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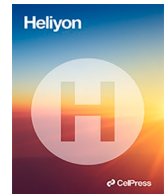
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Understanding Trust Drivers of S-commerce

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ABSTRACT

Trust has emerged as a pillar in the acceptance and use of new technologies in the ever-changing digital landscape, notably in the booming field of social commerce. The importance of this study lies in the fact that it explores in-depth the aspects of customer trust in Instashopping using new constructs that have yet to be explored in s-commerce literature. Focusing on Instashopping, the research proposed a multi-dimensional model of trust to examine the dynamics of user trust in social commerce platforms and analyses the effects of various factors, including institution-based trust, disposition to trust, personal inventiveness, perceived page quality, and overall web experience. Structural equation modelling and confirmatory factor analysis were used to examine data from 267 responses in a survey of university students in the United Arab Emirates who have used Instagram for shopping. The analysis showed that user trust and trusting beliefs were significantly influenced by the disposition to trust, institution-based trust, and general web experience. Still, no significant association was found between perceived site quality and trusting beliefs. These findings highlight the crucial part that user trust plays in social commerce platform success and how important it is for online platforms to build and maintain user trust. The work also contributes theoretically to the knowledge body by comprehensively analysing trust dynamics in social commerce. In practice, the knowledge gained can help organisations plan their strategy for gaining and keeping client trust, which is essential for long-term success in the digital arena. To ensure long-term success, organisations must emphasise building and maintaining customer trust.

1. Introduction

The emergence of Web 2.0 and social media has changed how people engage with one another and conduct business. S-commerce has become an essential subset of e-commerce characterised by cooperative customer connections [1,2]. Social Commerce combines social and commercial activities in social media [3–6], which fosters user interaction and content production while improving online social presence. After a significant boost during the COVID-19 pandemic, s-commerce sales globally surpassed 700 billion US dollars in 2021 [7]. They are expected to reach 3.37 trillion US dollars by 2028, indicating a promising growth trajectory, particularly in the

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Table 1
Social commerce drivers studies.

Reference	Theory Foundation	Method and Data	Independent Variables	Dependent Variables	Comment(s)
[9]	Not reported	A survey of 500 respondents in KSA analysed using SEM	Trust, Social Support, Informational Support, Social Commerce Constructs	Social Commerce Intention	All Constructs Were Supported
[8]	Not Reported	A survey of 343 of Social Media users in Pakistan Analysed using SEM	social commerce constructs (SCCs), social support and relationship quality	Social Commerce Intention	All Constructs Were Supported
[15]	Social Network Sites (SNS) behaviour and social capital theory	A survey Of 970 Facebook users analysed using SEM	SNS behaviour and social capital, SNS behaviour	Social Commerce Intention	All Constructs Were Supported
[12]	social learning theory	A survey of 585 Chinese social commerce users analysed using SEM	utilitarian and hedonic motivations	online purchase intention	All Constructs Were Supported
[16]	Not reported	A survey of 206 Facebook users analysed using SEM	Consumer engagement, brand awareness and intention to purchase, trust is a mediator.	Social Purchase intention	All Constructs Were Supported
[17]	Not reported	Survey of 512 Iranian Social Media Users analysed using SEM	Institutional-based trust, social commerce contents, Negative Valence, Positive Valance	Social Purchase intention	All Constructs Were Supported
[18]	stimulus-organism-response	Survey of 360 users analysed using SEM	Social Ornamental characteristics (Interactivity, Stickiness, Penalisation, sociability), Customer-to-customer interaction (Product Interactions, Interpersonal Interaction), and customer perceived value	Social Purchase intention	All Constructs Were Supported
[19]	Not reported	Survey of 291 users analysed using SEM	Culture Dimensions (Uncertainty Avoidance and Individualism), Social Interaction (Perceived Risks, trust, Intimacy)	Social Purchase intention	perceived Risks was reported as unsupported construct
[20]	Not reported	Survey of 421 Indonesia Social Commerce users analysed using SEM	Reputation, Information, Trust, Satisfaction,	Word of Mouth Intention, Repurchase Intention	All Constructs Were Supported
[21]	Not reported	A survey of 144 Users analysed using SEM	economy, necessity, reliability, interaction, and sales promotion	Social Purchase intention	Social Interaction was not supported
[10]	Not reported	A survey of 343 of Social Media users Ana- lysed using SEM	Interpersonal Interaction (perceived responsiveness, perceived informativeness, Interaction With online recommender (Perceived Expertise, perceived similarities), Swift guanxi, Initial Trust	Initial Trust, Swift guanxi, Purchase Intention	Swift Guanxi and initial trust impacts purchase intention, Interpersonal Interaction And Interaction with online recommender impacts both initial trust and Swift Guanxi
[11]	Theory of Planned Behaviour	A survey of 490 Social Media Users from Pakistan analysed using SEM	interactivity, argument quality, hedonic motivation and perceived enjoyment online, intrusive concerns and privacy concerns	Social Purchase intention	All Constructs Were Supported
[22]	Social Presence Theory Social Bonding theory		Social presence of web, social presence in interaction, social presence of others, belief in integrity, benevolence and competence, Social Bonding theory, Trustworthiness	Trustworthiness, Purchase intention	All Constructs Were Supported
[23]	Not reported	Survey Of 1007 analysed using SEM	social influence (subjective norms and critical mass), innovation characteristics of the platform, and user characteristic (trust)	Behavioural Intention	All Constructs Were Supported
[24]	Not reported	Survey of 277 social commerce	Utilitarian, Hedonic Value, Social Value, Perceived Risks	Purchase Intention, Satisfactions	All Constructs Were Supported

(continued on next page)

Table 1 (continued)

