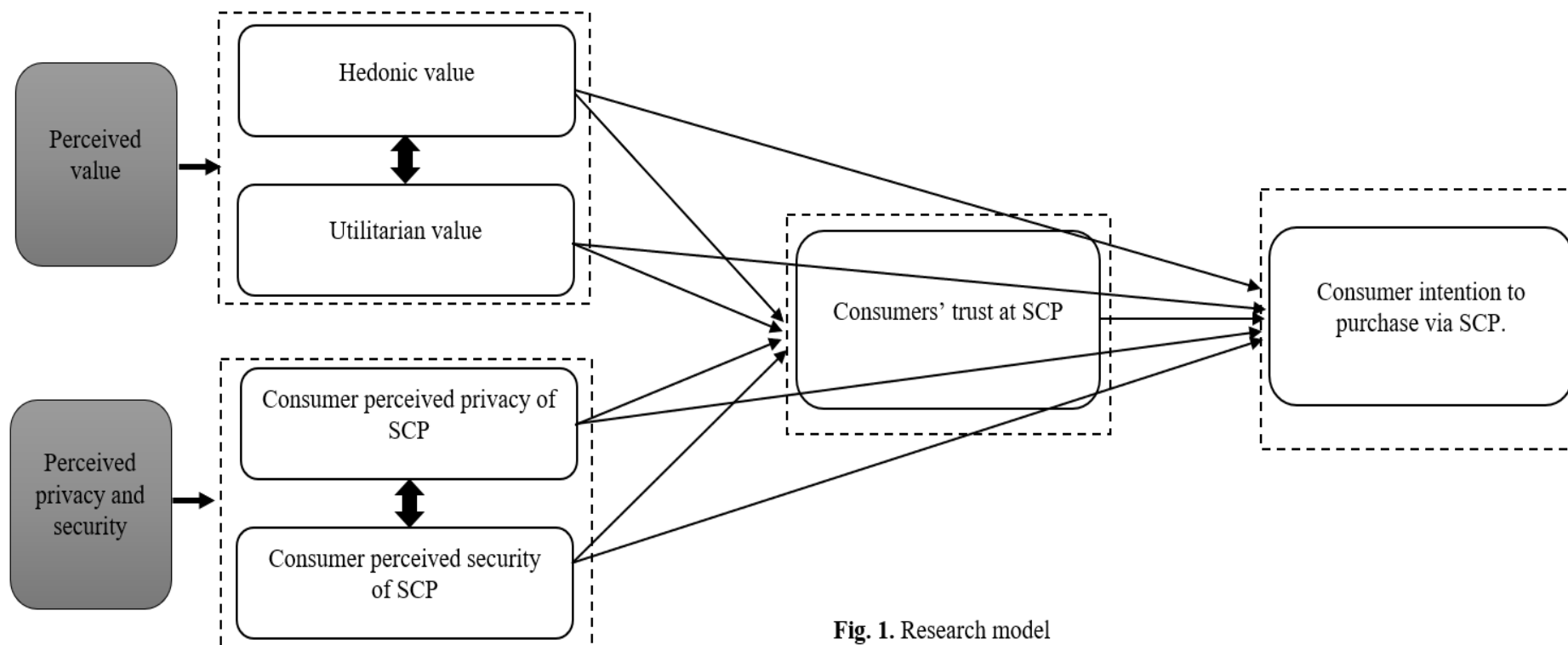


Fig. 1. Research model

Table 1. Prior research on social commerce

Authors	Theoretical Bases	Antecedents	Key findings
Tseng (2022)	Social support theory	Ethical consideration of information credibility, perceived privacy risk	The findings discuss individuals' reaction to privacy issues and to understand the motives to disclose or reveal personal information within a marketing or consumption context. The research also explores the theoretical implications by integrating theories from information systems and social psychology to investigate ethical issues in social commerce
Bazi et al (2022)	Situational influences' theory and social support theory	Situational influences during the COVID-19 pandemic, big five personality traits	The results showed the different cohorts of buying intention on social commerce websites. Social support does not impact online purchase intention, while other situational factors do. Moreover, the model varied across the big five personality traits.
Wang et al (2022)	The theory of planned behaviour (TPB)	Control beliefs and perceived behaviour control, Perceived behavioural control	Results reveal that the two motivations mediate the relationship between subjective norm/perceived behavioural control and shoppers' behavioural intention
Lin et al (2020)	Theory of consumption values	Functional value and emotional value, organic food characteristics, social commerce characteristics	Social commerce and organic food characteristics interact and serve as inputs for functional value and emotional value assessments, which in turn, drive purchase intentions
Fu et al (2019)	Theories of similarity extrapolation, trust transfer	Parasocial interaction, trust toward social commerce platform, trust towards members	External similarity and internal similarity significantly affected consumers' PSI relationship forming and trust transfer, which in turn impact on consumers' social shopping intention
Wang and Herrando (2019)	Privacy-trust-behavioral intention (PTB) model	WOM communication, observation learning, institutional privacy assurance, institutional-based trust	Institutional privacy assurance positively influences institutional-based trust, which, in turn, affects online social interactions, and consequently increases the likelihood of product purchases on s-commerce sites
Sun et al (2019)	Affordance theory	Immersion, presence, and IT affordance (visibility, metavoicing, guidance shopping)	visibility affordance, metavoicing affordance, and guidance shopping affordance can influence customer purchase intention through live streaming engagement
Yang (2019)	-	Guanxi elements and Sense of belonging	Guanxi elements are positively related to social shopping intention, and this effect is mediated by a sense of belonging.
Ko (2018)	Model of goal-directed behaviour	Social desire, commercial desire	Commercial desire has greater influence on shopping intentions than social desire

Wu et al (2018)	social capital theory and consumption values	Utilitarian value and hedonic value	Hedonic and utilitarian values fully mediate the relationship between social value and purchase intention
Chen et al (2017)	Social learning theory	Cognitive appraisal, affective appraisal. And both appraisals are affected by learning from forums and community, ratings and reviews, and social recommendations	Cognitive and affective appraisals are the main predictors of purchase intention, with cognitive appraisal having a higher predictive power. Learning from forums and communities and learning from ratings and reviews have significant influences on both cognitive and affective appraisals
Chen and Shen (2015)	Commitment-Trust theory, Trust transfer theory	Community commitment, trust towards community, trust towards members	Community commitment and trust towards community exerted significant impacts on both social shopping and social sharing intention. Trust towards members can be transferred to trust towards community
Ng (2013)	Social impact theory, Trust transference	Closeness, familiarity, trust	Significant relationships were found in the moderating role of culture and the mediating role of trust on the relationship between social interaction and intention to purchase
Lin and Wang (2023).	The technology acceptance model (TAM)	Familiarity, perceived ease of use, and perceived usefulness.	The findings suggest that social commerce information sharing increases consumer perceptions of familiarity, perceived ease of use, and perceived usefulness of social commerce platforms. Consumer learning and training of social commerce systems also increased their stated intention to purchase using the platform.
Wang and Huang (2023)	The Uses and Gratifications Theory (UGT).	Digital content marketing (DCM), social media influencers' (SMIs) brand content.	The findings indicate that DCM campaigns with an information, entertainment, commercial, and emotional focus have positive relationships with consumer brand engagement, except when DCM campaigns have negative emotional elements.
This study	Utilitarian and Hedonic motivation theory.	Hedonic value, utilitarian value, perceived privacy/security, trust at SCP.	Our findings provide robust empirical evidence on the causal and predictive temporal impact of Hedonic value, utilitarian value, and perceived privacy/security on trust at SCP and purchase intentions. It also indicated that trust at SCP mediates this relationship over time.

