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The role of trust and privacy concerns in using social media for e-retail services: The moderating role of COVID-19

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ABSTRACT

The COVID-19 pandemic has disrupted the customers' habits of purchasing as well as shopping behaviours. This study seeks to develop an integrated model of the critical role of trust and privacy concerns in influencing consumers' purchase behaviour through social media. It also explored the moderating role of COVID-19 on these relationships. Quantitative data were collected using survey strategy through questionnaires to address different levels of the study. Our proposed model was tested with 1,200 consumers, 600 prior to COVID-19 and 600 during COVID-19. Partial Least Squares Structural Equation Modelling was conducted to assess the hypotheses. The findings revealed that purchase intention depends on trust and privacy concerns. Information quality, security concerns, ease of use, privacy/security assurance seal, and disposition to third party certification are the main drivers of trust and privacy concerns. Furthermore, our proposed model during COVID-19 period has higher explanatory power ($R^2 = 0.741$) than before COVID-19 period ($R^2 = 0.603$) and consumers buying behaviour has been increased during COVID-19. The results offer important implications for retailers and are likely to stimulate further research in the area of purchase behaviour through social media.

1. Introduction

The retail sector in Saudi Arabia accounts for nearly 6.4% of the country's total gross domestic product (GDP). Between 2020 and 2025, Saudi Arabia's retail industry is expected to grow at a CAGR of 4.5% to reach SAR 331.6 billion. The coronavirus (COVID-19) outbreak and the subsequent public health response have had significant effects on the economies of Saudi Arabia and other countries around the world. Lockdown restrictions and social distancing have had a significant impact on the retail industry, which has resulted in a shift in the goods and services that we buy and how we buy them.

As the internet and the web have grown, new applications like social media have been made that help retailers better connect with their customers (Vieira et al., 2022). Social media is a type of the Web 2.0 paradigm, which emphasises user-generated content that can be shared in a social setting (Pallant et al., 2022). In their book, Kaplan and Haenlein (2012) called social media "as 'a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content". Social media apps are giving retailers new ways to connect with customers and become more transparent and accessible (Ginder and Byun, 2022). Retailers all over the world are trying to use the power of social media to change the way they run their businesses, especially when it comes to making connections and getting more consumers to use their services and to build trust with them (Abdelmoety et al., 2022). Facebook and other social media sites let retailers and customers talk to each other at the same time, unlike retailers' websites that only let consumers talk to each other one way (Watanabe et al., 2021). Social media makes it easy for customers to get information, connect, interact, participate, and engage with retailers. This means that these retailers can share important information with their customers on social media platforms, which most consumers like because they don't have to go to the retailers' websites to get that information (Cho, and Sutton, 2021). Social media gives retailers and customers a new way to get and share information, and it encourages customers to be involved in retailers' decision-making processes. However, even though social media has a lot of potential and retailers have made a lot of efforts to use social media for e-retailers services, there is still a lack of consumers to utilise social media to purchase online.

It has been revealed that data privacy and consumer trust are "one of

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the most important issues in marketing right now” (Wang et al., 2022, p. 495). “Trust, like the soul, never returns once it is gone” (Publılius, 2018). Yet, until now, we don’t know how much privacy and trust affect the adoption of new technologies (Aboul-Dahab et al., 2021; Bansal and Nah, 2022; Fox et al., 2021). The role of privacy and trust in consumer adoption of new technology is especially important in the context of social media, where it is becoming more important in individuals’ personal and family lives and has access to more and more personal and potentially sensitive information on customers. Many retailers and service providers (e.g., Armani Exchange, airlines, Toms, banks, and Samsung) have used social media to help their businesses grow. However, some businesses haven’t done well with their social media strategies, and there have been many complaints about “trust, security, and privacy” in information exchange. Walmart is one of the companies that didn’t do well (Saura et al., 2021). When consumers don’t buy things online because of distrust in online providers, that’s one of the main reasons (e.g., Abdelmoety et al., 2022; Bao and Yang, 2022). However, in the case of social media, customers are told about a product on social media and may make purchases. Trust in social media and embedded content from friends could make consumers more likely to buy from online providers.

Today, with the expansion of social media and SNSs, a study of customers behaviour on these platforms is a research agenda (Hyun et al., 2022) because social media are likely to develop marketing strategies in firms through trust-building mechanisms and affecting consumers’ intentions to buy online products. The high involvement in context of utilising social media for online shopping makes the need of customers trust critical as compared to online retailing websites where the involvement and interactions among retailers and customers is relatively low (Pop et al., 2022; Yahia et al., 2018). Moreover, due to the novel nature of social media usage in the online retailing context in Saudi Arabia, there has been limited examination on customers trust perspectives to utilise social media for online shopping (Hansen et al., 2018). Though a few examinations have acknowledged the critical role of customers’ trust in utilising such services (Cheng et al., 2019; McClure and Seock, 2020) but without providing a deep understanding on how to develop this trust. Furthermore, there have also been calls for future examination on customers’ trust to use social media in the retail context (Jiang et al., 2019). Thus, our examination develops and validates an integrative model of the main drivers of customers trust for retailer’s social media services in Saudi Arabia context.

Despite there are numerous studies on the impact of COVID-19 on retailing industry (Beckers et al., 2021), the influence it has on customers IT adoption is not explored yet. As a first step, the authors of this research seek to figure out how COVID-19 has changed customer’s plans for how they’ll use social media when they go shopping, and what caused these changes. Therefore, our study aims to explore the moderating role of COVID-19. Our model was built according to “the Technology Acceptance Model” (Davis, 1989) and the literature on consumer trust and privacy concerns to explore factors affecting consumers purchase intention in social media. Our model was tested at two time points, the first time point was “before COVID-19”, and the second was “during the COVID-19”, to explore the variances in the drivers of consumers purchase intention in social media. The findings of this study can advance our knowledge on consumers’ behaviours during COVID-19, offer meaningful implications for retailers to understand consumers behaviours during the new COVID-19 reality.

The next section demonstrates the literature review on purchase intention in social media and the role of consumer trust and privacy concerns. Our proposed model and hypotheses development were indicated in section 3. We demonstrated the methodology, data collection, and analysis in section 4. We also revealed the study findings in section 5. Discussion and implications were indicated in section 6.

2. Literature review

Recent examinations on social media have looked at how individuals use it from the point of view of trust or privacy concerns. We look at the research that has already been done on social media trust and privacy concerns, which helps us understand how these important factors are linked to promote purchase behaviours.

2.1. Trust

Trust plays a critical role in interactions and significant for firms to develop relationships with consumers (e.g., Abror et al., 2019; Bhalla, 2020). Jiang (2019, p. 269) define trust as “one’s confidence on the exchange party’s capability and willingness to establish the business’ adherence to the relationship norms and keeping promises”. Pappas (2018) pointed out that trust is a consumer’s belief that an exchange will go as planned. The way customers think about trust can be either one-dimensional or many-dimensional (Punyatoya, 2018). However, a better understanding of trust comes from knowing its different parts. Think of trusts as both “cognitive and affective trusts”, which are the two main kinds (Stouthuyzen et al., 2018). Consumer cognitive trust is the consumer’s belief in and willingness to depend on the ability and consistency of the person they are exchanging with. “Affective trust” can be defined as you feel something, you think that the company is more concerned about you than it is (Marriott and Williams, 2018). “Belief that the person you are exchanging things with is trustworthy” and “belief that the person you are exchanging things with wants to help you both” are two important parts of both cognitive and affective trusts (Agag, 2019; Alhaimer, 2022).