Reference	Theory Foundation	Method and Data	Independent Variables	Dependent Variables	Comment(s)
[6]	Not reported	users in China analysed using SEM Survey of 546 Social Commerce Users analysed using SEM	Social presence of the web, social presence in interaction, the social presence of others, Trust	Purchase Intention, Trust in Seller	All Constructs Were Supported
[25]	Not reported	Survey of 143 social commerce users	satisfaction, ethics, trust, enjoyment/easiness, social pressure and awareness	Purchase intention, and actual usage	All Constructs Were Supported
[14]	Not reported	Not Reported	s-vendor characteristics (price advantage, product differentiation, reputation, social interaction, language effort, and Hedonic effort), Perception of the platform (PEOU, Hedonic Motivation, Facilitating Condition, and Habit), and Trust in S-vendor	Social Commerce Intention	All Constructs Were Supported
[26]	UTAUT2	A survey of 310 social commerce users	Performance Expectancy, Effort Expectancy, Social Influence, facilitating conditions, Hedonic Motivation, Habit and Price saving Orientation	Behavioural Intention	Effort Expectancy, social influence, Facilitating Conditions and price saving were not supported

Middle East, which saw a 93 % increase in social media purchases, outpacing North America and Europe [7]. This development highlights the growing importance of researching the s-commerce phenomenon, especially in areas experiencing tremendous economic growth.

A growing number of studies have been conducted on social commerce, mainly discussing the factors influencing the adoption and usage of s-commerce (See Table 1). Several studies acknowledged the importance of factors such as social commerce constructs [8,9], interpersonal interactions [10], hedonic motivations [11,12], the social presence of the web [6,12], perceived ease of use [13,14] and many other as reported in Table 1.

Additionally, studies on social commerce highlighted the fact that there are many different trust drivers in s-commerce. Incorporating artificial intelligence (AI) in personalising user experiences has proven crucial in fostering trust. Additionally, user-generated material and peer reviews play an essential role in social influence, a significant factor in determining trust [27]. Moreover [28], recognised the authenticity and transparency of sellers as crucial elements in creating trust in s-commerce platforms. Focusing on technology developments and upholding openness can be crucial in building a trustworthy environment encouraging consumers to confidently engage in online transactions, as s-commerce platforms work to increase user trust. On the other hand, most of the s-commerce studies did not tackle trust as the main reason for the studies. They considered trust as a moderator of the relationship between the driving factors and the behavioural intentions or as one of the driving factors of behavioural intentions [16,17,19,20,22].

There's a significant gap in our understanding of how trust affects consumer behaviour in the emerging field of social commerce, especially in regions like the Middle East. We need a thorough study of what builds customer trust, especially given the unique cultural context of the Arab World. Even as the field grows, businesses are keen to address the vital issue of making online platforms more credible to foster and sustain consumer trust.

In order to explore the identified issues above, the McKnight e-commerce trust model is used in this study to examine the trust factors impacting users' trusting perceptions and intentions in social commerce, focusing on instashopping, to close a significant gap theoretically. The widely used McKnight trust model for e-commerce will be applied to the emerging field of social commerce, which can reveal complex dynamics of trust and provide a new perspective on how people behave online. The current body of knowledge appears to be fragmented and frequently constricted by cross-sectional studies and occasionally constrictive models, methodologies, and instruments. This study seeks to add a richer, more complex understanding to the existing literature by examining the applicability and nuances of the McKnight trust model in the context of social commerce. It also hopes to pave the way for future, active, evolving scholarly explorations that will add deeper insights and broader perspectives to existing knowledge. The study's main research questions are:

- What specific trust factors, as outlined in the McKnight e-commerce trust model, significantly influence users' trusting beliefs and intentions in the context of social commerce, particularly Insta Shopping, in the UAE?
- How does the McKnight e-commerce trust model translate to the social commerce landscape in the UAE, and what insights does it offer into understanding the complex trust dynamics governing user behaviour and intentions in Instashopping?

To answer these questions, we utilised confirmatory statistical analysis to determine the most critical factors influencing users' trust

in s-commerce. By exploring these questions, this study provides valuable insights into the factors that influence consumer trust in InstaShopping and sheds light on the applicability of the e-commerce multi-dimensional trust model in the context of s-commerce in the UAE. Ultimately, these insights can help businesses improve their online platforms' trustworthiness and enhance user trust in s-commerce.

The remainder of this paper is as follows: We summarise related work in the area in the second section, followed by the proposed conceptual model and hypotheses. We then discuss the methodology and report a comprehensive statistical analysis in Section 4. This is followed by a discussion of the results in Section 5, and the conclusions of this study.

2. Literature review

2.1. Drivers of S-Commerce

Increased user engagement and interaction across numerous platforms have been critical to s-commerce's rapid expansion. Despite this expansion, users are concerned about the data's accuracy, security measures, the validity of the deals, and the exchange/refund procedures followed by s-commerce businesses [29]. Recent technological developments have made it possible to understand user behaviour in s-commerce better. Identification of the variables influencing user behaviour on these platforms has been made possible in large part by the Technology Acceptance Model (TAM), the Theory of Planned Behaviour (TPB), and the Unified Theory of Acceptance and Use of Technology (UTAUT) in its both versions 1 & 2. [13] stressed the beneficial effects of perceived usefulness and ease of use, two fundamental TAM components, on promoting confidence in s-commerce platforms. The Stimulus- Organism-Response (S-O-R) model, which emphasises the impact of environmental signals in affecting user reactions, has also been acknowledged as a significant framework for understanding user behaviour in s-commerce [30].

In addition, the social support theory has also highlighted the importance of social facilitators like recommendations and referrals in promoting user engagement on s-commerce platforms. These social enablers are crucial in fostering user trust and customer confidence in s-commerce contexts [31], along with technical enablers like reliable information and safe transactions. Moreover, a range of studies that have attempted to clarify the behavioural intentions driving s-commerce are collected in Table 1. A glance at the table reveals that many theories have been investigated to understand what motivates social commerce. These include the social capital theory examined by Ref. [15], the UTAUT2 model reviewed by Ref. [26], and more recently, the social presence theory and social bonding theory highlighted by Ref. [22]. As a result, a wide range of factors have been identified as the main drivers of behavioural intention in s-commerce, highlighting the complexity of the topic. Table 1 shows that these drivers are highly influenced by cultural and study-specific factors, highlighting the importance of taking the geography and demographics of the study population into account. The fact that all of the research under consideration used survey methodology and had sample sizes of more than 200 people highlight how convenient and reliable is the survey methods for examining the factors that influence behavioural intention in social commerce.