Table 2. Participant demographics

Demographics	T (n=736)		T+1 (n=601)	
	Frequency	Percentage %	Frequency	Percentage %
<u>Gender</u>				
Male	409	46	351	58
Female	327	44	250	42
<u>Age</u>				
<30	208	28	161	27
30-40	184	25	156	26
41-50	123	17	104	17
51-60	149	20	115	19
>61	72	9	65	11
<u>Qualification</u>				
Up to High School	135	18	118	20
Bachelor	384	52	305	51
Master	139	19	114	19
Doctorate	78	10	64	10
<u>Experience</u>				
< 1	58	8	41	7
1-3	290	39	263	44
4-6	256	35	225	37
7-9	103	14	65	11
≥10	29	4	7	1

Table 3. Measurement statistics of construct scale

Construct/Indicators	Standard Loading		CR		Cronbach's α		AVE		Mean		SD		Δ
	T	T+1	T	T+1	T	T+1	T	T+1	T	T+1	T	T+1	
Purchase intentions at SCP			0.96	0.91	0.94	0.89	0.518	0.601					0.09 (ns)
INT1	0.93	0.88							2.28	2.20	0.81	0.85	
INT2	0.94	0.90							2.10	2.27	0.85	0.82	
INT3	0.90	0.95							2.32	2.17	0.82	0.81	
INT4	0.92	0.92							2.19	2.25	0.81	0.85	
Consumer trust at SCP			0.94	0.92	0.92	0.90	0.608	0.599					0.07 (ns)
TRU1	0.95	0.92							2.42	2.32	0.84	0.83	
TRU2	0.92	0.94							2.10	2.19	0.88	0.90	
TRU3	0.93	0.92							2.27	2.18	0.82	0.86	
Hedonic value			0.93	0.91	0.91	0.89	0.701	0.662					0.09 (ns)
HED1	0.94	0.93							2.10	2.31	0.83	0.82	
HED2	0.90	0.95							2.38	3.09	0.80	0.81	
HED3	0.89	0.90							2.19	2.26	0.87	0.79	

Construct/Indicators	Standard Loading		CR		Cronbach's α		AVE		Mean		SD		Δ
	T	T+1	T	T+1	T	T+1	T	T+1	T	T+1	T	T+1	
Utilitarian value			0.96	0.97	0.94	0.95	0.599	0.610					0.06 (ns)
ULT1	0.94	0.90							2.17	2.12	0.91	0.82	
ULT2	0.95	0.94							2.39	2.34	0.83	0.87	
ULT3	0.89	0.90							2.09	2.63	0.82	0.83	
Perceived privacy of SCP			0.94	0.92	0.93	0.91	0.621	0.714					0.08 (ns)
PRV1									2.90	3.09	0.89	0.82	
PRV2	0.92	0.93							2.08	2.11	0.83	0.80	
PRV3	0.95	0.92							2.12	2.67	0.86	0.84	
	0.90	0.89											0.09 (ns)
Perceived security of SCP			0.93	0.94	0.91	0.92	0.612	0.577					
SEC1	0.93	0.90							2.61	2.23	0.87	0.82	
SEC2	0.92	0.94							2.60	2.09	0.89	0.80	

Table 4. Correlations

Variables	INT (T)	TRU (T)	HED (T)	ULT (T)	PRV (T)	SEC (T)
INT (T)	0.719					
TRU (T)	0.390	0.779				
HED (T)	0.418	0.318	0.837			
ULT (T)	0.409	0.216	0.212	0.773		
PRV (T)	0.332	0.307	0.437	0.266	0.788	
SEC (T)	0.289	0.355	0.538	0.437	0.509	0.782
Variables	INT (T+1)	TRU (T+1)	HED (T+1)	ULT (T+1)	PRV (T+1)	SEC (T+1)
INT (T+1)	0.775					
TRU (T+1)	0.405	0.774				
HED (T+1)	0.236	0.457	0.812			
ULT (T+1)	0.445	0.194	0.389	0.781		
PRV (T+1)	0.290	0.420	0.236	0.321	0.845	
SEC (T+1)	0.314	0.212	0.209	0.538	0.270	0.759

Note:

INT= Purchase intention at SCP, TRU= Consumer trust at SCP, HED= Hedonic value, ULT= Utilitarian value, PRV= Consumer perceived privacy of SCP, SEC= Consumer perceived security of SCP.

Table 5. The baseline stationary, stability and cross-lagged models

Models	β	Effect size	r ²	Q2	Goodness-of-fit indices
A: Baseline stationary model					
Direct paths:					APC = 0.819* ARS = 0.638* AVIF = 2.092 <u>GoF</u> = 0.768 SPR = 1.00 NLBCDR = 1.00
HED1 → TRU1	0.32**	0.29	0.29	0.29	
TRU1 → INT1	0.49**	0.43	0.43	0.43	
HED2 → TRU2	0.63**	0.57	0.57	0.57	
TRU2 → INT2	0.36**	0.31	0.31	0.31	
ULT1 → TRU1	0.21**	0.18	0.18	0.18	
TRU1 → INT1	0.38**	0.32	0.32	0.32	
TRU1 → INT1	0.42**	0.34	0.34	0.34	
ULT2 → TRU2	0.30**	0.29	0.29	0.29	
TRU2 → INT2	0.38**	0.34	0.34	0.34	
PRV1 → TRU1	0.41**	0.35	0.35	0.35	
TRU1 → INT1	0.60**	0.52	0.52	0.52	
PRV2 → TRU2	0.75**	0.58	0.58	0.58	
TRU2 → INT2	0.39**	0.32	0.32	0.32	
SEC1 → TRU1	0.41**	0.39	0.39	0.39	
TRU1 → INT1	0.22**	0.17	0.17	0.17	
SEC2 → TRU2	0.54**	0.43	0.43	0.43	
TRU2 → INT2	0.32**	0.28	0.28	0.28	
TRU2 → INT2	0.43**	0.33	0.33	0.33	
B: Baseline stability model					
Direct paths:					APC = 0.740* ARS = 0.518* AVIF = 2.342 <u>GoF</u> = 0.699 SPR = 1.00 NLBCDR = 1.00
HED1 → HED2	0.43**	0.32	0.32	0.32	
TRU1 → TRU2	0.39**	0.36	0.36	0.36	
INT1 → INT2	0.26**	0.21	0.21	0.21	
	0.54**	0.46	0.46	0.46	

PRV1 → PRV2	0.46**	0.43	0.43	0.43	
TRU1 → TRU2	0.32**	0.29	0.29	0.29	
INT1→ INT2	0.21**	0.17	0.17	0.17	
SEC1 → SEC2	0.54**	0.52	0.52	0.52	
TRU1 → TRU2	0.56**	0.54	0.54	0.54	
INT1→ INT2	0.38**	0.36	0.36	0.36	
C: Cross-lagged DDCI					
HED1 → HED2	0.35**	0.31	0.31	0.31	APC = 0.656* ARS = 0.493* AVIF = 2.51 GoF = 0.616 SPR = 1.00 NLBCDR = 1.00
TRU1 → TRU2	0.43**	0.40	0.40	0.40	
INT1 → INT2	0.39**	0.32	0.32	0.32	
HED1 → TRU2	0.31**	0.26	0.26	0.26	
HED1 → INT2	0.50**	0.47	0.47	0.47	
PRV1 → PRV2	0.31**	0.25	0.25	0.25	
TRU1 → TRU2	0.24**	0.21	0.21	0.21	
INT1 → INT2	0.54**	0.45	0.45	0.45	
PRV1 → TRU2	0.36**	0.31	0.31	0.31	
PRV1 → INT2	0.67**	0.59	0.59	0.59	
	0.35**	0.30	0.30	0.30	
D: Cross-lagged DDCI and TRU					
HED1 → HED2	0.26**	0.22	0.22	0.22	APC = 0.544* ARS = 0.400* AVIF = 2.934 GoF = 0.504 SPR = 1.00 NLBCDR = 1.00
TRU1 → TRU2	0.29**	0.24	0.24	0.24	
INT1 → INT2	0.37**	0.33	0.33	0.33	
HED1 → TRU2	0.43**	0.40	0.40	0.40	
HED1 → INT2	0.26**	0.20	0.20	0.20	
TRU1 → HED2	0.11	0.04	0.04	0.04	
TRU1 → INT2	0.21**	0.18	0.18	0.18	
ULT1 → ULT2	0.37**	0.34	0.34	0.34	
TRU1 → TRU2	0.45**	0.43	0.43	0.43	

INT1 → INT2	0.57**	0.51	0.51	0.51	
ULT1 → TRU2	0.51**	0.47	0.47	0.47	
ULT1 → INT2	0.62**	0.59	0.59	0.59	
TRU1 → ULT2	0.08	0.06	0.06	0.06	
TRU1 → INT2	0.43**	0.42	0.42	0.42	
PRV1 → PRV2	0.29**	0.25	0.25	0.25	
TRU1 → TRU2	0.45**	0.44	0.44	0.44	
INT1 → INT2	0.48**	0.46	0.46	0.46	
PRV1 → TRU2	0.23**	0.22	0.22	0.22	
PRV1 → INT2	0.66**	0.58	0.58	0.58	
TRU1 → PRV2	0.23**	0.21	0.21	0.21	
TRU1 → INT2	0.48**	0.43	0.43	0.43	
TRU1 → INT2	0.54**	0.51	0.51	0.51	
SEC1 → SEC2	0.39**	0.35	0.35	0.35	
TRU1 → TRU2	0.32**	0.28	0.28	0.28	
INT1 → INT2	0.45**	0.41	0.41	0.41	
SEC1 → TRU2	0.61**	0.55	0.55	0.55	
SEC1 → INT2	0.33**	0.28	0.28	0.28	
TRU1 → SEC2	0.27**	0.22	0.22	0.22	
TRU1 → SEC2	0.05	0.07	0.07	0.07	
TRU1 → INT2	0.46**	0.43	0.43	0.43	
E: Cross-lagged DDCI and TRU					
HED1 → HED2	0.23**	0.18	0.18	0.18	APC = 0.397*
TRU1 → TRU2	0.22**	0.16	0.16	0.16	ARS = 0.293*
INT1 → INT2	0.29**	0.24	0.24	0.24	AVIF = 3.02
HED1 → TRU2	0.41**	0.36	0.36	0.36	GoF = 0.492
HED1 → INT2	0.47**	0.41	0.41	0.41	SPR = 1.00
TRU1 → HED2	0.38**	0.32	0.32	0.32	NLBCDR = 1.00
TRU1 → INT2	0.32**	0.27	0.27	0.27	
INT1 → HED2	0.22**	0.20	0.20	0.20	
INT1 → TRU2	0.08	0.06	0.06	0.06	
ULT1 → ULT2	0.36**	0.31	0.31	0.31	
	0.44**	0.42	0.42	0.42	