Mayer et al. (1995) defined Trust as “the willingness of a party to become vulnerable to the actions of another party based on the expectation that another party will perform a particular action impact to the trustor, irrespective of the ability to monitor or control that other party”. Recently, customers’ use of social networks has made it easier for individuals to get to know each other and share information, which has increased the level of trust (Pop et al., 2022). From SNS’s point of view, trust is built on security and privacy issues, which are still a reason why customers don’t buy from SNS (Hyun et al., 2022). Yahia et al. (2018) pointed out that trust plays a key role in SNS, and that trust is a variable that must be studied and looked into in SNS (Cooley and Parks-Yancy, 2019). Hansen et al. (2018) found that SNS affects how much customers trust a business. On the other hand, trust plays an important role in how customers decide what to buy (Sanny et al., 2020).

In our study, we define trust as “one can rely upon a promise made by another and that the other, in unforeseen circumstances, will act toward oneself with goodwill and in a benign fashion” (Suh and Han, 2003, p. 137). When people conduct business online, they place their trust in the exchange party’s trustworthiness and the attributes of competence, integrity, and compassion (Pop et al., 2022). When it comes to social media, there is usually more uncertainty because there are a lot of user-generated content and there aren’t a lot of face-to-face interactions (Li and Tsai, 2022). Despite this, having more experience with exchange parties could lessen the uncertainty and make customers more likely to use online commerce by making them more trusting (Hasan et al., 2021). The paucity of face-to-face communications can make consumers doubt the truthfulness of online transactions, and the lack of information about the online providers could make online shopping even more risky (Jiang and Lau, 2021). Meilatinova (2021) explore the drivers of customers trust and its effect on online shopping behaviours. They identified different social media characteristics to be the main antecedents of consumer trust (e.g., information quality and security concerns).

2.2. Privacy concerns

Because many customers are worried about their personal information when they use the internet, prior research has revealed that privacy
Concerns are a major obstacle for the development of new media (e.g., Wang et al., 2022). For instance, customers may have positive feelings about online banking technology, but their fears about the security of online commerce might keep them from adopting online banking service (Agag et al., 2020; Fox et al., 2021; Zhang et al., 2022). Previous studies indicate that privacy concerns are key driver in purchase intentions in the online context (e.g., Agag and Eid, 2019; Bansal and Nah, 2022). Individuals are worried about their personal information being stolen when they use social media. Privacy issues came to light after a security flaw in 2010 led to the accidental release of Facebook users’ personal information (Agag and Colmekcioglu, 2020; Anic et al., 2019). In spite of more consumers talking about privacy, there aren’t any clear answers about how individuals respond to personalised advertising because of privacy concerns. Privacy concerns are thought to make consumers avoid ads and have a negative attitude about the brand and the ad (Agag and Eid, 2019; Ketelaar, and Van Balen, 2018; Zhang et al., 2019).

Concerns about privacy make customers less likely to use social media to purchase products (Tajvidi et al., 2020). How worried customers are about their privacy online depends a lot on how much they trust the online platform (Wang and Herrando, 2019). Social media platforms try to ease customers’ worries by making them feel like they have more control over their privacy concerns. Platforms provide customers with the power to choose how much privacy they want in the hopes that it will decrease their worries (Zhu and Kanjanamekanant, 2021). When customers don’t have a privacy breach or are emotionally far away, they have a different view of privacy concerns (Liyanarachchi, 2021). This means that if a customer’s privacy is violated, they will be less likely to use the social media platform because they won’t trust it as much.

Privacy is defined as “the ability to control and limit physical, interactional, psychological, and informational access to the self or one’s group” (Gutierrez et al., 2019; P 297). In the internet environment, privacy is inextricably linked to access to personal information (e.g., Bandara et al., 2020; Bright and Logan, 2018; Wottrich et al., 2018). When individuals perceive an unwanted intrusion into their privacy or a loss of control over their personal information, a privacy worry is triggered (Gimpel et al., 2018; Lin et al., 2019; Yun et al., 2019). According to public opinion polls, the majority of Americans are concerned about the types of personal information marketers possess and how they collect and use that information (Agag and El-Masry, 2016; Esmaelza-deh, 2018). Due of social media’s ability to follow users’ online activities like purchase histories and deliver personalised ad messages, one of the most likely reactions is a rise in privacy concerns. Personalised ad messages make customers realise that their personal information is being used for marketing purposes, and this discourages them from making an online purchase (Ariffin et al., 2018; Song et al., 2022; Wang and Herrando, 2019). Thus, our study seeks to explore the main antecedents of privacy concerns (i.e., privacy/security policy, assurance seals, disposition to third party certification) and their influence on purchase behaviour.

3. Conceptual framework and hypotheses development

Based on the TAM, we developed our model (see Fig. 1). Originally developed as a tool to estimate whether a new technology would be accepted by consumers, the TAM has since been used extensively to research the adoption of new technologies, such as online shopping (Eneizan et al., 2020; Hyun et al., 2022), smartphones (Mehra et al., 2021), and the new media (Khan et al., 2021a, b). According to Davis (1989), intention to use a new technology is mostly driven by two factors: “the technology’s perceived usefulness and its perceived ease of use”.

![Fig. 1. Research model.](image-url)
3.1. Drivers of customers trust in the use of social media for e-retailing services

Based on the TAM and prior research on consumer trust, we identified five factors as main drivers of consumer trust: Information quality, security concerns, perceived ease of use, perceived usefulness, and privacy concerns. Information quality is defined as consumers’ perceptions about accuracy and the completeness of information in the online context (Khan et al., 2021a,b). Trust in an online provider increases when consumers perceive it to be a source of reliable information (Elhoushy et al., 2020; Kang and Namkung, 2019). An e-retailer service’s ability to provide reliable and trustworthy sources of information is a major factor in achieving intended outcomes (Eid et al., 2021; Zha et al., 2018). According to Dedeoglu (2019), one of the most important advantages consumers attribute to social media is the availability of information. As a result, retailers should publish reliable data to foster consumer trust in their operations. Using social media services generates a wide range of information from a variety of sources in a real-time context (Chen and Chang, 2018; Eid et al., 2019). The link between information quality and consumer trust has been examined and found to be significant (Khan et al., 2021a,b). As a result, individuals’ confidence in the use of social media for e-retailing services can be influenced by high-quality content.

The term “perceived security” refers to consumers’ perceptions of the level of internet security protection they feel they have (Wongkitrungrueng and Assarut, 2020). It is vital for retailers to address customer concerns about online security (Ariffin et al., 2018). Consumers are reassured by the existence of safety features. According to Vasić et al. (2019), consumers’ trust and willingness to rely on e–vendor service are bolstered by a sense of security. Consumers’ confidence in online services can be bolstered by their conviction that their data is safe from espionage, spyware, or other viruses (Jiang and Lau, 2021). During social media interactions with e-retailers, customers must have confidence that their information will not be viewed or exploited by undesirable organisations.

Customers’ willingness and ability to adopt and use new technology have been studied from a variety of theoretical perspectives, as documented in the academic literature. Customer acceptance and use of technology-related apps can be better studied using the TAM’s preferred methodology out of these three options (Pal and Patra, 2021). First introduced by Davis (1986), the TAM posits that the acceptability of an information system is influenced by individuals’ judgments of ease of use and usefulness. Consumer acceptance of various forms of technology can be explained in large part by TAM, which has gained strong empirical evidence (e.g., Rijanto, 2021). Davis (1989, P. 320) defined ease of use as “the degree to which a person believes that using a particular system would be free of effort”. In this study, perceived ease of use is the extent to which customer believes that social media use for e-retailers services is easy to use. Perceived usefulness was conceptualised as “the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989; P.320)”. In this research, perceived usefulness refers to the extent to which customers believe that utilising social media for e-retailers services improves their shopping planning. Previous studies revealed a significant association among perceived ease of use and usefulness (e.g., Agag and El-Masry, 2017; Khan et al., 2021a,b). Moreover, prior research demonstrated a positive and significant link among perceived ease of use, perceived usefulness, and consumers trust (e.g., Agag and El-Masry, 2017; Butt et al., 2021; Eneizan et al., 2020; Ha and Nguyen, 2019).