2.2. Trust in S-Commerce

The successful operation and expansion of s-commerce platforms now depend heavily on trust. Recently, scholars have focused on the idea of digital trust and its determinants, with studies exploring various aspects of trust in the online environment [32], which are especially important due to the prominence of peer-generated content and the essential lack of physical contact between parties [5,33].

Recent research has sought to demystify the complex concept of trust by categorising it into various components, such as trusting beliefs and intentions, encompassing aspects like integrity, compassion, and capacity [34]. Recent definitions of trust have emphasised the willingness to be vulnerable based on positive expectations and the reliance on appropriate behaviours from the other party [35, 36]. Furthermore, studies have highlighted the role of social presence and familiarity in enhancing trust and the propensity to purchase on s-commerce platforms. These studies suggest that fostering a sense of social presence and familiarity can significantly boost trust and encourage purchasing intentions [13]. Moreover, trust is fundamentally developed through interactions with other individuals and the environment, where consumers grow their trust when they receive reliable, accurate, and timely information from s-commerce communities [6,37]. Recent studies highlighted that trust is mainly impacted by the disposition to trust, community trust, trust in the seller, trust toward members and trust toward the site [38,39] as well as UTAUT2 model construct [40] and social credibility [41].

Moreover [42], approved that trust in social commerce is shaped by privacy risks [43], information-sharing activities and social support, highlighting the importance of social interactions and information exchange between social network users. While [22] suggested that social presence theory components and attachment to social commerce platforms positively impact users' trustworthiness. On the other hand [44], reported that the reputation of online vendors, information quality, platform involvement, and social commerce constructs influence users' trust in social commerce in Qatar. Furthermore [45], highlighted four main determinants of trust: perceived risk, process-based trust, and characteristics-based trust. Additionally, research has categorised trust in s-commerce from various perspectives, including trust in the marketplace and trust in sellers. These studies emphasise the role of consumer-to-consumer (C2C) and consumer-to-marketer (C2M) trust in fostering engagement with brand communities on social media platforms [46,47].

The extensive research on trust in social commerce (s-commerce) underscores the necessity to critically analyse and validate existing models and theories to foster a more robust understanding of trust dynamics in the digital sphere. The McKnight trust model, established in 2002, serves as a cornerstone in this field, delineating trust into various components, such as trusting beliefs and intentions, which encapsulate vital elements like integrity, compassion, and capacity. In the current s-commerce scenario, characterised

by significant peer-generated content and social interactions, the model’s emphasis on vulnerability and reliance on appropriate behaviours from others holds particular relevance, potentially unveiling new dynamics that have surfaced with the evolution of online platforms.

Furthermore, the McKnight trust model can be a fundamental framework to assimilate recent research insights, offering a more comprehensive perspective on trust in s-commerce. This approach would not only facilitate understanding the complex interplay of various trust components and their influence on consumer behaviour but also aid in crafting effective strategies to nurture a trust-worthy and engaging environment on these platforms. Consequently, revisiting and testing the McKnight trust model is a critical step in advancing the s-commerce field, enabling researchers and practitioners to cultivate a nuanced understanding of trust in the digital era, thereby promoting the successful growth and expansion of s-commerce platforms.

2.3. Conceptual framework and hypothesis development

We apply the model of trust in e-commerce proposed by Ref. [34] to define and test the drivers of consumer trust. It is a comprehensive model that combines the multi-dimensional nature of trust with information systems and theories of personal trust in sociology. The model is presented in Fig. 1, and consists of the following constructs:

Trusting Intention: This indicates that consumers are engaged in trust-related behaviours and are confident in their ability to rely on the trustee. Trusting intentions comprise two sub-constructs: willingness to depend and subjective probability of depending. Willingness to depend refers to when shoppers voluntarily prepare to become vulnerable to the trustee, while the subjective probability of depending reflects the perceived likelihood of relying on the other in specific ways. Of the two sub-constructs, the subjective probability of depending is considered more concrete as it goes beyond a stated desire to rely on another and reflects an individual’s intention to rely on them in specific situations. This highlights the importance of considering both sub-constructs of trusting intentions when examining consumer trust in a particular context. By doing so, researchers can better understand the factors influencing consumer trust and develop strategies to enhance trust in business-to-consumer interactions.

Trust-related Behaviour: This refers to sharing personal information, completing a purchase, or acting on information offered by a website. In general, behavioural intention leads to actual behaviour. Thus, if consumers intend to trust an s-commerce vendor, they are willing to share their personal information with the vendor and complete the purchase. Literature on trust suggested a positive and robust relationship between trusting intention and trust-related behaviour e.g Ref. [48]. This conclusion has been further confirmed by Ref. [49], who found a strong and positive relationship between trust, trust-related behaviours, and purchase intention. Moreover [29], identified trusting intention as one of the critical factors influencing trust and purchase intention in social commerce. Thus, our first hypothesis is that:

(H1). A trusting intention impacts trust-related behaviour.