TRU1 → TRU2	0.36**	0.33	0.33	0.33	
INT1 → INT2	0.39**	0.36	0.36	0.36	
ULT1 → TRU2	0.23**	0.21	0.21	0.21	
ULT1 → INT2	0.54**	0.49	0.49	0.49	
TRU1 → ULT2	0.32**	0.31	0.31	0.31	
TRU1 → INT2	0.57**	0.51	0.51	0.51	
INT1 → ULT2	0.23**	0.21	0.21	0.21	
INT1 → TRU2	0.12	0.06	0.06	0.06	
PRV1 → PRV2	0.25**	0.22	0.22	0.22	
PRV1 → TRU2	0.53**	0.48	0.48	0.48	
TRU1 → TRU2	0.39**	0.32	0.32	0.32	
INT1 → INT2	0.44**	0.41	0.41	0.41	
PRV1 → TRU2	0.32**	0.28	0.28	0.28	
PRV1 → INT2	0.43**	0.37	0.37	0.37	
TRU1 → PRV2	0.09	0.04	0.04	0.04	
TRU1 → INT2	0.23**	0.21	0.21	0.21	
INT1 → PRV2	0.43**	0.38	0.38	0.38	
INT1 → TRU2	0.10	0.05	0.05	0.05	
SEC1 → SEC2	0.30**	0.25	0.25	0.25	
TRU1 → TRU2	0.25**	0.21	0.21	0.21	
INT1 → INT2	0.27**	0.24	0.24	0.24	
SEC1 → TRU2	0.38**	0.34	0.34	0.34	
SEC1 → INT2	0.21**	0.17	0.17	0.17	
SEC1 → INT2	0.33**	0.31	0.31	0.31	
TRU1 → SEC2	0.62**	0.56	0.56	0.56	
TRU1 → INT2	0.51**	0.44	0.44	0.44	
INT1 → SEC2	0.13	0.04	0.04	0.04	
INT1 → TRU2	0.12	0.06	0.06	0.06	

Note:

APC, average path coefficients (should be significant); ARS, average r-squared (should be significant); AVIF, average variance inflation factor (ideal if > 3.3); NLBCDR, non-linear bivariate causality direction ratio (acceptable if ≥ 0.70); Q2, Stone-Geisser q-squared (should be greater than zero); r^2 , r-squared; SPR, Sympton's Paradox Ratio (ideal if 1.00); Tenenhaus' GoF, goodness-of-fit (large effect if ≥ 0.36).

Cohen's f^2 (Cohen, 1992): small = 0.20, medium = 0.50, large = 0.80.

**p < 0.01. *p < 0.05.

Appendix 1

Variables	Measurement scale/item	Factor loading	Source
Purchase intention at SCP.	I intend to continue using brand's Facebook fanpage for shopping in the future. I will always try to use brand's Facebook fanpage in my daily life for purchase. I plan to continue to use brand's Facebook fanpage frequently for gathering information for my preferred products/items. To the extent possible, I would use brand's Facebook fanpage for shopping.	0.945 0.961 0.927 0.905	(Nadeem et al., 2017)
Consumer's trust at SCP	Brand's Facebook fanpage enthusiastically address their member problems. Brand's Facebook fanpage provide trustworthy information. In general, brand's Facebook fanpage are very trustworthy.	0.934 0.899 0.961	(Lin and Lu, 2011)
Utilitarian value	The item(s) is reasonably priced while social shopping on the Facebook. The item(s) has consistent quality while social shopping on the Facebook. The item(s) is a good product for the price while social shopping on Facebook.	0.937 0.928 0.924	(Wu and Li, 2018)
Hedonic value	Social shopping on Facebook is one that I would enjoy. Social shopping on Facebook would make me feel good. Social shopping on Facebook would give me pleasure.	0.924 0.892 0.899	(Wu and Li, 2018)
Perceived security of social commerce platform	I believe the information I provide with brand's Facebook fanpage will not be manipulated by inappropriate parties. I am confident that the private information I provide with brand's Facebook fanpage will be secured.	0.934 0.920	(Tseng et al., 2023)

Perceived privacy of social commerce platform	I am confident that I know all the parties who collect the information I provided during the use of brand's Facebook fanpage.	0.930	(Tseng et al., 2023)
	I am aware of the exact nature of information that will be collected during the use of brand's Facebook fanpage.	0.902	
	I believe there is an effective mechanism to address any violation of the information I provide to brand's Facebook fanpage.	0.948	

References

- Abbas, S., Alnoor, A., Yin, T.S., Sadaa, A.M., Muhsen, Y.R., Khaw, K.W., Ganesan, Y., 2023. Antecedents of trustworthiness of social commerce platforms: a case of rural communities using multi group SEM & MCDM methods. *Electronic Commerce Research and Applications*. 62, p.101322.
- Abdelmoety, Z.H., Aboul-Dahab, S., Agag, G., 2022. A cross cultural investigation of retailers commitment to CSR and customer citizenship behaviour: the role of ethical standard and value relevance. *J. Retailing Consum. Serv.* 64, 102796.
- Abedini, A., Abedin, B., Zowghi, D., 2023. A Framework of Environmental, Personal, and Behavioral Factors of Adult Learning in Online Communities of Practice. *Information Systems Frontiers*. 45(8),1-18.
- Abeds, S.S., 2020. Social commerce adoption using TOE framework: An empirical investigation of Saudi Arabian SMEs. *International Journal of Information Management*. 53, p. 102118.
- Abeds, S.S., 2022. A literature review exploring the role of technology in business survival during the Covid-19 lockdowns. *International Journal of Organizational Analysis*. 30(5), 1045–1062.
- Aboul-Dahab, S., Agag, G., Abdelmoety, Z.H., 2021. Examining the influence of cultural and ethical ideology on consumers' perceptions about the ethics of online retailers and its effects on their loyalty. *J. Retailing Consum. Serv.* 61, 102559.
- Adaji, I., Oyibo, K., Vassileva, J., 2019. Effect of shopping value on the susceptibility of e-commerce shoppers to persuasive strategies and the role of gender. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 11433 LNCS, pp. 270–282.
- Agag, G., 2019. E-commerce ethics and its impact on buyer repurchase intentions and loyalty: an empirical study of small and medium Egyptian businesses. *J. Bus. Ethics*. 154(2), 389–410.
- Agag, G., 2019. E-commerce ethics and its impact on buyer repurchase intentions and loyalty: An empirical study of small and medium Egyptian businesses. *Journal of Business Ethics*. 154, 389-410.
- Agag, G., Abdelmoety, Z., Eid, R., 2023a. Understanding factors affecting travel avoidance behaviour during the COVID-19 pandemic: findings from a mixed method approach. *J. Trav.* 34 (8), 67–93.
- Agag, G., Brown, A., Hassanein, A., Shaalan, A., 2020. Decoding travellers' willingness to pay more for green travel products: closing the intention-behaviour gap. *J. Sustain. Tourism*. 28 (10), 1551–1575.
- Agag, G., Durrani, B.A., Abdelmoety, Z.H., Daher, M.M., Eid, R., 2024a. Understanding the link between net promoter score and e-WOM behaviour on social media: the role of national culture. *J. Bus. Res.* 170, 114303.
- Agag, G., Durrani, B.A., Shehawy, Y.M., Alharthi, M., Alamoudi, H., El-Halaby, S., Hassanein, A., Abdelmoety, Z.H., 2023b. Understanding the link between customer feedback metrics and firm performance. *J. Retailing Consum. Serv.* 73, 103301.