The relationship between privacy concerns and customer purchase behaviour is complex in the online context (Anic et al., 2019; Fox et al., 2021). Prior research revealed that privacy concerns might not lead to intentions to purchase (Zhu and Kanjanamekanant, 2021). Customers who are more knowledgeable about the Internet and how to protect themselves are likely to continue shopping online (Venkatesh et al., 2021). When confronted with the perceived risk and invasion of privacy, consumers tend to limit their online purchases (Cowan et al., 2021; Liu et al., 2021). In the context of social media, previous studies pointed out that privacy concerns have a significant negative influence on consumers trust towards the use of social medial (e.g., Ayaburi and Treku, 2020; Khan et al., 2021a,b). Thus, we suggest the following hypotheses:

H1. “Information quality positively influences consumers trust to use social media for e-retailers services”.

H2. “Security concerns negatively influence consumers trust to use social media for e-retailers services”.

H3. “Perceived ease of use positively influences consumers trust to use social media for e-retailers services”.

H4. “Perceived ease of use positively influences perceived usefulness”.

H5. “Consumers trust to use social media for e-retailers services positively influences perceived usefulness”.

H6. “Privacy concerns negatively influences consumers trust to use social media for e-retailers services”.

3.2. Drivers of privacy concerns

Based on Ray et al. (2011), we identified three main factors as key drivers of privacy concerns (i.e., privacy/security policy, assurance seal, and disposition to third-party certification), these constructs have not been explored in the social media environment. We explored the drivers of privacy concerns in the context of social media, because of the huge impact of these variables on consumers trust and purchase behaviours (Khan et al., 2021a,b). Statements made by online retailers claiming that their customers’ information is safe and secure are known as privacy and security policies (Ray et al., 2011). A retailers’ investments in a website can be measured in terms of the money, time, and effort they put into establishing it. Investments in security and privacy are signal to e-retailers that the physical appearance of their services has long been a reliable indicator of quality (Ray et al., 2011). Policies on security and privacy on the store’s website and investments made by the shop are valid sources of information, because they are supplied by the seller themselves (Ponte et al., 2015).

Numerous studies examined the effect of “third-party assurance seals” on consumers trust, however, there is a paucity of assent on this relationship (Shao et al., 2022). While prior research revealed a significant link between assurance seals and consumers trust (e.g., Sim et al., 2021), others have not found a significant effect (e.g., López López Jiménez et al., 2021). However, there is very little research on the effect of “assurance seals” on customers’ privacy concerns. For instance, Lowry et al. (2011) pointed out that assurance seals have no significant influence on privacy concerns. Moreover, in social media setting, there is no study that explored these relationships.

According to Saeed and Riaz (2021), the impression of identifying markings for third-party certification is influenced by the notion of trust in the certification of third-party, which in turn influences customers’ trust. The proclivity to rely on third parties for reliable information during online transactions is described as the proclivity to believe in third-party certification. Third-party certifications, such as “security and privacy protection assurances”, are likely to have a beneficial influence on the impression of the “e-retailer’s privacy and security” if buyers have a high predisposition to trust third parties. Akhtar et al. (2022) found that customers who have a higher trustworthiness are more inclined to trust e-retailers that display “third-party assurance seals”, which increases their sense of website “security and privacy protection”. For this reason, it is almost inevitable that individuals’ willingness to place their trust in “third-party certification” will affect their trust in retailers’ e-commerce via social media. Prior research pointed out that customers disposition to trust third-party certification is related to their trust to online services provider (Ponte et al., 2015). The tendency to
depend on third parties for reliable information during online transactions is what is meant by the term “tendency to trust third-party certification”. If customer tends to trust third-party certifications, “like security and privacy protection guarantees”, this is likely to make them feel better about the privacy and security of the online service providers. X. Wang et al. (2021) revealed that individuals who are more likely to trust are more likely to trust online service providers who have third-party assurance seals, which makes them feel more confident about website privacy and security. Therefore, we propose the following hypotheses:

H7. “Privacy and security policies negatively influence privacy concerns”.
H8. “Assurance seal negatively influence privacy concerns”.
H9. “Disposition to third-party certification negatively influence privacy concerns”.

3.3. Privacy concerns, trust, and purchase intention

Trust was found to be a key driver of purchase intention in the context of online retailing and social media (e.g., Khan et al., 2021a,b; Moslehpour et al., 2021; L. Wang et al., 2021). As a result, customers’ willingness to use a system is favourably influenced by their level of trust. Having faith in a new technology can have a big impact on how widely it is adopted. We expect that trust to have a great influence on purchase intention in social media context due to the data collection and sharing through social media. The “privacy paradox” is a common theme in the research on personal ICT use, including mobile devices and social media, where consumers’ professed privacy values do not match their actual privacy practises (Barth De and Jung, 2017). Several factors may contribute to this paradox, such as consumers’ being overwhelmed by the amount of information they must manage, consumers’ conducting a cost-benefit analysis of the risks associated with the release of personal information (Dinev and Hart, 2006), user trust or mistrust of the service and provider (Gerber et al., 2018), and other factors restricting consumers’ choice (Norberg et al., 2007).

Some social network sites may share member information with third-party communities that work together to offer a personalised and tailored online service for payment and after-sale. When people don’t feel safe, they don’t want to give out information (Zhu and Kanjana-mekanant, 2021). Because of these concerns, people who use the Internet are less likely to give out personal information, are less likely to use online services (Bawack et al., 2021), and don’t trust the website (Liyanarachchi, 2021). In this way, social networking sites should not only be more open about how information is used, what roles users play, and what controls and permissions users have, but they should also make privacy notices clear during the shopping process to ease consumers’ privacy worries (Ioannou et al., 2021). Prior research pointed out that consumers trust, and privacy concerns are key driver of purchase intention (e.g., Jaspers and Pearson, 2022; Khan et al., 2021a,b; Ponte et al., 2015; Zahid et al., 2022). Therefore, we suggest the following hypotheses:

H10. “Privacy concerns negatively influence purchase intention”.
H11. “Customer trust positively influences purchase intention”.

3.4. The moderating role of COVID-19

COVID-19’s global lockdown and other restrictions have prompted more people to shop online. During the quarantine period, Internet business has accelerated its growth as a result of the economic crisis. Customers around the world have become more discerning and financially strapped as a result of the rise of a new digitally immersed consumer class (Akar, 2021). In comparison to 2000, the number of e-commerce publications is expected to nearly treble by 2023. However, it has grown by 1.6 times in the last year (Gu et al., 2021). This reflects an increase in academic interest in e-commerce during the COVID-19 era. Customers’ behaviour changed as a result of the COVID-19 outbreak. Customer preference for internet purchases increased during the COVID-19 crisis (Mason et al., 2020). Overall, e-commerce spending has changed dramatically. There was a rise in the number of people who went shopping on a regular basis. Customers’ online purchasing behaviour in COVID-19 is likely to be influenced by several factors, including an increase in Internet user numbers and an improved awareness about online shopping, as well as more frequent and active product releases and lower-cost bulk purchases (Sharma and Jhamb, 2020). More people are likely to shop online as a result of the COVID-19 epidemic, social isolation, and the urge to shop at home. e-commerce may be affected by supply chain constraints and unpredictable customer demand. A drop in casual shopping and supply chain disruptions caused by the COVID-19 pandemic are also anticipated to have an impact on shops (He and Harris, 2020; Sheth, 2020).