Trusting Beliefs: This means that the trustee is acting for the truster’s benefit and to satisfy the truster’s needs (competence), cares about the truster’s needs, is motivated to do whatever the truster requires (benevolence), and is honest (integrity). Trusting beliefs impact people’s intention to trust as if they believe that the trusting vendor is doing whatever the trustee needs and acting in the main

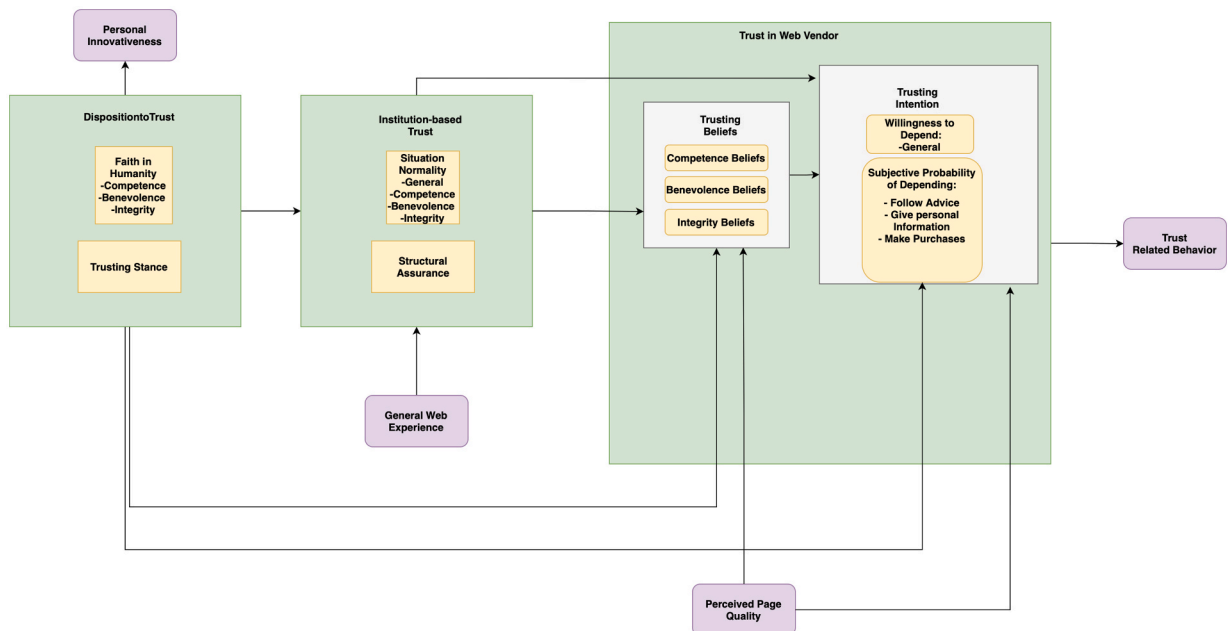


Fig. 1. Model of trust for s-commerce (Fig. 2 in Ref. [34]).

well-intentioned, and trustworthy. A trusting stance refers to trusting that vendors are benevolent and supportive until they prove that the trustee is not correct in this belief. The disposition to trust typically influences personal trust in a vendor, as if a consumer trusts vendors and people unless they show contradictory behaviour. This suggests that the disposition to trust impacts institution-based trust, trusting beliefs, and trusting intentions. Trust disposition was a primary construct impacting trusting beliefs in social commerce. If a person trusts others, that will lead to a trusting intention and trusting beliefs [60]. Moreover, trust disposition usually depends on personal socialisation behaviour, which is believed to enhance trusting beliefs and intentions [13,60].

Recently, disposition to trust was reported as a significant determinant of trust in Fintech [61], using social media for retail (s-commerce) [62], and online food delivery apps [63]. Therefore, it is crucial to emphasise the integral part that disposition to trust plays in determining how consumers engage with others and what they expect from a digital commerce ecosystem. Fundamentally, this disposition encapsulates a user's natural tendency to place confidence in things or people in various circumstances, including faith in people's overall honesty and good intentions, as well as a proactive attitude of trust towards suppliers. A person's tendency for trust can be developed by personal socialisation habits, which can significantly impact how they view and interact with suppliers. This could lead to a healthier and more robust digital commerce environment.

Thus, we offer three hypotheses to be tested:

(H5). *The disposition to trust impacts institution-based trust,*

(H6). *the disposition to trust impacts trusting beliefs,* and

(H7). *the disposition to trust impacts trusting intentions.*

Personal innovativeness: this is a personality trait that expresses optimism or confidence in the accepting new ideas or technologies. While personal innovativeness refers to optimism about new technology, the disposition to trust refers to general personal optimism. Therefore, if a person is generally optimistic, they will be optimistic about any new technology. Previous studies suggested that personal innovativeness is a vital construct in technology adoption and either has a moderate or high impact on behavioural intention [64]. Exploring the relationship between a person's disposition to trust and their level of personal innovativeness is essential, especially in the rapidly developing fields of e-commerce and social commerce. A disposition to trust expresses their general optimism, which frequently extends to how they view technology breakthroughs. This general propensity to believe in and keep an optimistic viewpoint creates a favourable environment for encouraging personal innovativeness, best described as a person's eagerness to accept new concepts or technological developments.

Typically, a solid disposition for trust can lead to an increase in one's innovativeness. In essence, those with a disposition to trust are more likely to approach new technologies with an open mind and be open to incorporating them into their daily lives. This optimistic outlook can act as a catalyst for creating an environment where technological innovations are easily absorbed and adopted, speeding up acceptance and widening the reach of dissemination.

This leads to the eighth hypothesis:

(H8). *The disposition to trust positively impacts people's personal innovativeness.*

General Web Experience: indicates that the consumer has the impression that Internet interaction is legitimate and ordinary and is reflected by situational normality. Most people believe the Internet is safe based on their experience, which benefits structural assurance. A person comfortable using the Internet generally has a general trust in web platforms. Several studies concluded a positive impact of the computer experience and internet experience on online shopping e.g Ref. [65]. However, with the increasing popularity of the internet, people have more experience and feel more comfortable using the internet.