- Agag, G., Eid, R., 2020. Which consumer feedback metrics are the most valuable in driving consumer expenditure in the tourism industries: a view from macroeconomic perspective. *Tourism Manag.* 80 (3), 104–109.
- Agag, G., El-masry, A., Alharbi, N.S., Ahmed Almamy, A., 2016. Development and validation of an instrument to measure online retailing ethics: consumers' perspective. *Internet Research.* 26(5), 1158-1180.
- Agag, G., El-Masry, A.A., 2016. Understanding consumer intention to participate in online travel community, effects on consumer intention to purchase travel online , WOM: an integration of innovation diffusion theory, TAM with trust. *Comput. Hum. Behav.* 60 (3), 97–111.
- Agag, G., Shehawy, Y.M., Almoraish, A., Eid, R., Lababdi, H.C., Labben, T.G., Abdo, S.S., 2024b. Understanding the relationship between marketing analytics, customer agility, and customer satisfaction: A longitudinal perspective. *Journal of Retailing and Consumer Services.* 77, p.103663.
- Agag, G.M., Khashan, M.A., Colmekcioglu, N., Almamy, A., Alharbi, N.S., Eid, R., Shabbir, H., Abdelmoety, Z.H.S., 2019. Converting hotels website visitors into buyers: how online hotel web assurance seals services decrease consumers' concerns and increase online booking intentions. *Inf. Technol. People.* 31 (70), 63–90.
- Aiken, K.D., Boush, D.M., 2006. Trustmarks, objective-source ratings, and implied investments in advertising: investigating online trust and the context-specific nature of Internet signals. *Journal of the Academy of Marketing Science.* 34(3), 308-323
- Akram, U., Junaid, M., Zafar, A.U., Li, Z., Fan, M., 2021. Online purchase intention in Chinese social commerce platforms: Being emotional or rational?. *Journal of Retailing and Consumer Services.* 63, p.102669.
- Al-Adwan, A.S., Yaseen, H., 2023. Solving the product uncertainty hurdle in social commerce: The mediating role of seller uncertainty. *International Journal of Information Management Data Insights.* 3(1).
- Alghamdi, O., Agag, G., 2024. Competitive advantage: A longitudinal analysis of the roles of data-driven innovation capabilities, marketing agility, and market turbulence. *Journal of Retailing and Consumer Services.* 76, p.103547.
- Alghamdi, O., Agag, G., 2024. Competitive advantage: A longitudinal analysis of the roles of data-driven innovation capabilities, marketing agility, and market turbulence. *Journal of Retailing and Consumer Services.* 76, p.103547.
- Alghamdi, O.A., Agag, G., 2023a. Boosting innovation performance through big data analytics powered by artificial intelligence use: an empirical exploration of the role of strategic agility and market turbulence. *Sustainability.* 15 (19), 14296.
- Alghamdi, O.A., Agag, G., 2023b. Unlocking the power of reporting: exploring the link between voluntary sustainability reporting, customer behavior, and firm value. *Sustainability.* 15 (21), 15584.

- Alimamy, S., Nadeem, W., 2022. Is this real? Cocreation of value through authentic experiential augmented reality: the mediating effect of perceived ethics and customer engagement. *Information Technology and People*. 35(2), 577-599.
- Almeida Lucas, G., Lunardi, G.L., Bittencourt Dolci, D., 2023. From e-commerce to m-commerce: An analysis of the user's experience with different access platforms. *Electronic Commerce Research and Applications*. 58(2).
- Al-Omoush, K.S., de Lucas Ancillo, A., Gavrilă, S.G., 2022. The role of cultural values in social commerce adoption in the Arab world: An empirical study. *Technological Forecasting and Social Change*. 176, p.121440.
- Aloqool, A., Alsmairat, M.A.K., 2022. The impact of social commerce on online purchase intention: The mediation role of trust in social network sites. *International Journal of Data and Network Science*. 6(2), 509–516.
- Alrawad, M., Lutfi, A., Almaiah, M.A., Elshaer, I.A., 2023. Examining the influence of trust and perceived risk on customers intention to use NFC mobile payment system. *Journal of Open Innovation: Technology, Market, and Complexity*. 9(2), p. 100070.
- Alsuwaidi, M., Eid, R., Agag, G., 2022. Tackling the complexity of guests' food waste reduction behaviour in the hospitality industry. *Tourism Manag. Perspect.* 42, 100963.
- Al-Tit, A.A., Omri, A., Hadj, T.B., 2020. The driving factors of the social commerce intention of Saudi Arabia's online communities. *International Journal of Engineering Business Management*. 12(6), p. 184797901989974.
- Alyahya, M., Agag, G., Aliedan, M., Abdelmoety, Z.H., 2023a. A cross-cultural investigation of the relationship between eco-innovation and customers boycott behaviour. *J. Retailing Consum. Serv.* 72, 103271.
- Alyahya, M., Agag, G., Aliedan, M., Abdelmoety, Z.H., 2023c. Understanding the factors affecting consumers' behaviour when purchasing refurbished products: a chaordic perspective. *J. Retailing Consum. Serv.* 75, 103492.
- Alyahya, M., Agag, G., Aliedan, M., Abdelmoety, Z.H., Daher, M.M., 2023b. A sustainable step forward: understanding factors affecting customers' behaviour to purchase remanufactured products. *J. Retailing Consum. Serv.* 70, 103172.
- Alyahya, M.A., Elshaer, I.A., Abunasser, F., Hassan, O.H.M., Sobaih, A.E.E., 2022. Elearning experience in higher education amid covid-19: does gender really matter in a gender-segregated culture? *Sustainability*. 14 (6), 3298.
- Alzaidi, M.S., Agag, G., 2022. The role of trust and privacy concerns in using social media for e-retail services: the moderating role of COVID-19. *J. Retailing Consum. Serv.* 68, 103042.
- Alzaidi, M.S., Agag, G., 2022. The role of trust and privacy concerns in using social media for e-retail services: The moderating role of COVID-19. *Journal of Retailing and Consumer Services*. 68, p.103042.
- Anderson, J.C., Gerbing, D.W., 1988. Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*. 103(3), p.411.

- Anderson, K.C., Knight, D.K., Pookulangara, S., Josiam, B., 2014. Influence of hedonic and utilitarian motivations on retailer loyalty and purchase intention: A Facebook perspective. *Journal of Retailing and Consumer Services*. 21(5), 773–779.
- Anderson, T.N., Kida, T.E., 1982. The cross-lagged research approach: description and illustration. *Journal of Accounting Research*. 34(8), 403–414.
- Andonopoulos, V., Lee, J.J., Mathies, C., 2023. Authentic isn't always best: When inauthentic social media influencers induce positive consumer purchase intention through inspiration. *Journal of Retailing and Consumer Services*. 75, p.103521.
- Andriani, D., Ramadhani, I., Febriana, A.V., Gunadi, W., 2021. Influences of EWOM in Social Media on Consumer's Purchase Intention on Online Video Streaming. 2021 International Conference on Information Management and Technology (ICIMTech, pp. 755–760, doi: 10.1109/ICIMTech53080.2021.9535073.
- Anic, I.D., Škare, V., Milaković, I.K., 2019. The determinants and effects of online privacy concerns in the context of e-commerce. *Electronic Commerce Research and Applications*. 36, p.100868.
- Arief, M., Mustikowati, R.I., Chrismardani, Y., 2023. Why do customers buy an online product? The effects of advertising attractiveness, influencer marketing, and online customer reviews. *LBS Journal of Management & Research*. 25(7), 56–70.
- Arnold, M.J., Reynolds, K.E., 2003. Hedonic shopping motivations. *Journal of Retailing*. 79(2), 77–95.
- Attar, R.W., Shanmugam, M., Hajli, N., 2021. Investigating the antecedents of e-commerce satisfaction in social commerce context. *British Food Journal*. 123(3), 849–868.
- Azer, J., Ranaweera, C., 2022. Former customers' E-WOM in social media platforms: An investigation of motives, network size and social ties. *Journal of Business Research*. 146(3), 118–133.
- Babin BJ, Darden WR. 1995. Consumer self-regulation in a retail environment. *J Retail* 71(1), 47–70
- Babin BJ, Lee Y, Kim E, Griffin M. 2005. Modeling consumer satisfaction and word-of-mouth: restaurant patronage in Korea. *J Serv Mark*, 19 (3),133–9.
- Babin, B.J., Darden, W.R., Griffin, M., 1994. Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value. *Journal of Consumer Research*. 20(4), 644–656.
- Bagozzi, R.P., Yi, Y., Phillips, L.W., 1991. Assessing construct validity in organizational research. *Administrative science quarterly*. 421–458.
- Bawack, R.E., Bonhoure, E., Kamdjoug, J.-R.K., Giannakis, M., 2023. How social media live streams affect online buyers: A uses and gratifications perspective. *International Journal of Information Management*. 70(4), p. 102621.
- Belghanami, N.W., 2022. The role of E-marketing and social media in the efficiency of Ecommerce-Analytical study: case of Algeria and Egypt. *Strategy & Development Review*. 12(2).
- Bentler, P. M., Chou, C. P., 1987. Practical issues in structural modeling. *Sociological Methods & Research*. 16(6), 78–117.
- Bernhardt, K.L., Donthu, N., Kennett, P.A., 2000. A longitudinal analysis of satisfaction and profitability. *J. Bus. Res.* 47 (2), 161–171.
- Bhattacharya, R., Devinney, T.M., Pillutla, M.M., 1998. A formal model of trust based on outcomes. *Academy of Management Review*. 23(3), 459–472.
- Bhattacharjee, A., Sanford, C., Watts Sussman, S., Thompson, R., Wegener, D., 2006. INFLUENCE PROCESSES FOR INFORMATION TECHNOLOGY ACCEPTANCE: AN ELABORATION LIKELIHOOD MODEL 1 Motivation for the Study”.
- Bilal, M., Akram, U., Rasool, H., Yang, X., Tanveer, Y., 2022. Social commerce isn't the cherry on the cake, it's the new cake! How consumers' attitudes and eWOM influence online purchase intention in China. *International Journal of Quality and Service Sciences*. 14 (2), 180–196.
- Brown, T.A., 2015. Confirmatory factor analysis for applied research. Guilford publications.