During the COVID-19 period, people have become much more dependent on technology and information systems (Erjavec and Manfreda, 2022). Technology is being used more and more because it can keep people apart and make them safer (Eger et al., 2021). During unusual events, like the pandemic, older people quickly move to broader sources of information, like broadcast media (Akar, 2021). Also, because older adults’ face-to-face communication was suddenly cut off, they started to rely mostly on social media apps as their only source of news (Erjavec and Manfreda, 2022). Alhaimer (2022) indicated that stronger messages in the media may cause more fear, which may lead to more compliance with social-distance and lockdown policies. COVID-19 fear has also been used as a moderating variable (Grashuis et al., 2020).

There is a possibility that some drivers variables, such as COVID19, could moderate the intensity and direction of a consumers’ purchase intention in response to the COVID-19 scenario (Little et al., 2007). As a result, the current paper examines the variances among two settings, one without COVID-19 and the other with COVID-19, in order to add COVID-19 as a moderating factor. One of our study purposes is to explore whether there have been changes in the variables that influence consumers’ use of social media in their purchasing decisions in this new setting. Given that we’re now dealing with a completely new issue with no historical context, the following proposal is made:

H12. “COVID-19 moderates the relationships between the study variables and purchase intention”.

4. Methodology

4.1. Sample and data collection

We used two samples with gender and age quotas to test the proposed model. Prior to the start of COVID-19 (5th –25th May 2019), the first sample was collected, and the second sample has been collected during the COVID-19 (10th-25th November 2021). The participants in our study were Saudi Arubians who regularly used social media and lived in various parts of Saudi Arabia, chosen at random by an established Saudi Arabian online survey firm. A database-marketing firm had access to a representative panel of consumers made up of more than 1.9 million registered customers and delivered the link to a random sample of 2000 customers (i.e., 1000 before and 1000 during the COVID-19 pandemic). The study’s purpose, estimated completion time, and survey URL were all included in the email invitation. The survey URL was also published via the company’s platform. Participants could only participate if they agreed to take part in the survey in the first place. Gender, age and education level were also taken into account while selecting respondents. The e-mail invitations included a screening question about the frequency of utilising social media for online buying.
Only 600 consumers were included in each of the two samples (Table 1). Our questionnaire was developed in English based on validated and tested measurements from the previous studies in the context of social media and online shopping. To ensure the validity and reliability of the measuring scales utilised to Arabic, a sequential linguistic method was used (Muniz et al., 2013). We utilised a 5-point Likert scale from 1 (“totally disagree”) to 5 (“totally agree”). Our questionnaire was piloted on 150 consumers. Participants were given a little monetary reward for their time.

### 4.2. Data analysis

The data was analysed with the SPSS 26 and SmartPLS3 statistical techniques. SPSS was utilised to test for the common method bias where PLS-SEM was utilised to test the study hypotheses. In our study, we used the PLS-SEM because “it is the most accurate option for models where all constructs are reflective”; it is recommended for “multigroup analyses” (Hair et al., 2021); and it is “less sensitive to violation assumptions of data normality” (Klesel et al., 2021). PLS-SEM is also “more robust than CB-SEM when data are not normal” (Hair et al., 2021).

Social scientists’ interest in “partial least square” (PLS) modelling has grown recently (Zareie and Navimipour, 2016). As a result of this, researchers may better forecast and comprehend the role and genesis of distinct constructs and their interactions with each other when using PLS, which is compatible with basic “structural equation modelling” precepts (Hair et al., 2021). In addition, because it aims to maximise the explained variance in the dependent construct, PLS is frequently deemed more suited than “covariance-based modelling techniques” like LISREL when the emphasis is on prediction. For more complex models, sample size requirements are even fewer than the minimum advised by “covariance-based methods” (Hair et al., 2021). Covariance-based SEM has expanded group comparison algorithms for “multi-group structural equation modelling”. This method, however, places a heavy burden on the quality of the data and the size of the sample. The component-based strategy, “partial least squares” (PLS), is another less restricted method for evaluating structural equation models across groups (Hair et al., 2019). It was decided to run the study model through the component-based structural equation modelling technique of PLS. A version of PLS 3.0 was utilised, a piece of software popular among marketing and information systems scholars (Hair et al., 2021).

Our study was carried out in five steps. We conducted a comparison of means to explore whether there had been any shifts in consumer’s intentions to purchase products through social media. Therefore, we followed these steps to test the study hypotheses (e.g., García-Milon et al., 2021; Hair et al., 2019):

First, we divided the data into two groups based on when it was gathered. Those who gave data prior to COVID-19’s beginning form the first group (non-COVID-19). The COVID-19 participants who contributed data for Group 2 are included in this group. To be able to conduct a multi-group comparison, each groups had to be assessed with the same items and have similar proportions of gender and age. For each group, the measurement model was validated using partial least squares structural equation modelling (PLS/SEM); each scale’s reliability and validity were independently tested. PLS-SEM was used to evaluate the structural model, and the R2 and path coefficients, as well as the significance of each, were determined for each model separately. Finally, Non-COVID-19 and COVID19 groups were analysed using a multi-group analysis, with a “PLS consistent permutation test” used to compare path coefficients.

Common method biases (CMB) can arise when self-reported data is used because of the consistency motif and social desirability (Podsakoff et al., 2003). We used statistical methods to determine the degree of CMB contamination in our samples. SPSS was utilised to test CMB. Further, Malhotra et al. (2006) recommend using CFA, loading all items on a single variable, and investigating the fit indices. Single variable is seen as a “methods factor 2 that indicates that data collection has been

### Table 1

**Participant demographics.**

| Demographics | All sample (n = 1,200) | Non-COVID-19 (n = 600) | COVID-19 (n = 600) |
|--------------|-----------------------|------------------------|------------------|
| **Age groups** |                        |                        |                  |
| 18-24        | 256                   | 135                    | 121              |
| 25-34        | 291                   | 142                    | 149              |
| 35-44        | 287                   | 151                    | 136              |
| 45-54        | 202                   | 95                     | 107              |
| 55+          | 164                   | 77                     | 87               |
| **Gender**   |                        |                        |                  |
| Male         | 633                   | 311                    | 322              |
| Female       | 567                   | 289                    | 278              |
| **Education**|                        |                        |                  |
| High school diploma | 231                 | 123                    | 108              |
| Some college | 250                   | 115                    | 135              |
| Bachelor’s Degree | 226                 | 107                    | 119              |
| Master’s Degree | 269                  | 129                    | 140              |
| PhD degree   | 224                   | 126                    | 98               |
| **Income**   |                        |                        |                  |
| <£25,000     | 279                   | 127                    | 152              |
| £25,001–50,000 | 268               | 160                    | 108              |
| £50,001–100,000 | 270             | 136                    | 134              |
| £100,001–150,000 | 231             | 102                    | 129              |
| >£150,000    | 152                   | 75                     | 77               |
| **Duration of daily social media usage** | | | |
| 0.5 h or below | 198              | 97                     | 101              |
| 0.5–1 h     | 194                   | 105                    | 89               |
| 1–1.5 h     | 203                   | 119                    | 84               |
| 1.5–2 h     | 160                   | 67                     | 93               |
| 2–2.5 h     | 107                   | 51                     | 56               |
| 2.5–3 h     | 129                   | 58                     | 71               |
| 3 h or above | 209                   | 103                    | 106              |
influenced by bias. One-factor models were found to be poorly fit, and the hypothesised model’s fit was found to be highly significant. The correlation marker technique was used to test for CMB (Lindell and Whitney, 2001). CMB-induced correlations were partially removed using the unrelated variables. Following Lindell and Whitney’s (2001) arguments, we went on to determine the significance of the correlations. The correlations’ significance remained unchanged, according to our findings. These results revealed that there is no impact from common method variance (CMV).