This emphasises the importance of situational normality, in which users rely on their prior experiences and familiarity with the web to create a feeling of legitimacy and shared experience in their online interactions. The positive relationship between web experience and institution-based trust results from a process where growing internet comfort and familiarity foster a foundational level of trust in web platforms. This comfortability, which results from frequent pleasant interactions and ease of navigating online environments, contributes considerably to the development of structural assurance. Users who have used the internet extensively are more likely to be well-versed in the safeguards to protect their interactions and transactions, increasing their sense of security and trust in the system. Thus, we hypothesise that:

(H9). *general web experience impacts institution-based trust.*

Perceived Site Quality: If customers consider a website to have excellent quality, they conclude the web seller has good quality items and will develop trusting intentions toward it. The site's quality leads to trust in the vendor because experience conquers uncertainty. Moreover, site quality impacts the trusting intentions of consumers, as people trust a well-designed website more than an unorganised one. It is widely acknowledged in e-commerce literature that the quality of the e-commerce website will influence the consumers' trusting beliefs and then trusting intention [66]. The same has been reported for social commerce [67]. However, within the social commerce context, site quality refers to the Instagram page quality rather than the quality of the Instagram website.

This highlights the critical role that website quality plays in influencing users' trusting attitudes and purchasing intentions in the context of social and electronic commerce. It is based on the noticeable relationship between the level of quality of a website and the presumed quality of the goods or services provided by the vendor who occupies that platform. An expertly crafted and managed website displays professionalism and considerably lowers the nervousness and uncertainty associated with online purchases.

Understanding that a higher-quality website is likely to inspire consumers to have faith in it is also vital. Customers frequently first interact with websites through their design and functional components, where they develop their first opinions. A website that reflects competence and skill in its structure and design generates higher trust since it communicates the vendor's dedication to providing

high-quality goods and a seamless user experience.

A process from developing trusting beliefs to developing trustworthy intentions is also captured. A carefully designed site increases the seller's legitimacy, encouraging users to participate more actively, fostering a willingness to trust and use the platform for transactions. The quality of individual pages becomes an essential criterion in social commerce, particularly on platforms like Instagram, demonstrating the legitimacy and dependability of the vendor. An attractive page with clear information and a well-designed layout naturally encourages visitors to establish trusting intentions, which may increase user engagement and profitable transactions. This leads us to build two more hypotheses:

(H10). Site quality impacts trusting beliefs, and (H11) Site quality impacts trusting intentions.

3. Methodology

We consider the philosophy of post-positivism research to answer the above research hypotheses. This involves working with the relevant theories and knowledge that scholars develop, including their strengths and biases [68]. We developed an online survey instrument to measure the perceptions and experiences of users' trust in s-commerce, specifically on the social media platform Instagram. The online survey was hosted on Google Forms.

The online outlet is fast, easy to use, and convenient for importing data for analysis. The survey instrument was designed and developed based on the relevant literature. The research items were borrowed from the theory of trust in e-commerce developed by Ref. [34] and were customised to fit the context of Insta-shopping. The survey included demographic questions on gender, age, educational background, and occupation, which is presented in Table 2 that shows a detailed breakdown of the respondents' demographic characteristics. Research questions associated with the research model were categorised based on blocks of variables: the disposition to trust, institution-based trust, trusting beliefs, and trusting intentions. The items were measured through the five-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree), where 3 indicated a (neutral) stance.

We followed the convenience sampling approach to target Generation Z from the research sample because of its technological and social interests. Members of this generation (students at three universities in different emirates of the UAE) were solicited through e-learning platforms, social media groups, LinkedIn profiles, and emails. As suggested by Ref. [68], the snowball technique was used to increase the response rate and sample size. The criteria applied for inclusion in the selected sample were as follows: (a) awareness of or familiarity with Insta-shopping in terms of either buying or selling in the UAE; (b) older than 18 years, and (c) willingness to share perceptions of and thoughts on Insta-shopping. A total of 267 responses were gathered from February 28 to April 30, 2022. The responses were manually checked for biases or incomplete instances. All responses were found to be complete and valid for analysis.

4. Analysis

We focus on the drivers of trust and how they impact trusting beliefs and trusting intention of s-commerce in the UAE. The conceptual framework used in this study was tested by structural equation modelling on Amos 25 software and maximum likelihood estimation.

4.1. Common method bias

The data were collected through cross-sectional data, as using this method of collecting data could lead to the appearance of common method bias CMB [69], so it is important to verify that CMB does not appear in the data to avoid the emergence of bias in the study results [70].

The evaluation of CMB is well established in the methodological literature, as there are many statistical and non-statistical methods for detecting it [71]. Harman's one-factor test was used to determine whether the study data were affected by CMB or not [69]. The acceptable variance value is less than 50 %. Since the variance value extracted through Harman's one-factor test was 27.82 %, this confirms that CMB is not a fundamental issue in this study.

This approach followed two main steps: 1) Confirmatory factor analysis (CFA) was used to check the reliability and validity of the

Table 2
Distribution of the respondents.

Characteristics	Category	No.	%
Gender	Males	65	24.3
	Females	202	75.7
Education	Business	29	10.9
	Health science	16	6.0
	Humanities	18	6.7
	IT	204	76.4
Status	Study	244	91.4
	Study and work	20	7.5
	Work	3	1.1
Age	Numerical variable	Mean (20.65)	SD (1.60)
Total		267	100

measurement model's constructs and the fit indicators. (2) The structural model was used to test the hypotheses [72].

4.2. Measurement model

The reliability of the constructs was checked by calculating the values of Cronbach's alpha and the coefficients of composite reliability (CR). The factor loadings and values of the average variance extracted (AVE) were calculated to verify the convergent validity of the model. Both sets of values needed to be higher than 0.5.

Table 3 summarises the reliability and convergent validity results and shows that the constructs fulfilled the relevant conditions. Items with factor loadings lower than 0.5 were deleted to improve the quality of the AVE values. Crossed-out items were: (IP4).

Model fitness was determined by using the CFA of the overall model. Such common fitness values as the RMSEA, IFI, TLI, and CFI were calculated for all the constructs. The results showed their values were close to the statistically acceptable values according to the cut-offs set by Ref. [73]. Table 4 shows the results of an assessment of model fitness. Discriminant validity was evaluated using the criterion proposed by Ref. [74]. This is the most used method for evaluating discriminant validity [75] and states that the square root of the AVE of a construct must be greater than the value of any correlation between it and other constructs. Table 5 shows the discriminant validity of all constructs.