- Budiharseno, R.S., Handani, N.D., Hwan, S.J., 2020. Impact of utilitarian value and hedonic value on purchase in online store in Indonesia. *Research, Society and Development*. 9 (10), p. 115910830.
- Bugshan, H., Attar, R.W., 2020. Social commerce information sharing and their impact on consumers. *Technological Forecasting and Social Change*. 153(6), p. 119875.
- Cai, X., Cebollada, J., Cortiñas, M., 2023. Impact of seller- and buyer-created content on product sales in the electronic commerce platform: The role of informativeness, readability, multimedia richness, and extreme valence. *Journal of Retailing and Consumer Services*. 70, p. 103141.
- Chen, A., Lu, Y., Wang, B., 2017. Customers' purchase decision-making process in social commerce: A social learning perspective. *International Journal of Information Management*. 37(6), 627–638.
- Chen, J., Shen, X.-L., 2015. Consumers' decisions in social commerce context: An empirical investigation. *Decision Support Systems*. 79(3), 55–64.
- Chen, S.C., Dhillon, G.S., 2003. Interpreting Dimensions of Consumer Trust in E-Commerce. *Information Technology and Management*. 4(3), 303–318.
- Cheng, H.F., Yang, M.H., Chen, K.Y., Chen, H.L., 2014. Measuring perceived EC ethics using a transaction-process-based approach: scale development and validation. *Electronic Commerce Research and Applications*. 13(1), 1-12
- Churchill, G.A., 1979. A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*. 16(1), 64–73.
- Cohen., 2013. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*”, doi: 10.4324/9780203774441.
- Corbitt, B.J., Thanasankit, T., Yi, H., 2003. Trust and e-commerce: a study of consumer perceptions. *Electronic Commerce Research and Applications*. 2(3), 203–215.
- Cutshall, R., Changchit, C., Pham, A., 2022. Factors influencing consumers' participation in social commerce. *Journal of Computer Information Systems*. 62(2), 290-301.
- Dellarocas, C., 2003. The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms. *Management Science*. 49(10), 1407–1424.
- Diedenhofen, B., Musch, J., 2015. cocor: A comprehensive solution for the statistical comparison of correlations. *PloS one*. 10(4), p.0121945.
- Dincelli, E., Goel, S., 2017. Can privacy and security Be friends? A cultural framework to differentiate security and privacy behaviors on online social networks, *Proceedings of the 50th Hawaii International Conference on System Sciences*.
- Djafarova, E., Bowe, T., 2021. Instagram made Me buy it': Generation Z impulse purchases in fashion industry. *Journal of Retailing and Consumer Services*. 59(4), p. 102345.
- Djelassi, S., Godefroit-Winkel, D., Diallo, M.F., 2018. Does culture affect the relationships among utilitarian and non-utilitarian values, satisfaction and loyalty to shopping centres? Evidence from two Maghreb countries. *International Journal of Retail & Distribution Management*. 46 (11/12), 1153–1169.
- Dogra, N., Adil, M., Sadiq, M., Dash, G., Paul, J., 2023. Unraveling customer repurchase intention in OFDL context: An investigation using a hybrid technique of SEM and fsQCA. *Journal of Retailing and Consumer Services*. 72(6), p.10328.
- Doha, A., Elnahla, N., McShane, L., 2019. Social commerce as social networking. *Journal of Retailing and Consumer Services*. 47(5), 307-321.
- Eid, R., Abdelmoety, Z., Agag, G., 2020. Antecedents and consequences of social media marketing use: an empirical study of the UK exporting B2B SMEs. *J. Bus. Ind. Market*. 35 (2), 284–305.

- Eid, R., El-Kassrawy, Y.A., Agag, G., 2019. Integrating destination attributes, political (in) stability, destination image, tourist satisfaction, and intention to recommend: a study of UAE. *J. Hospit. Tourism Res.* 43 (6), 839–866.
- Elbaz, A.M., Agag, G.M., Alkathiri, N.A., 2018. How ability, motivation and opportunity influence travel agents performance: the moderating role of absorptive capacity. *J. Knowl. Manag.* 22 (1), 119–141.
- Elbeltagi, I., Agag, G., 2016. E-retailing ethics and its impact on customer satisfaction and repurchase intention: a cultural and commitment-trust theory perspective. *Internet Research.* 26(1), 288–310.
- Elhoushy, S., Salem, I.E., Agag, G., 2020. The impact of perceived benefits and risks on current and desired levels of outsourcing: hotel managers' perspective. *Int. J. Hospit. Manag.* 91, 102419.
- Elshaer, I.A., Alrawad, M., Lutfi, A., Azazz, A.M.S., 2024. Social commerce and buying intention post COVID-19: Evidence from a hybrid approach based on SEM – fsQCA. *Journal of Retailing and Consumer Services.* 76(8), p. 103548.
- Esmaeili, L., G, H., A, S., 2019. A systematic review on social commerce. *Journal of Strategic Marketing.* 27(4), 317–355.
- Ferm, L.E.C., Thaichon, P., 2021. Customer pre-participatory social media drivers and their influence on attitudinal loyalty within the retail banking industry: A multi-group analysis utilizing social exchange theory. *Journal of Retailing and Consumer Services.* 61, p.102584.
- Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research.* 18(1), 39–50.
- Fu, J.R., Lu, I.W., Chen, J.H., Farn, C.K., 2020. Investigating consumers' online social shopping intention: An information processing perspective. *International Journal of Information Management.* 54, p.102189.
- Fung, B., 2018. Facebook logs 90 million people out of their accounts after security breach”, available at: https://www.washingtonpost.com/technology/2018/09/28/facebook-says-millionaccounts-affected-by-hackers/?noredirect=on&utm_term=.2e7f51b94347
- Gan, C., Wang, W., 2017. The influence of perceived value on purchase intention in social commerce context. *Internet Research.* 27(4), 772–785.
- Gefen, K., Straub,., 2003. Trust and TAM in Online Shopping: An Integrated Model. *MIS Quarterly.* 27(1), 51–70.
- George, A., Joseph, A., Abraham, M., Joseph, E.T., 2023. Brand trust and engagement in social commerce. *International Journal of Consumer Studies.* 21(8), 67–89.
- Goh, K.-Y., Heng, C.-S., Lin, Z., 2013. Social Media Brand Community and Consumer Behavior: Quantifying the Relative Impact of User-and Marketer-Generated Content. *Information Systems Research.* 24(1), 88–107.
- Gupta, A., 2023. Electronic Word of Mouth (eWOM”, *Consumer Communication.* 225–255.
- Gutierrez, A., Punjaisri, K., Desai, B., Alwi, S.F.S., O'Leary, S., Chaiyasoonthorn, W., Chaveesuk, S., 2023. Retailers don't ignore me on social media! The importance of consumer-brand interactions in raising purchase intention-Privacy the Achilles heel. *Journal of Retailing and Consumer Services.* 72, p.103272.
- Gvili, Y., Levy, S., 2023. I Share, Therefore I Trust: A moderated mediation model of the influence of eWOM engagement on social commerce. *Journal of Business Research.* 166(3), p. 114131.
- Ha, S., Stoel, L., 2009. Consumer e-shopping acceptance: antecedents in a technology acceptance model. *Journal of Business Research.* 62(5), 565–571.