We utilised the method proposed by Armstrong and Overton (1977) to test for possible non-response bias. Two groups (i.e., early, late) respondents were tested to find out if there is a difference between them. During the early stage, 350 individuals filled out the survey, and 250 individuals filled it out during the late stage. At the 5% significance level, the chi-square test did not find any major differences among early and late respondents. So, there was no major concern on non-response bias.

### 4.3. Study Measurements

Validated measures from prior research were utilised to assess the study constructs (i.e., Adhikari and Panda, 2018; Cohen, 1988; Dinev and Hart, 2006; Jiang et al., 2019; Ray et al., 2011; Venkatesh et al., 2021; Venkatesh et al., 2021). We used multiple items to assess all the research constructs. Specifically, consumer trust was assessed using five items (e.g., “I believe that retailers services through social media are trustworthy”). Four items were adopted to evaluate information quality (e.g., “I believe that the Information provided by retailers through social media is accurate”). We used five items to evaluate security concerns (e.g., “I am not confident that the private information I share with retailers on social media is secure”). Perceived ease of use was assessed using four items (e.g., “Most of the services provided by retailers on social media are easy to use”). Perceived usefulness was measured utilising four items (e.g., “Using social media for retailers’ services can improve the service quality that I will receive, compared to deal with real people for the same service”). We measured

| Table 2                                                                 |
|------------------------------------------------------------------------|
| **Measurement statistics of construct scales (All sample).**            |
| Construct/Indicators | Standard Loading | CR  | VIF | Cronbach’s α | AVE | Mean | SD | t-statistic | Skewness | Kurtosis |
|----------------------|------------------|-----|-----|--------------|-----|------|----|-------------|-----------|----------|
| Purchase intention (INT)                                           |                 |     |     |              |     |      |    |             |           |          |
| INT1                 | 0.96             | 0.95| 1.094| 0.94         | 0.608| 3.94 | 0.81| 14.78       | –1.31     | 3.43     |
| INT2                 | 0.94             |     |     |              |     |      |    |             |           |          |
| INT3                 | 0.93             |     |     |              |     |      |    |             |           |          |
| Trust (TRU)           |                 |     |     |              |     |      |    |             |           |          |
| TRU1                 | 0.95             |     |     |              |     |      |    |             |           |          |
| TRU2                 | 0.96             |     |     |              |     |      |    |             |           |          |
| TRU3                 | 0.94             |     |     |              |     |      |    |             |           |          |
| TRU4                 | 0.90             |     |     |              |     |      |    |             |           |          |
| Privacy concerns (PRC)                                           |                 |     |     |              |     |      |    |             |           |          |
| PRC1                 | 0.93             | 0.93| 2.08 | 0.91         | 0.690| 3.85 | 0.86| 13.20       | –2.45     | 2.45     |
| PRC2                 | 0.94             |     |     |              |     |      |    |             |           |          |
| PRC3                 | 0.97             |     |     |              |     |      |    |             |           |          |
| PRC4                 | 0.90             |     |     |              |     |      |    |             |           |          |
| Information quality (IQU)                                        |                 |     |     |              |     |      |    |             |           |          |
| IQU1                 | 0.96             |     |     |              |     |      |    |             |           |          |
| IQU2                 | 0.93             |     |     |              |     |      |    |             |           |          |
| IQU3                 | 0.98             |     |     |              |     |      |    |             |           |          |
| IQU4                 | 0.93             |     |     |              |     |      |    |             |           |          |
| Security concerns (SRC)                                           |                 |     |     |              |     |      |    |             |           |          |
| SRC1                 | 0.94             |     |     |              |     |      |    |             |           |          |
| SRC2                 | 0.96             |     |     |              |     |      |    |             |           |          |
| SRC3                 | 0.97             |     |     |              |     |      |    |             |           |          |
| SRC4                 | 0.93             |     |     |              |     |      |    |             |           |          |
| SRC5                 | 0.89             |     |     |              |     |      |    |             |           |          |
| Perceived ease of use (PUS)                                      |                 |     |     |              |     |      |    |             |           |          |
| PUS1                 | 0.94             | 0.93| 1.873| 0.90         | 0.610| 2.89 | 0.85| 21.23       | –2.90     | 1.56     |
| PUS2                 | 0.95             |     |     |              |     |      |    |             |           |          |
| PUS3                 | 0.90             |     |     |              |     |      |    |             |           |          |
| PUS4                 | 0.95             |     |     |              |     |      |    |             |           |          |
| Perceived ease of use (PEU)                                      |                 |     |     |              |     |      |    |             |           |          |
| PEU1                 | 0.89             |     |     |              |     |      |    |             |           |          |
| PEU2                 | 0.94             |     |     |              |     |      |    |             |           |          |
| PEU3                 | 0.90             |     |     |              |     |      |    |             |           |          |
| PEU4                 | 0.93             |     |     |              |     |      |    |             |           |          |
| Privacy/security policy (PSP)                                   |                 |     |     |              |     |      |    |             |           |          |
| PSP1                 | 0.94             | 0.94| 1.490| 0.91         | 0.631| 3.03 | 0.84| 18.30       | –2.45     | 2.30     |
| PSP2                 | 0.97             |     |     |              |     |      |    |             |           |          |
| PSP3                 | 0.93             |     |     |              |     |      |    |             |           |          |
| PSP4                 | 0.90             |     |     |              |     |      |    |             |           |          |
| Assurance seal (ASL)                                              |                 |     |     |              |     |      |    |             |           |          |
| ASL1                 | 0.94             |     |     |              |     |      |    |             |           |          |
| ASL2                 | 0.92             |     |     |              |     |      |    |             |           |          |
| ASL3                 | 0.96             |     |     |              |     |      |    |             |           |          |
| Disposition to third-party certification (DTC)                     |                 |     |     |              |     |      |    |             |           |          |
| DTC1                 | 0.93             | 0.94| 1.871| 0.93         | 0.618| 3.56 | 0.86| 21.20       | –2.45     | 2.08     |
| DTC2                 | 0.90             |     |     |              |     |      |    |             |           |          |
| DTC3                 | 0.96             |     |     |              |     |      |    |             |           |          |
privacy/security policy using four items (e.g., “The availability of a privacy or a security statement was easily seen on the retailer website”). Assurance seal was measured using three items (e.g., “The third-party assurance seals on the retailer website make me feel more comfortable”). We used three items to measure disposition to third-party certification (e.g., “I generally have faith in third-party certification”). Finally, purchase intention was assessed using three items (e.g., “I intend to purchase retailers’ products through social media”). On a five-point Likert scale ranging from “1 = strongly disapprove” to “5 = strongly agree,” all items were evaluated.

5. Results

5.1. Measurement model

Our measurements psychometric properties were evaluated using discriminant validity, items loadings, and internal consistency (Tables 2 and 3). Our results indicated that both internal consistency and the loading of items were above 0.70, indicating that our measurements meet this criterion (Fornell and Larcker, 1981). “The average variance extracted values” for all variables (AVE) were above 0.5, demonstrating that convergent validity was satisfactory. The discriminant validity was evaluated according to the recommendations by Chin (1998): (1) “indicators should load more strongly on their corresponding constructs than on other constructs in the model” and (2) “the square root of the average variance extracted (AVE) should be larger than the interconstruct correlations”. Our study results revealed that the research variables meet this criterion. Therefore, the discriminant validity of the study measures was supported. Moreover, we used the “heterotrait-monotrait ratio” (HTMT) to assess the discriminant validity of the study constructs (Henseler et al., 2016). The analysis revealed that all HTMT values were below 0.85, demonstrating that the constructs were discriminately accurate.