4.3. Structural model

We focused on testing the set of hypotheses proposed in the conceptual model of this study. Fig. 2 summarises the paths between the exogenous constructs and the endogenous constructs. The following decision rule was adopted: A hypothesis was considered to be supported when its CR value was greater than 1.96, and its P-value was less than 0.05. Table 6 shows that all hypotheses and all paths between the exogenous constructs and the endogenous constructs were acceptable, except for PSQ to TB, DT to TB, DT to TI and IBT to TI.

The values of R2 of all endogenous constructs were calculated to evaluate the model's predictive power and are presented in Table 7. The values of R2 of all constructs were moderate to high [72].

Table 3
Convergent validity and reliability of the constructs.

Second-order construct	First-order construct	Item	Factor loading	AVE	Composite reliability		
Disposition to trust	DB (Benevolence)	DB1	0.823	0.696	0.873		
		DB2	0.877				
		DB3	0.801				
	DI (Integrity)	DI1	0.83			0.65	0.848
		DI2	0.788				
		DI3	0.8				
	DC (Competence)	DC1	0.827			0.668	0.858
		DC2	0.776				
		DC3	0.847				
	ST (Trusting Stance)	ST1	0.709			0.554	0.788
		ST2	0.776				
		ST3	0.746				
Institution-based trust	IG (General)	IG1	0.829	0.733	0.846		
		IG2	0.882				
	IB (Benevolence)	IB1	0.747			0.645	0.845
		IB2	0.826				
		IB3	0.833				
	II (Integrity)	II1	0.82			0.697	0.873
		II2	0.831				
		II3	0.853				
	IC (Competence)	IC1	0.828			0.671	0.859
		IC2	0.824				
		IC3	0.804				
	ISA (Structural Assurance)	ISA1	0.789			0.687	0.898
		ISA2	0.833				
		ISA3	0.852				
		ISA4	0.842				
Trusting beliefs	TBB (Benevolence Beliefs)	TBB1	0.81	0.725	0.888		
		TBB2	0.874				
		TBB3	0.869				
	TBI (Integrity Beliefs)	TBI1	0.851			0.765	0.929
		TBI2	0.884				
		TBI3	0.873				
		TBI4	0.891				
		TBC1	0.874				

Table 4
Indicators of model fitness.

Model fit indicator	Estimated values	Recommended values
CMIN/DF	2.047	5
RMSEA	0.063	0.08
IFI	0.867	0.90
TLI	0.849	0.90
CFI	0.865	0.90

5. Discussion

The outcomes of data analysis yielded a set of significant findings that supported the proposed model. The disposition to trust was found to have the strongest positive effect on institution-based trust ($\beta = 0.703$, $CR = 8.269$, $P\text{-Value} = 0.000$). The former promoted the latter based on the users' interest in enhancing their confidence in others. In other words, individuals' trust in Instagram sellers could be enhanced by encouraging their perception that people do care about the well-being of others and try to be helpful to others rather than just looking out for themselves. This is in line with the findings of a few studies, whereby the disposition to trust plays an important role in strengthening institution-based trust in buying and selling in e-commerce in general [76,77].

We also found that the disposition to trust had a significant effect on personal innovativeness ($\beta = 0.646$, $CR = 8.014$, $P\text{-Value} = 0.000$), where trust and the readiness for it helped develop creative thinking and achieve new insights. This occurs primarily because personal innovativeness is closely related to individuals' optimism regarding new technology and the extent of their acceptance of it. The disposition to trust can enhance the trust of individuals in themselves and in Instagram sellers, thus allowing for more positive thinking about new ideas and increasing personal innovativeness. Indeed, one's perception that people care about others, that people generally try to supplement their words with actions, and that most professionals are good at their work can strongly impact the buyer's attitude toward exploring new Instagram sellers. To the best of our knowledge, this path of regression has not been tested before in research on e-commerce.

In addition, the results revealed that the causal relationship between institution-based trust and trusting beliefs was positive and statistically significant ($\beta = 1.01$, $CR = 9.411$, $P\text{-Value} = 0.000$) because institutional trust is linked to legal regulations and privacy protections offered by Instagram. This guarantees the customer to trust both the sellers and the Instagram platform. This is important as Insta-shopping involves sharing personal information and monetary transactions. Therefore, a high level of institutional trust can improve the buyer's trusting beliefs (such as benevolence, integrity, and competence in the context of Insta-shopping). This result is consistent with the findings of certain studies in the e-commerce literature, such as the work by Refs. [48,78].

We also concluded that trusting beliefs significantly positively influence trusting intentions ($\beta = 0.481$, $CR = 1.974$, $P\text{-Value} = 0.048$). This means that trusting beliefs, especially those related to honesty and integrity, can make individuals feel that Instagram sellers care about the buyer's interests and show benevolence and competence. Therefore, the intention to trust rises among those buyers. This finding is in line with a previous study by Ref. [48].

A positive causal relationship was identified between general web experience and institution-based trust ($\beta = 0.433$, $CR = 7.184$, $P\text{-Value} = 0.000$), as originally indicated by Ref. [79]. The user's personal experience on the Internet significantly increases their trust in Insta-shopping because it fosters skills and knowledge related to e-commerce in general and s-commerce in particular. This increases the user's familiarity with commercial transactions over social media platforms. Moreover, the experience of Instagram as a social network can develop the user's awareness of using it for shopping transactions.

The results also indicated that general web experience could significantly and positively influence the institution-based trust of users ($\beta = 0.433$, $CR = 7.184$, $P\text{-Value} = 0.000$). In other words, reading stories and messages on Instagram, posting them, accessing the information on the platform about products and services listed under user interests, and shopping and making purchases can help make users more comfortable with Insta-shopping. This, in turn, helps foster the belief in users that Instasellers act in their best interest and are genuinely interested in user wellbeing. From a general perspective, this finding also supports the claim that users' general web experience can make them feel more comfortable using Instagram for shopping purposes and that they will feel more assured that its legal and technological structures adequately shield them from problems. This finding is consistent with the study by Ref. [78], who found that Russian customer awareness of Instagram shopping can impact the customer's trust in the vendor and the technology used to conduct e-commerce transactions.