- Hair Jr, J.F., Matthews, L.M., Matthews, R.L., Sarstedt, M., 2017. PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*. 1(2), 107-123.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., 2010. *Multivariate data analysis*. Vectors. 417, 280–290
- Hair, J.F., Risher, J.J., Sarstedt, M., Ringle, C.M., 2019. When to use and how to report the results of PLS-SEM. *European Business Review*. 31(1), 2–24.
- Hajli, N., 2015. Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*. 35(2), 183–191.
- Hajli, N., 2018. Ethical environment in the online communities by information credibility: a social media perspective. *Journal of Business Ethics*. 149(4), 799-810
- Hajli, N., Wang, Y., Tajvidi, M., Hajli, M.S., 2017. People, technologies, and organizations interactions in a social commerce era. *IEEE Transactions on Engineering Management*. 64(4), 594-604.
- Han, M.C., 2023. Checkout button and online consumer impulse-buying behavior in social commerce: A trust transfer perspective. *Journal of Retailing and Consumer Services*. 74, p.103431.
- Hardin, R., 2002. *Trust and Trustworthiness*, Russell Sage Foundation, New York
- Hashim, K.F., Mohd Yusof, S.A., Ahmad, R., 2015. The Influence of Hedonic Values on S-Commerce Adoption Behavior”, *Advanced Science Letters*. 21(5), 1561–1565.
- Helmy Mohamad, A., Farouk Hassan, G., Elrahman, S.A., A., 2022. Impacts of e-commerce on planning and designing commercial activities centers: A developed approach. *Ain Shams Engineering Journal*. 13(4), p. 101634.
- Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*. 43(1), 115–135.
- Holbrook MB. E1986. motion in the consumption experience: toward a new model of the human consumer. In: Peterson Robert A, Hoyer Wayne D, Wilson William R, editors. *The role of affect in consumer behavior: emerging theories and applications*. Lexington, MA: D.C. Heath.
- Hou, T., Cheng, X., Cheng, X., 2021. The role of transaction cost and trust in e-loyalty: a mixed methods study of ridesharing. *Information Technology and People*. 34(3), 1018-1038.
- Hsu, C.-L., Yu, L.-C., Chang, K.-C., 2017. Exploring the effects of online customer reviews, regulatory focus, and product type on purchase intention: Perceived justice as a moderator. *Computers in Human Behavior*. 69(2), 335–346.
- Hu, L., Filieri, R., Acikgoz, F., Zollo, L., Rialti, R., 2023. The effect of utilitarian and hedonic motivations on mobile shopping outcomes. A cross-cultural analysis. *International Journal of Consumer Studies*. 47(2), 751–766.
- Hu, Q., Pan, Z., 2023. Can AI benefit individual resilience? The mediation roles of AI routinization and infusion. *Journal of Retailing and Consumer Services*. 73(9), p. 103339.
- Hulland, J., Baumgartner, H., Smith, K. M., 2018. Marketing survey research best practices: Evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*. 46(1), 92–108.
- Hult, G.T.M., Hair Jr, J.F., Proksch, D., Sarstedt, M., Pinkwart, A., Ringle, C.M., 2018. Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing*. 26(3), 1-21.
- Ismagilova, E., Dwivedi, Y.K., Rana, N., Raman, R., 2022. Factors Affecting Adoption of eWOM Communications: A Synthesis of Research Using Meta-analysis”, doi: 10.1007/978-3-031-15342-6_25.
- Ismagilova, E., Rana, N.P., Slade, E.L., Dwivedi, Y.K., 2021. A meta-analysis of the factors affecting eWOM providing behaviour. *European Journal of Marketing*. 55(4), 1067–1102.

- Jadil, Y., Rana, N.P., Dwivedi, Y.K., 2022. Understanding the drivers of online trust and intention to buy on a website: An emerging market perspective. *International Journal of Information Management Data Insights*. 2(1), p. 100065.
- Johnson, D., Grayson, K., 2005. Cognitive and affective trust in service relationships. *Journal of Business Research*. 58(4), 500–507.
- Jones, M.A., Reynolds, K.E., Arnold, M.J., 2006. Hedonic and utilitarian shopping value: investigating differential effects on retail outcomes. *Journal of Business Research*. 59 (9), 974-981.
- Kang, K., Lu, J., Guo, L., Li, W., 2021. The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms, *International Journal of Information Management*. 56(1), p. 102251.
- Kang, W., Shao, B., 2023. The impact of voice assistants' intelligent attributes on consumer well-being: Findings from PLS-SEM and fsQCA. *Journal of Retailing and Consumer Services*. 70(4), p. 103130.
- Karunasingha, A., Abeysekera, N., 2022. The mediating effect of trust on consumer behavior in social media marketing environments. *South Asian Journal of Marketing*. 3(2),135–149.
- Kenny, D.A., 1975. Cross-lagged panel correlation: A test for spuriousness. *Psychological bulletin*. 82(6), p.887.
- Khan, A., Rezaei, S., Valaei, N., 2022. Social commerce advertising avoidance and shopping cart abandonment: A fs/QCA analysis of German consumers. *Journal of Retailing and Consumer Services*. 67, p.102976.
- Kim, S., Park, H., 2013. Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management*. 33(2), 318–332.
- Kim, S.-B., Sun, K.-A., Kim, D.-Y., 2013. The Influence of Consumer Value-Based Factors on Attitude-Behavioral Intention in Social Commerce: The Differences between High- and Low-Technology Experience Groups. *Journal of Travel & Tourism Marketing*. 30(1-2), 108–125.
- Kim, Y., Peterson, R. A., 2017. A meta-analysis of online trust relationships in ecommerce. *Journal of Interactive Marketing*. 38, 44–54.
- Kock, N., 2020. Harman's single factor test in PLS-SEM: Checking for common method bias. *Data Analysis Perspectives Journal*. 2(2),1-6.
- Kwahk, K.-Y., Kim, B., 2017. Effects of social media on consumers' purchase decisions: evidence from Taobao. *Service Business*. 11(4), 803–829.
- Lam, H.K.S., Yeung, A.C.L., Lo, C.K.Y., Cheng, T.C.E., 2019. Should firms invest in social commerce? An integrative perspective. *Information & Management*. 56(2), p. 103164.
- Latan, H., 2018. PLS path modeling in hospitality and tourism research: The golden age and days of future past. In F. Ali, M. S. Rasoolimanesh, C. Cobanoglu (Eds.), *Applying partial least squares in tourism and hospitality research* (pp. 53–83). Emerald.
- Lee, J.Y., 2016. Trust and Social Commerce. *University of Pittsburgh Law Review*. 77(2).
- Lee, Y.W., Strong, D.M., Kahn, B.K., Wang, R.Y., 2002. AIMQ: a methodology for information quality assessment. *Information & Management*. 40(2), 133–146.
- Li, Y., Rho, E.H.R. Kobsa, A., 2022. Cultural differences in the effects of contextual factors and privacy concerns on users' privacy decision on social networking sites. *Behaviour & Information Technology*. 41(3), 655-677.
- Lin, K.Y., Lu, H.P., 2011. Intention to continue using Facebook fan pages from the perspective of social capital theory. *Behavior, and Social Networking*. 14(10), 565-570.
- Lin, X., Wang, X., 2023. Towards a model of social commerce: improving the effectiveness of e-commerce through leveraging social media tools based on consumers' dual roles. *European Journal of Information Systems*. 32(5), 782-799.