5.2. Structural model

The structural model was assessed after the measurement model assessment. In line with the suggested hypotheses, our analysis indicated that information quality (β = 0.392, p < 0.000), security concerns (β = 0.485, p < 0.000), perceived ease of use (β = 0.701, p < 0.000), and perceived usefulness (β = 0.318, p < 0.000) have significant influence on consumers’ trust. Perceived ease of use was also found to have a significant influence on perceived usefulness (β = 0.408, p < 0.000). Therefore, H1, H2, H3, and H4 were supported (Table 4). The results revealed that consumer trust has a positive influence on perceived usefulness (β = 0.491, p < 0.000). Thus, H5 was supported. Privacy concerns were found to have a negative influence on consumer trust (β = −0.269, p < 0.000). Therefore, H6 was supported. Moreover, our analysis demonstrated that privacy/security policy (β = −0.510, p < 0.000), assurance seal (β = −0.487, p < 0.000), and disposition to third-party certification (β = −0.315, p < 0.000). Therefore, H7, H8, and H9 were supported. Finally, the analysis indicated that privacy concerns (β = −0.116, p < 0.05), and consumer trust (β = 0.610, p < 0.000) have a significant influence on purchase intention. Thus, H10, H11 and H12 were supported. The effect size (f2) of Trust and purchase intentions were 0.371 and 0.508, respectively, which demonstrated a large effect size (Cohn, 1988). The f2 of privacy concerns was 0.216, which demonstrated a medium effect size.

The model’s measurement invariance was tested using a “permutation test” (Henseler et al., 2016), and the “configural invariance criteria” were found to be met. All model constructs also achieved “partial measurement invariance” for the two samples. It was possible to compare both samples using these results in a multigroup comparison to explore the moderating influence of COVID-19. The data collection periods were used as categorical constructs in this multigroup test (Sarstedt et al., 2011). The analysis revealed a significant difference among the two groups in information quality, perceived usefulness, privacy/security policy, trust, and privacy concerns, at a significance level of 99%. Thus, H12 can be supported (Table 5). Although consumer trust was a key driver of purchase intention in non-COVID-19 group, it is now critical; COVID-19 has greatly increased its explanatory capacity, going from 32.16 percent to 53.08 percent in non-COVID-19 group. Perceived ease of use, which were once the second most critical predictor of consumer trust (41.96 percent), are now statistically insignificant.

5.3. Mediation test

Based on Hayes (2013) suggestions, we utilised SPSS and PROCESS statistical method to test for the mediation effect in our proposed model. Table 6 demonstrates the results of these tests. Based on Hayes (2013),

Table 3

| Table 3 | Discriminant validity (All sample). |
|---------|----------------------------------|
| INT | TRU | PRC | IQU | SRC | PUS | PEU | PSP | ASL | DTC |
| INT | 0.779 | 0.493 | 0.437 | 0.216 | 0.217 | 0.219 | 0.310 | 0.218 | 0.219 |
| TRU | 0.430 | 0.771 | 0.238 | 0.310 | 0.328 | 0.306 | 0.232 | 0.205 | 0.320 |
| PRC | 0.326 | 0.239 | 0.830 | 0.244 | 0.309 | 0.215 | 0.183 | 0.314 | 0.313 |
| IQU | 0.304 | 0.203 | 0.403 | 0.735 | 0.217 | 0.316 | 0.241 | 0.120 | 0.215 |
| SRC | 0.256 | 0.320 | 0.367 | 0.319 | 0.735 | 0.301 | 0.208 | 0.226 | 0.320 |
| PUS | 0.384 | 0.219 | 0.378 | 0.246 | 0.245 | 0.781 | 0.321 | 0.219 | 0.340 |
| PEU | 0.359 | 0.354 | 0.289 | 0.299 | 0.198 | 0.242 | 0.774 | 0.305 | 0.219 |
| PSP | 0.435 | 0.290 | 0.235 | 0.308 | 0.204 | 0.199 | 0.236 | 0.794 | 0.226 |
| ASL | 0.248 | 0.356 | 0.310 | 0.246 | 0.326 | 0.343 | 0.120 | 0.236 | 0.779 |
| DTC | 0.290 | 0.297 | 0.256 | 0.228 | 0.410 | 0.278 | 0.350 | 0.290 | 0.210 |

* The diagonal is the square root of the AVE of the latent variables and indicates the highest in any column or row.
* Elements above the diagonal represent the constructs’ HTMT ratios.

Table 4

| Table 4 | Results of the structural model. |
|---------|----------------------------------|
| Paths | All sample (n = 1,200) | Non-COVID-19 (N = 600) | COVID-19 (N = 600) |
| IQU-TRU | 0.392*** | 0.219*** | 0.310*** |
| SCR-TRU | −0.485*** | −2.37*** | −0.398*** |
| PEU-TRU | 0.701*** | 0.389*** | 0.489*** |
| PUS-PSE | 0.318*** | 0.216*** | 0.283*** |
| TRU-PUS | 0.491*** | 0.203*** | 0.307*** |
| PRC-TRU | −0.269*** | −0.210** | −0.208*** |
| PSP-PRC | −0.510*** | −0.209*** | −0.473*** |
| ASL-ASL | −0.487*** | −0.318** | −0.406*** |
| DTC-PRC | −0.315*** | −0.319*** | −0.217*** |
| TRU-INT | 0.610*** | 0.478*** | 0.549*** |
| R2 | 0.408 | 0.219 | 0.398 |
| Trust | 0.394 | 0.305 | 0.377 |
| Privacy concerns | 0.618 | 0.603 | 0.741 |
| Purchase intention | | | |
Table 5
Multi-group comparison of the explanatory variables.

| Paths          | Non-COVID-19 | COVID-19 | Difference  | P_5 permutation test |
|----------------|--------------|----------|-------------|----------------------|
| QU−TRU         | 0.219***     | 0.310*** | 0.1903      | 0.028                |
| ISCR−TRU       | −2.37***     | −0.398***| −0.091      |                      |
| PEU−TRU        | 0.389***     | 0.489*** | −0.103      |                      |
| PEU−PUS        | 0.218***     | 0.283*** | 0.065       | 0.127                |
| TRU−PUS        | 0.203***     | 0.307*** | 0.1097      | 0.031                |
| PRC−TRU        | −0.219***    | −0.268***| 0.1695      | 0.118                |
| PSP−PRC        | −0.209***    | −0.473***| 0.0671      | 0.016                |
| ASL−PSC        | −0.318***    | −0.406***| 0.0116      | 0.003                |
| DTC−PSC        | −0.319***    | −0.217***| −0.1873     | 0.085                |
| PRC−INT        | −0.135***    | −0.128***| 0.0981      | 0.021                |
| TRU−INT        | 0.478***     | 0.549*** | 0.0104      | 0.040                |

Note: N = 184; ***p < 0.001; **p < 0.010; *p < 0.050; p < 0.100. Standardized coefficients are reported with t-values in parenthesis. Bootstrap N = 10 000; 95% confidence intervals; BULCI, bootstrap lower-level confidence interval; BULCI, bootstrap upper-level confidence interval.