Surprisingly, the perceived quality of the site was found to have no significant influence on trusting beliefs ($\beta = 0.078$, $CR = 7.184$, $P\text{-Value} = 0.377$). No significant correlation was identified between the qualities of the seller's page and the buyer's trusting beliefs (such as regarding the seller's competence, benevolence, and integrity). Trusting beliefs appeared to be driven more by institution-based trust and general web experience rather than the design and functionalities of the seller's Instagram page.

On the contrary, the perceived quality of the site had a significant and positive influence on the user's intentions to trust, as expected ($\beta = 0.078$, $CR = 2.088$, $P\text{-Value} = 0.037$). This indicates that the better the quality of the seller's page on Instagram is, the stronger the user's intention to trust them for Insta-shopping in the UAE. Such qualities of the seller's page as ease of use, design aesthetics, visual displays, and the ease of finding information on the items and contact-related details of the seller all contribute positively and strongly to the users' willingness to trust them (such as by the following advice, giving their personal information, or making a purchase). This finding is in line with a study on online shopping by Ref. [80] and is consistent with the finding by Ref. [81] that the quality of information can impact user trust in purchasing e-tickets (see also [82]).

Table 5
Discriminant validity of the examined constructs.

	DB	DI	DC	GN	TRUST	IC	ST	GI	TBB	IB	TBI	TBC	II	FA	IG	MP	PSQ	GWE	PI	ISA
DB	0.834																			
DI	0.775***	0.806																		
DC	0.567***	0.637***	0.817																	
GN	0.547***	0.636***	0.522***	0.832																
TRUST	0.457***	0.541***	0.510***	0.649***	0.812															
IC	0.561***	0.596***	0.609***	0.749***	0.672***	0.819														
ST	0.564***	0.709***	0.618***	0.470***	0.455***	0.604***	0.744													
GI	0.517***	0.559***	0.398***	0.824***	0.674***	0.653***	0.457***	0.712												
TBB	0.607***	0.656***	0.530***	0.831***	0.754***	0.851***	0.510***	0.698***	0.852											
IB	0.583***	0.666***	0.567***	0.777***	0.681***	0.814***	0.530***	0.704***	0.874***	0.803										
TBI	0.518***	0.604***	0.518***	0.819***	0.671***	0.756***	0.511***	0.584***	0.895***	0.813***	0.875									
TBC	0.542***	0.611***	0.553***	0.831***	0.644***	0.672***	0.469***	0.557***	0.832***	0.706***	0.830***	0.867								
II	0.491***	0.573***	0.461***	0.814***	0.638***	0.792***	0.503***	0.702***	0.815***	0.807***	0.793***	0.671***	0.835							
FA	0.532***	0.582***	0.523***	0.732***	0.701***	0.699***	0.433***	0.642***	0.846***	0.746***	0.780***	0.799***	0.780***	0.830						
IG	0.512***	0.533***	0.502***	0.791***	0.652***	0.680***	0.434***	0.751***	0.796***	0.728***	0.720***	0.746***	0.829***	0.775***	0.856					
MP	0.461***	0.581***	0.333***	0.808***	0.596***	0.531***	0.375***	0.749***	0.704***	0.631***	0.669***	0.718***	0.614***	0.770***	0.639***	0.850				
PSQ	0.474***	0.521***	0.609***	0.743***	0.628***	0.741***	0.487***	0.617***	0.745***	0.701***	0.704***	0.683***	0.726***	0.749***	0.725***	0.524***	0.803			
GWE	0.475***	0.522***	0.561***	0.710***	0.595***	0.565***	0.324***	0.584***	0.688***	0.601***	0.652***	0.656***	0.595***	0.638***	0.635***	0.602***	0.761***	0.804		
PI	0.521***	0.548***	0.447***	0.753***	0.640***	0.573***	0.357***	0.697***	0.710***	0.627***	0.623***	0.697***	0.662***	0.772***	0.788***	0.749***	0.731***	0.730***	0.819	
ISA	0.563***	0.627***	0.565***	0.764***	0.640***	0.726***	0.531***	0.766***	0.799***	0.653***	0.751***	0.670***	0.730***	0.752***	0.673***	0.686***	0.724***	0.662***	0.679***	0.829

Table 6
Results of hypothesis testing.

Path	Beta Value	Std.Error	CR	P-Value	Result
DT->PI	0.646	0.101	8.014	0.000	Support
IBT->TB	1.01	0.118	9.411	0.000	Support
TB->TI	0.481	0.270	1.974	0.048	Support
GWE->IBT	0.433	0.047	7.184	0.000	Support
PSQ->TB	0.078	0.031	0.930	0.377	Not support
PSQ->TI	0.078	0.036	2.088	0.037	Support
TI->TRUST	0.696	0.073	9.511	0.000	Support
DT->TB	-0.078	0.06	-1.276	0.202	Not support
DT->TI	-0.028	0.070	-0.437	0.662	Not support
IBT->TI	0.463	0.325	1.733	0.083	Not support
DT->IBT	0.703	0.076	8.269	0.000	Support

DT: Disposition to Trust, IBT: Institutional Based Trust.
 PI: Personal Innovativeness, TB: Trusting Beliefs, TI: Trusting Intention.
 GWE: General Web Experience, PSQ: Perceived Site Quality.

Table 7
Results of power of prediction in the model

Endogenous constructs	R ² values
PI	0.418
IBT	0.682
TB	0.917
TI	0.847
TRUST	0.485

As proposed, trusting intentions were found to have a significant and robust positive impact on general trust in Insta-shopping ($\beta = 0.696$, CR = 9.511, P-Value = 0.000). In simpler terms, if people in the UAE believe that Instagram sellers have good intentions (like being honest, delivering on promises, and genuinely caring about their customers), they are more likely to trust and feel comfortable shopping on the platform. The underlying intentions behind trust are a major factor in determining how much the general public in the UAE trusts to shop on Instagram.