- Lin, X., Wang, X., Hajli, N., 2019. Building E-Commerce Satisfaction and Boosting Sales: The Role of Social Commerce Trust and Its Antecedents. *International Journal of Electronic Commerce*. 23(3), 328–363.
- Lopes, A.I., Dens, N., Pelsmacker, P., Malthouse, E.C., 2023. Managerial response strategies to eWOM: A framework and research agenda for webcare. *Tourism Management*. 98(3), p. 104739.
- Maia, C.R., Lunardi, G.L., Dolci, D., D’Avila, L.C., 2019. Competitive Price and Trust as Determinants of Purchase Intention in Social Commerce. *BAR - Brazilian Administration Review*. 16(4).
- Mainardes, E.W., Portelada, P.H.M., Damasceno, F.S., 2023. The Influence on Cosmetics Purchase Intention of Electronic Word of Mouth on Instagram. *Journal of Promotion Management*, Vol. 29 No. 7, pp. 961–991, doi: 10.1080/10496491.2023.2167897.
- Marcoulides, G.A., Saunders, C., 2006. Editor's comments: PLS: a silver bullet?. *MIS quarterly*, pp.iii-ix.
- Martens, M.P., Haase, R.F., 2006. Advanced applications of structural equation modeling in counseling psychology research. *The Counseling Psychologist*. 34(6), 878-911.
- Matute, J., Polo-Redondo, Y. and Utrillas, A. (2016), “The influence of EWOM characteristics on online repurchase intention. *Online Information Review*. 40(7), 1090–1110.
- McAllister, D. J., 1995. Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*. 38(1), 24–59.
- McKnight, D.H., Choudhury, V., Kacmar, C., 2002. Developing and validating trust Measures for e-commerce: an integrative typology. *Information Systems Research*. 13 (3), 334-359.
- Mehta, R., Dixit, G., 2016. Consumer decision making styles in developed and developing markets: A cross-country comparison. *Journal of Retailing and Consumer Services*. 33(7), 202–208.
- Mekovec, R., Hutinski, Z., 2012. The role of perceived privacy and perceived security in online market, *MIPRO, 2012 Proceedings of the 35th International Convention*, 1549-1554, IEEE
- Miah, M.R., Hossain, A., Shikder, R., Saha, T., Neger, M., 2022. Evaluating the impact of social media on online shopping behavior during COVID-19 pandemic: A Bangladeshi consumers’ perspectives. *Heliyon*. 8(9), p. 10600.
- Mikalef, P., Giannakos, M., Pateli, A., 2013. Shopping and word-of-mouth intentions on social media. *Journal of Theoretical and Applied Electronic Commerce Research*. 8(1), 17–34.
- Mooij, M., Hofstede, G., 2002. Convergence and divergence in consumer behavior: implications for international retailing. *Journal of Retailing* 78(1), 61–69.
- Morgan, R.M., Hunt, S.D., 1994. The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*. 58(3), 20-47.
- Mou, J., Benyouicef, M., 2021. Consumer behavior in social commerce: Results from a meta-analysis. *Technological Forecasting and Social Change*. 167(6), 34-51.
- Nadeem, W., Juntunen, M., Juntunen, J., 2017. Consumer segments in social commerce: a latent class approach. *Journal of Consumer Behaviour*. 16 (3), 279-292.
- Nadeem, W., Khani, A.H., Schultz, C.D., Adam, N.A., Attar, R.W., Hajli, N., 2020. How social presence drives commitment and loyalty with online brand communities? the role of social commerce trust. *Journal of Retailing and Consumer Services*. 55, p.102136.
- Nadeem, W., Tan, T.M., Tajvidi, M., Hajli, N., 2021. How do experiences enhance brand relationship performance and value co-creation in social commerce? The role of consumer engagement and self-brand connection. *Technological Forecasting and Social Change*. 171(8), 120952.
- Nakayama, M., Wan, Y., 2019. The cultural impact on social commerce: A sentiment analysis on Yelp ethnic restaurant reviews. *Information and Management*. 56(2), 271–279.
- Nikkhah, H.R., Sabherwal, R., 2022. Information disclosure willingness and mobile cloud computing collaboration apps: the impact of security and assurance mechanisms. *Information Technology and People*. 35(7), 1855-1883.

- O'Brien, H.L., 2010. The influence of hedonic and utilitarian motivations on user engagement: The case of online shopping experiences. *Interacting with Computers*. 22(5), 344–352.
- Othman, A.K., Hassan, L.F.A., Hamzah, M.I., Razali, A.R., Saim, M.A.S., Ramli, M.S., Osman, M.A., 2019. The Influence of Social Commerce Factors on Customer Intention to Purchase. *Asian Themes in Social Sciences Research*. 3(1), 1–10.
- Pang, H., Zhang, K., 2024. Determining influence of service quality on user identification, belongingness, and satisfaction on mobile social media: Insight from emotional attachment perspective. *Journal of Retailing and Consumer Services*. 77, p.103688.
- Park, D.-H., Lee, J., Han, I., 2007. The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. *International Journal of Electronic Commerce*. 11(4), 125–148.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*. 88(5), 879-890.
- Qin, L., De-Juan-Vigaray, M.D., 2021. Social commerce: Is interpersonal trust formation similar between USA and Spain?. *Journal of Retailing and Consumer Services*. 62, p.102642.
- Qin, L., De-Juan-Vigaray, M.D., 2021. Social commerce: Is interpersonal trust formation similar between U.S.A. and Spain?”, *Journal of Retailing and Consumer Services*. 62(6), p. 102642.
- Qu, Y., Cieřlik, A., Fang, S., Qing, Y., 2023. The role of online interaction in user stickiness of social commerce: The shopping value perspective. *Digital Business*. 3(2), 45-61.
- Rahaman, M.A., Hassan, H.M.K., Asheq, A.A., Islam, K.M.A., 2022. The interplay between eWOM information and purchase intention on social media: Through the lens of IAM and TAM theory. *PLOS ONE*. 17(9), p. 0272926.
- Reina Paz, M.D., Rodríguez Vargas, J.C., 2023. Main theoretical consumer behavioural models. A review from 1935 to 2021”, *Heliyon*. 9(3), p. 13895.
- Ribeiro Coimbra, R., Brito, C.M., Oliveira Sampaio, D., 2023. Hedonic and utilitarian motivations and their relationship with cultural dimensions, life satisfaction and the attributes of supermarkets: An international study on consumer behavior. *Cogent Business & Management*. 10(2), 34-52.
- Roman, S., 2007. The ethics of online retailing: a scale development and validation from the consumers' perspective. *Journal of Business Ethics*. 72(2), 131-148
- Rothberg, D., 2005. Yahoo Unleashes a User-Plugged Shoposphere, <https://www.Eweek.Com/News/Yahoo-Unleashes-a-User-Plugged-Shoposphere/>.
- Roxas, B., 2022. Eco-innovations of firms: A longitudinal analysis of the roles of industry norms and proactive environmental strategy. *Business Strategy and the Environment*. 31(1), 515-531.
- Ruiz-Mafe, C., Bigné-Alcañiz, E., Currás-Pérez, R., 2020. The effect of emotions, eWOM quality and online review sequence on consumer intention to follow advice obtained from digital services. *Journal of Service Management*. 31(3), 465–487.
- Sagala, G.H., Sumiyana, N.A., 2020. The intersection of hedonic and utilitarian values on integrated-social media retailers. *International Journal of Business Information Systems*. 33(4), 505-549.
- Sarker, P., Hughe, L., Dwivedi, Y.K., Rana, N.P., 2020. Social Commerce Adoption Predictors: A Review and Weight Analysis. doi: 10.1007/978-3-030-44999-5_15.
- See-To, E.W.K., Ho, K.K.W., 2014. Value co-creation and purchase intention in social network sites: The role of electronic Word-of-Mouth and trust – A theoretical analysis. *Computers in Human Behavior*. 31(4), 182–189.
- Selig, J.P., Preacher, K.J., 2009. Mediation models for longitudinal data in developmental research. *Research in human development*. 6(2-3), 144-164.

- Selim, H., Eid, R., Agag, G., Shehawy, Y.M., 2022. Cross-national differences in travelers' continuance of knowledge sharing in online travel communities. *J. Retailing Consum. Serv.* 65, 102886.
- Shaalán, A., Agag, G., Tourky, M., 2022. Harnessing customer mindset metrics to boost consumer spending: a cross-country study on routes to economic and business growth. *Br. J. Manag.* 34 (7), 67–81.
- Shamim, K., Azam, M., Islam, T., 2024. How do social media influencers induce the urge to buy impulsively? Social commerce context. *Journal of Retailing and Consumer Services.* 77, p.103621.
- Sharma, M., Kaushal, D., Joshi, S., 2023. Adverse effect of social media on generation Z user's behavior: Government information support as a moderating variable. *Journal of Retailing and Consumer Services.* 72, p.103256.
- Sharma, S., Menard, P., Mutchler, L.A., 2019. Who to Trust? Applying Trust to Social Commerce. *Journal of Computer Information Systems.* 59(1), 32–42.
- Shehawy, Y.M., Agag, G., Alamoudi, H.O., Alharthi, M.D., Brown, A., Labben, T.G., Abdelmoety, Z.H., 2024. Cross-national differences in consumers' willingness to pay (WTP) more for green hotels. *Journal of Retailing and Consumer Services.* 77, p.103665.
- Shehawy, Y.M., Elbaz, A., Agag, G.M., 2018. Factors affecting employees' job embeddedness in the Egyptian airline industry. *Tourism Rev.* 73 (4), 548–571.
- Sheikh, Z., Yezheng, L., Islam, T., Hameed, Z., Khan, I.U., 2019. Impact of social commerce constructs and social support on social commerce intentions. *Information Technology & People.* 32(1), 68–93.
- Shekhar, R., Jaidev, U.P., 2020. Antecedents of online purchase intention in the context of social commerce. *International Journal of Applied Management Science.* 12(1), 68-81.
- Shin, D.H., 2010. The effects of trust, security and privacy in social networking: a security-based approach to understand the pattern of adoption. *Interacting With Computers.* 22 (5), 428-438.
- Silaban, P.H., Silalahi, A.D.K., Octoyuda, E., Sitanggang, Y.K., Hutabarat, L., Sitorus, A.I.S., 2022. Understanding hedonic and utilitarian responses to product reviews on youtube and purchase intention”, *Cogent Business & Management.* 9(1), 34-51.
- Sofiane, L., 2019. The Impact of Consumer-Based Brand Equity on Word-of-Mouth Behavior. *International Journal of Business and Social Science.* 10(4),36-51.
- Sohaib, M., Han, H., 2023. Building value co-creation with social media marketing, brand trust, and brand loyalty. *Journal of Retailing and Consumer Services.* 74, p.103442.
- Sohn, J.W., Kim, J.K., 2020. Factors that influence purchase intentions in social commerce. *Technology in Society.* 63(50), p. 101365.
- Soleimani, M., 2022. Buyers' trust and mistrust in e-commerce platforms: a synthesizing literature review. *Information Systems and E-Business Management.* 20(1), 57–78.
- Statista., 2022. <https://www.statista.com/statistics/1003351/saudi-arabia-leading-brands-on-facebook-by-number-of-total-fans/> accessed (25/06/2023).
- Teng, S., Wei Khong, K., Wei Goh, W., Yee Loong Chong, A., 2014. Examining the antecedents of persuasive eWOM messages in social media. *Online Information Review.* 38(6), 746–768.
- To, P.-L., Liao, C., Lin, T.-H., 2007. Shopping motivations on Internet: A study based on utilitarian and hedonic value. *Technovation.* 27(12), 774–787.