Table 6
Mediation test.

| Outcome variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|------------------|---------|---------|---------|---------|---------|
|                  | Trust   | Privacy concerns | Purchase intention |
| Control variables |         |         |         |         |         |
| Age              | 0.043   | 0.052   | 0.021   | 0.039   | 0.043   |
| (1.039)          | (1.027) | (1.287) | (1.260) | (1.287) |         |
| Gender           | 0.091   | 0.071   | 0.076   | 0.020   | 0.089   |
| (0.320)          | (1.410) | (1.065) | (1.013) | (1.065) |         |
| Income           | 0.085   | 0.068   | 0.121   | 0.016   | 0.002   |
| (0.208)          | (1.161) | (1.430) | (1.029) | (1.009) |         |
| Education        | 0.021   | 0.027   | 0.053   | 0.082   | 0.018   |
| (1.219)          | (0.389) | (1.017) | (1.096) | (1.015) |         |
| Predictor        |         |         |         |         |         |
| Information      | 0.290   | 0.186   | −0.290  | −0.217  | −0.130  |
| quality          | (5.709) | (3.118) | (5.709) | (4.904) | (2.653) |
| Security         | −0.319  | −0.408  | −0.319  | −0.294  | −0.289  |
| concerns         | (3.964) | (5.805) | (3.964) | (3.809) | (3.128) |
| Ease of use      | 0.508   | 0.610   | −0.508  | −0.387  | −0.419  |
| (8.731)          | (10.720)| (8.731) | (6.906) | (7.231) |         |
| Perceived        | 0.366   | 0.218   | −0.366  | −0.275  | −0.309  |
| usefulness       | (5.939) | (4.679) | (5.939) | (4.019) | (5.301) |
| Privacy/         |         |         |         |         |         |
| security         | 0.601   | 0.477   | −0.601  | −0.587  | −0.513  |
| policy           | (9.715) | (8.096) | (9.715) | (7.908) | (8.843) |
| Assurance seals  | 0.449   | 0.309   | −0.449  | −0.316  | −0.398  |
| (8.094)          | (5.870) | (8.094) | (6.440) | (7.219) |         |
| Third party      | 0.302   | 0.249   | −0.210  | −0.308  | −0.289  |
| certification    | (5.129) | (3.281) | (3.209) | (5.125) | (4.120) |
| Mediator         |         |         |         |         |         |
| Trust            | −0.509  | 0.314   | −0.412  | −0.309  | −0.309  |
| (9.120)          | (9.403) |         |         |         |         |
| Privacy concerns | 0.509   | 0.251   |         |         |         |
| (9.120)          |         |         |         |         |         |
| Constant         | 0.802   | 0.627   | −2.720  | −2.185  | 0.519   |
| (1.739)          | (1.029) | (4.209) | (3.209) | (4.031) |         |
| Model statistics |         |         |         |         |         |
| F-value          | 8.174   | 18.201  | 5.159   | 18.029  | 4.928   |
| Degrees of freedom |         |         |         |         |         |
| (9.209)          | (14.093)| (7.245) | (9.310) | (13.309)|         |
| P-value          | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| r-square         | 0.361   | 0.672   | 0.270   | 0.519   | 0.273   |

Note: N = 184; ***p < 0.001; **p < 0.010; *p < 0.050; p < 0.100. Standardized coefficients are reported with t-values in parenthesis. Bootstrap N = 10 000; 95% confidence intervals; BULCI, bootstrap lower-level confidence interval; BULCI, bootstrap upper-level confidence interval.

6. Discussion and conclusion

6.1. Key findings

The study of online consumer behaviour is particularly relevant now that the COVID-19 pandemic is spreading, and e-commerce is becoming increasingly significant. Our paper examined the critical role of trust and privacy concerns in utilising social media for e-retailers services before and during COVID-19 pandemic in Saudi Arabia environment.

COVID-19 has shifted how and how much customers will utilise social media for e-retail services, according to this study. We can conclude that the COVID-19 pandemic has increased the functionality of social media; we believe that consumers will employ social media more for e-retailers services because their scores increased in six of the suggested variables, with the highest shifts being in scores relevant to assurance seals, which were also those relevant to higher level of reluctance to utilise in the “non-COVID-19 stage” of the pandemic. According to the findings, the percentage of consumers who plan to buy the product has risen by 31.74 percent. Because social media for e-retailers services was recommended during the pandemic, it appears that the barriers to its use have been reduced. The acceptance of social media for e-retailers services is a step toward additional growing of the digital business, which is already well-established in some societies (e.g., Saudi Arabia).

To put it another way: in the COVID19 context, the suggested model better explains how e-retailers are using social media. “COVID-19 stage” (R2 = 0.741 and Q2 = 0.705) has a higher explanatory and predictive power than “non-COVID-19 stage” (R2 = 0.603 and Q2 = 0.585). There are fewer residual errors in the estimated values when employing the COVID-19 model, as can be seen. There has been a growth in the ability to justify social media for e-retailers services because of the model’s increased explanatory power.

In addition to trust and perceived usefulness, perceived ease of use was proven to be an important factor in customers’ intention to purchase via social media. This demonstrates that customers are more likely to put their faith in services they learn about on social media sites like Facebook (Hyun et al., 2022). In addition, buyers believe that the usefulness of a retailer’s service increases when it is easy to use, which influences their decision to shop online via social media. Users’ willingness to utilise an online shopping service increases when it is easy to use, according to Liu and Tao (2022). Jaspers and Pearson (2022) pointed out that perceived ease of use was a significant influence on social media users’ trust.

Our study indicated that greater level of trust towards the utilisation of social media for e-retailers services, the more consumers are willing to use social media for e-retailers services. These findings are in line with
prior research results of (e.g., Oghazi et al., 2018; Saha et al., 2022; Zhao et al., 2019), who pointed out that consumers trust is a key driver of purchase intentions in the online context. Our study also revealed that privacy concerns is a key driver of customer trust in using social media for purchasing products online, which is in line with the findings of prior research on this relationship (e.g., Ayaburi and Treku, 2020 Khan et al., 2021a,b Tseng, 2022; Wood et al., 2021), who pointed out that there is significant relationship between privacy concerns and customers’ trust. In a developing nation such as Saudi Arabia, the use of social media for online shopping purpose is still in early stages of advancement. Thus, retailers should make efforts to improve customers awareness about the policies, reliability, and security of social media platforms. Customers need to believe that their personal information is secure from hackers to trust these social media platforms.

There are more privacy concerns associated with social media than there are with more established electronic services, such as e-commerce (Alsuwaidi et al., 2021; Khan et al., 2021a,b). Social networking sites allow individuals to post their videos, photos, and locations. These services might not be trusted if the individuals believe their personal information is not being handled properly. Offering e-retailers services via social media should therefore include efforts to protect consumers’ privacy. Our results indicated that information quality, security concerns, and perceived ease of use are key drivers of consumers trust towards social media use for e-retailers services. These results are consistent with prior studies results (e.g., Shaalan et al., 2022; Jung, 2017; Khan et al., 2021a,b; Lin and Kim, 2016; Youssef et al., 2022).

Furthermore, our study results revealed that privacy/security policy, assurance seals, and disposition to third-party certification are key drivers of privacy concerns. This result is in line with the results of prior research (e.g., Alsuwaidi et al., 2022; Khan et al., 2021a,b; Ponte et al., 2015; Selim et al., 2022), who found that security/privacy policy and assurance seals have a significant influence on privacy concerns in the online context.

6.2. Theoretical implications

Our study is the first to explore the role of trust and privacy concerns in social media use for e-retailers services in two different contexts (i.e., non-COVID-19 and COVID-19 context). Using COVID-19 pandemic context as a moderating variable for a specific consumers behaviours, such as purchase intentions, our study adds to the retail literature. As a result of COVID-19, a new cultural context for retailing, social media, and perceived ease of use are key drivers of consumers trust towards social media use for e-retailers services. These results are consistent with prior studies results (e.g., Shaalan et al., 2022; Jung, 2017; Khan et al., 2021a,b; Lin and Kim, 2016; Youssef et al., 2022).

An additional theoretical implication is that this study extends the TAM model by including privacy concerns and trust as well as the driving factors (such as information quality, privacy/security policies, assurance seals, and third-party certification). Social media purchases are explained using this new model that incorporates these factors into technological acceptance. As a result, we have a fully featured model that still adheres to the minimalism criterion. With nine antecedent variables, the model has never been used before and has high “explanatory and predictive power in the new COVID-19 environment” (R² = 0.741). Thus, our study indicates that TAM can be utilised to understand and explain consumers purchases intentions through social media, since “perceived ease of use and perceived usefulness” are valid drivers of customers trust which in turns drive consumers purchase behaviour.

Our study revealed that privacy concerns is influenced by third-party assurance seals in the context of online shopping. Therefore, customers believe that third-party assurance seals are a key driver of protecting their personal information. This result is consistent with prior research by Ponte et al. (2015) who indicated that third-party assurance seals have no influence on privacy concerns. Customers’ understanding of third-party assurance seals is an important factor that directly affects how safe they feel when shopping online. This means that the more people know about assurance seals, the safer they feel when shopping on websites with those seals. Since this is the first study to look at how understanding assurance seals affects how safe customers feel, we can’t compare our results to what’s already been written. We think that web managers should make sure that people understand seals, because that means they will have a better idea of how secure online shopping is. On the other hand, how customers understand seals does not affect how they think their privacy is protected. These results are the same as the ones found by Lowry et al. (2011).

The empirical evidence of our paper proposes that the main drivers of privacy concerns, in order of effect, are privacy/security policy; assurance seals; and disposition to third-party certificate. Therefore, according to this result, privacy concerns depend on three factors. The results also revealed that the main antecedents of customers trust perceived ease of use, information quality, and security concerns. Our study extended the model suggested by Ray et al. (2011) to understand the relationships between privacy concerns and trust and their drivers and purchase intentions in the context of online shopping before and during COVID-19 pandemic by adding critical variables (i.e., assurance seals, the disposition towards third-party certification, perceived ease of use, and perceived usefulness).

6.3. Managerial implications

Our study offers practical implications for managers and practitioners that enable them to design and develop strategic plans to promote customers online shopping behaviours. As a result of this study, we are able to make a number of operational recommendations aimed at reactivating customers’ interest in shopping via safe, technology-mediated channels. Consumer behaviour has been altered by the COVID-19 context, and managers and retailers must recognise this and work to improve shopping experiences for customers by implementing technological transformations and providing more social media options for e-retailers services.

Online websites managers can take steps to improve the quality of information because it affects how much trust individuals have in it. Based on the findings of this study, perceived usefulness is a predictor of customers’ trust. As a result, managers of shopping websites should focus their marketing strategies on creating and maintaining the highest benefits for their customers in online transactions. The findings of this examination also show that retailers can affect how valuable online shopping. Our work is a step forward in the study of how customers contrast the two contexts. This study filled a gap in the research on this relationship (e.g., Ayaburi and Treku, 2020 Khan et al., 2021a,b ; Ponte et al., 2017 ; Khan et al., 2021a,b ; Lin and Kim, 2016 ; Youssef et al., 2022 ).

Furthermore, our study results revealed that privacy/security policy, assurance seals, and disposition to third-party certification are key drivers of privacy concerns. This result is in line with the results of prior research (e.g., Alsuwaidi et al., 2022; Khan et al., 2021a,b; Ponte et al., 2015; Selim et al., 2022), who found that security/privacy policy and assurance seals have a significant influence on privacy concerns in the online context.
shopping is seen to be and how likely individuals are to use social media for online shopping if they can make individuals trust their websites more. Individuals’ understanding of third-party assurance seals is an important factor that directly affects how safe they feel when shopping online. This means that the more individuals know about assurance seals, the safer they feel when using their websites with those seals. Since this is the first examination to look at how understanding assurance seals affects how safe customers feel, we can’t compare our results to what’s already been written. We propose that online retailing managers should make sure that individuals understand seals, because that means they will have a better idea of how secure online shopping is.

As a result of this research, consumers will be more confident and less concerned about their privacy, increasing the likelihood that they will use social media to make purchases. Due to Saudi Arabia’s status as a developing society, where consumers lack trust and are unwilling to accept the use of social media for e-retail services, the results of our research can help retailers and policymakers in Saudi Arabia to better position their strategies for fostering consumer trust and encouraging social media use for e-retail services. Consumers’ use of e-retailers’ services via social media platforms is heavily reliant on their ability to trust them, according to the findings. Consumers’ trust in e-retailers’ services may be enhanced through social media, which can aid policymakers and retailers in revising their policies and enhancing their governance processes. Social networks managers can enhance consumers’ trust by improving the platforms features such as information quality, ease of use, and security and privacy policy. However, purchase intentions via social media are not influenced only by customer trust and there are other variables that play a critical role in purchase intentions such as privacy concerns.

An understanding of the causes of privacy concerns and how this effect trust is helpful for retailers who want establish actions and strategy to increase the “perceived security protection of their websites” and, thus, the trust in the employing of social media for e-retail. Managers, on the other hand, can take steps to improve the quality of their employees’ information. As a result, retailers should focus their marketing efforts on building and maintaining customer trust in social media-based e-retail services, according to the study’s findings. Retail managers can use e-WOM strategy in social media to improve their reputation. Managers can take the most significant action to increase the number of customers who are more likely to make a purchase. It turns out, however, that retailers can influence consumers’ trust and, consequently, purchase intentions by improving the information quality and perceived ease of use. Online retailers can encourage customers to purchase their products online through social media to develop trust. This can represent value co-creation with consumers instead of value creation for consumers.

Consumers can be assured of the safety of online shopping transactions via third-party assurance seals on a retailer’s website. “Third-party assurance seals” are recommended for retail websites because they reduce privacy concerns. Consumers’ faith in assurance seals can be bolstered through communications from the retailers that provide them. As a result, it is important to point out that “third-party assurance seals” are useless if customers don’t recognise their functions. Retail managers can assist individuals in better understanding “third-party assurance seals” by encouraging them to click on the seals and read the explanations that appear on the page that follows. In order to be more easily understood, assurance seals retailers’ explanations should be well-written and simple. A major source of privacy concerns, according to our findings, is retail websites’ privacy and security policies. An important take away for managers in the retail industry is to make sure that the policy of security/privacy of their websites are prominently displayed and explained. It’s also a good idea, if privacy and security policies are to be effective, to avoid using technical language that’s difficult for the general public to understand and avoid including lengthy descriptions. It’s possible that showing privacy and security policies to customers in video format will improve their impressions of those safeguards.

7. Limitations and directions for future research

Our study has some limitations that need to be explored further in future studies. First, a number of variables were examined to determine why customers choose to shop for goods and services via social media. Explanatory variables and/or barriers may be expanded in future studies to create more comprehensive models of technology acceptance. Second, a large sample of Saudi Arabian consumers was used to test the proposed models. Saudi Arabian consumers’ socio-cultural characteristics may influence the results; for example, the COVID-19 crisis’s impact in societies with less social contact may be different. In the future, researchers could replicate the model in other societies to see if the findings vary depending on the level of socialisation and digitization. Third, we measured our study constructs at a single point of time using survey. Therefore, further examination should use other methods such as experiments method to test the suggested model. Fourth, future studies can explore the moderating role of personality traits and religiosity and its effect on customer purchase behaviour in the context of online shopping. Fifth, demographic factors (i.e., age, gender, education, income) weren’t included in our model. Although we collected information about these variables, prior studies revealed that demographic variables have no significant effect on the adoption and use of online shopping (Agag et al., 2016; Erjavac and Manfreda, 2022). Finally, our investigation doesn’t consider cross-cultural issue. Thus, future studies can conduct a comparative examination of developing and developed economies by testing our suggested model in different cultural contexts.

Declaration of competing interest

The author declares that there is no conflict of interest.

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