- Tseng, H.T., 2023. Shaping path of trust: the role of information credibility, social support, information sharing and perceived privacy risk in social commerce. *Information Technology & People*. 36(2), 683-700.
- Tseng, H.T., Nadeem, W., Hajli, M.S., Featherman, M., Hajli, N., 2023. Understanding consumers' interest in social commerce: the role of privacy, trust and security. *Information Technology & People*. 34(7), 61-89.
- Tuncer, I., 2021. The relationship between IT affordance, flow experience, trust, and social commerce intention: An exploration using the S-O-R paradigm. *Technology in Society*. 65(4), 57-71.
- Vazquez, E.E., Patel, C., Alvidrez, S., Siliceo, L., 2023. Images, reviews, and purchase intention on social commerce: The role of mental imagery vividness, cognitive and affective social presence. *Journal of Retailing and Consumer Services*. 74(6), 61-79.
- Venkatesh, V., Speier-Pero, C., Schuetz, S., 2022. Why do people shop online? A comprehensive framework of consumers' online shopping intentions and behaviors. *Information Technology and People*. 35(5), 1590-1620.
- Verhagen, T., Meents, S., Tan, Y.-H., 2006. Perceived risk and trust associated with purchasing at electronic marketplaces. *European Journal of Information Systems*. 15(6), 542–555.
- Verma, D., Dewani, P.P., Behl, A., Dwivedi, Y.K., 2023. Understanding the impact of eWOM communication through the lens of information adoption model: A meta-analytic structural equation modeling perspective. *Computers in Human Behavior*. 143(6), 34-56.
- Vieira, V., Santini, F.O., Araujo, C.F., 2018. A meta-analytic review of hedonic and utilitarian shopping values. *Journal of Consumer Marketing*. 35(4), 426–437.
- Vinoi, N., Shankar, A., Khalil, A., Mehrotra, A., Kumar, J., 2024. Holding on to your memories: Factors influencing social media hoarding behaviour. *Journal of Retailing and Consumer Services*. 76, p.103617.
- Wang, B., Jia, T., 2023. Seize the favorable impression: how hosts should manage positive online reviews. *International Journal of Contemporary Hospitality Management*. 35(6), 67-81.
- Wang, F., Du, Z., Wang, S., 2023. Information multidimensionality in online customer reviews. *Journal of Business Research*. 159(5), 56-79.
- Wang, J., Shahzad, F., Ahmad, Z., Abdullah, M., Hassan, N.M., 2022. Trust and Consumers' Purchase Intention in a Social Commerce Platform: A Meta-Analytic Approach. *SAGE Open*. 12(2), 34-51.
- Wang, P., Huang, Q., 2023. Digital influencers, social power and consumer engagement in social commerce. *Internet Research*. 33(1), 178-207.
- Wang, X.-W., Cao, Y.-M., Park, C., 2019. The relationships among community experience, community commitment, brand attitude, and purchase intention in social media. *International Journal of Information Management*. 49(3), 34-61.
- Wang, Y., Yu, C., 2017. Social interaction-based consumer decision-making model in social commerce: The role of word of mouth and observational learning. *International Journal of Information Management*. 37(3), 56-78.
- Wongkitrungrueng, A., Assarut, N., 2020. The role of live streaming in building consumer trust and engagement with social commerce sellers. *Journal of business research*, 117, 543-556.
- Wood, B.P., Eid, R., Agag, G., 2021. A multilevel investigation of the link between ethical leadership behaviour and employees green behaviour in the hospitality industry. *Int. J. Hospit. Manag.* 97, 102993.
- Wu, W., Wang, S., Ding, G., Mo, J., 2023. Elucidating trust-building sources in social shopping: A consumer cognitive and emotional trust perspective. *Journal of Retailing and Consumer Services*. 71(6), p. 103217.

- Wu, Y., Nambisan, S., Xiao, J., Xie, K., 2022. Consumer resource integration and service innovation in social commerce: the role of social media influencers. *Journal of the Academy of Marketing Science*. 50(3), 429-459.
- Wu, Y.L., Li, E.Y., 2018. Marketing mix, customer value, and customer loyalty in social commerce: A stimulus-organism-response perspective. *Internet Research*. 28(1), 74-104.
- Xu, X.-Y., Gao, Y.-X., Jia, Q.-D., 2023. The role of social commerce for enhancing consumers' involvement in the cross-border product: Evidence from SEM and ANN based on MOA framework. *Journal of Retailing and Consumer Services*. 71(6), 56-78.
- Yahia, I. B., Al-Neama, N., Kerbache, L., 2018. Investigating the drivers for social commerce in social media platforms: Importance of trust, social support and the platform perceived usage. *Journal of Retailing and Consumer Services*. 41, 11–19.
- Yan, Y., Chen, H., Shao, B., Lei, Y., 2023. How IT affordances influence customer engagement in live streaming commerce? A dual-stage analysis of PLS-SEM and fsQCA. *Journal of Retailing and Consumer Services*. 74(6), p. 103390.
- Yang, C.Z., Ha, H.-Y., 2023. The evolution of E-WOM intentions: A two time-lag interval approach after service failures. *Journal of Hospitality and Tourism Management*. 56(6), 147–154.
- Yao, Y., Xu, P., 2022. E-participation decision across different channels. *Information Technology and People*. 35(3), 956-976.
- Yin, Q., Song, D., Lai, F., Collins, B.J., Dogru, A.K., 2023. Customizing governance mechanisms to reduce opportunism in buyer–supplier relationships in the digital economy. *Technological Forecasting and Social Change*. 190(3), p. 122411.
- Youssef, M.A.E.A., Eid, R., Agag, G., 2022. Cross-national differences in big data analytics adoption in the retail industry. *J. Retailing Consum. Serv.* 64, 102827.
- Yu, W.-J., Hung, S.-Y., Yu, A.P.-I., Hung, Y.-L., 2023. Understanding consumers' continuance intention of social shopping and social media participation: The perspective of friends on social media. *Information & Management*. 34(6), 67-89.
- Zhang, J., Luximon, Y., Li, Q., 2022. Seeking medical advice in mobile applications: How social cue design and privacy concerns influence trust and behavioral intention in impersonal patient–physician interactions. *Computers in Human Behavior*. 130(5), p.107178.
- Zhang, K.Z.K., Benyoucef, M., 2016. Consumer behavior in social commerce: A literature review. *Decision Support Systems*. 86(3), 95–108.
- Zhao, J.-D., Huang, J.-S., Su, S., 2019. The effects of trust on consumers' continuous purchase intentions in C2C social commerce: A trust transfer perspective. *Journal of Retailing and Consumer Services* 50(3), 42–49.
- Zhao, L., Xu, Y., Xu, X., 2023. The effects of trust and platform innovation characteristics on consumer behaviors in social commerce: A social influence perspective. *Electronic Commerce Research and Applications*. 60(3), p. 101284.
- Zhao, W., Hu, F., Wang, J., Shu, T., Xu, Y., 2023. A systematic literature review on social commerce: Assessing the past and guiding the future. *Electronic Commerce Research and Applications*. 57(9), p. 101219.
- Zhao, X., Lynch, J.G., Chen, Q., 2010. Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*. 37(2), 197–206.
- Zhao, Y., Wang, L., Tang, H., Zhang, Y., 2020. Electronic word-of-mouth and consumer purchase intentions in social e-commerce. *Electronic Commerce Research and Applications*. 41(9), p. 100980.

Zheng, X., Men, J., Yang, F., Gong, X., 2019. Understanding impulse buying in mobile commerce: An investigation into hedonic and utilitarian browsing. *International Journal of Information Management*. 48(1), 151-160.