Surprisingly, “disposition to trust” does not have a significant impact on “trusting beliefs” in Inst-shopping in the UAE ($\beta = -0.078$, CR = -1.276, P-Value = 0.202). This could be justified based on cultural, social, and technological factors. For instance, The UAE, with its rich cultural heritage, strongly emphasises personal relationships and face-to-face interactions. Trust in this context might be more rooted in personal connections rather than a general disposition to trust unfamiliar entities or platforms. Another reason could be that if a significant number of UAE residents had negative experiences with online platforms or sellers in the past, it might overshadow their general disposition to trust, making them more sceptical. Also, the population in the UAE is generally tech-savvy. This means they might rely more on specific cues, reviews, and evidence when determining trustworthiness rather than a general disposition to trust. It is also worth noting that robust regulatory frameworks, consumer protection laws, and digital security measures in the UAE might mean that people rely less on their inherent disposition to trust and more on external assurances.

5.1. Theoretical contributions and implications

This study implies theoretical contributions. In detail, our findings contribute to the literature on s-commerce and Insta-shopping by modifying, customising, and testing McKnight et al.’s (2002) theory of trust. Although this theory has been frequently cited and is considered comprehensive, little research has focused on understanding trust in s-commerce in general and Insta-shopping in particular. No study to date has focused on this well-established theory from the user’s perspective, and the central thrust of the relevant research has been on the intention to trust and the user’s behaviour (as independent or mediated variables). In addition, our study extends the work of [48,77,78] by testing the paths associated with personal innovativeness, perceived quality of the page, and general web experience in the context of Instahopping. Thus, we have filled this gap in research by examining this theory in a relatively novel context (Insta-shopping). Moreover, little is known about trust in Insta-shopping in the Middle East and Gulf regions, which enhances the significance of this study. Furthermore, this study has provided a dataset of survey items and measures that are useable for different platforms and contexts.

5.2. Implications for practices

Practically, we provide several insights for administrators and sellers on Instagram to enhance user trust in Instashopping. First, Instagram users in the UAE are from different backgrounds and have different experiences, and thus demonstrate different levels of disposition to trust. Therefore, users’ trust (as individuals) should be fostered by promoting their faith in humanity. A culture of trust can thus be established to make it easier for the user to trust other people, including sellers and traders, on Instagram. Second, as a third

party, Instagram should support the relationship between buyers and sellers by providing a balanced structure to ensure the integrity of transactions and develop institution-based trust. This can be ensured by following best practices and demonstrating fair policies and transparent procedures to support both the buyer and the seller. In addition, sellers are also responsible for the development of trust by the user by exhibiting benevolence, integrity, and competence in their practices. This is possible by promptly communicating with the buyers, such as when responding to their questions and following up with them after sales. Moreover, sellers must maintain complete, precise, and up-to-date information on the items for sale. This can positively contribute to the development of the intention to trust by buyers and the corresponding behaviour in the context of Instashopping.

Furthermore, understanding the trust factors can boost trustworthiness perception. This is possible through merchants who should show competence by highlighting their product expertise, through comprehensive product details, showcasing customer testimonials, and organising interactive Q&A sessions. Also, sellers must show they genuinely value their customers and are benevolent. This is possible by offering quick responses to queries, personalised shopping tips, and open communication. Showing integrity and honesty in all dealing, from product sourcing to pricing, is vital to achieving and maintaining customer trust in that seller, along with transparent policies on returns and refunds, which can also enhance trust.

Moreover, the results indicate a need for reinforcing trust in Instashopping through institutional measures, such as seller verification, transaction safety, and handling complaints to maintain reliable and secure shopping experiences. Managing and resolving customer issues can further instil trust in that Instagram seller. Instagram also can encourage situational comfort, by ensuring respect for UAE local and cultural values, such as recognising local festivities or offering region-centric promotions. In addition, Instagram, as a shopping platform, may organise sessions on best practices for online shopping, which can help in making Instagram shopping a more familiar and trusted online environment. Also, collaborations with renowned local entities or influencers can enhance a seller's reputation. Such partnerships can act as a stamp of approval, further building customer trust. Furthermore, Instagram can encourage feedback from prompt customers to share their experiences and reviews. This not only aids potential buyers but also gives merchants insights for improvement, which has a mutual impact of trust for both buyers and sellers.

Overall, trust in Instagram shopping in the UAE hinges not just on the products but the entire buying journey. Both sellers and the platform can craft a trustworthy shopping environment where customers feel secure, respected, and empowered in their choices.

5.3. Limitations and future research directions

While our study sheds light on trust in Instagram as a shopping platform within the UAE, the insights might also apply to other Gulf and Middle Eastern nations due to shared cultural, social, and religious facets. Trust is intricately woven into the cultural fabric of these regions. The rich mosaic of traditions, values, and societal norms in the Middle East and Gulf countries plays a pivotal role in shaping perceptions of trust. For example, the value placed on personal ties, honour, and reputation in these cultures can lead to different trust dynamics compared to Western settings. Furthermore, the swift economic advancement, technological uptake, and digital evolution seen in numerous Gulf nations have implications for trust in online environments. The velocity and character of such progress might necessitate tweaks to our trust model. Moreover, shared historical occurrences, political consistency, and regional interplays in the Gulf can impact overarching trust in institutions, commercial entities, and digital platforms.

This study has a few limitations. The targeted sample consisted of UAE university students recruited using the convenience sampling method. We used this non-probabilistic approach to sampling to conveniently obtain information from the targeted respondents. Moreover, the survey is naturally prone to a response bias. However, the items were borrowed from the original theory, as mentioned earlier, and the items were customised and reworded carefully and clearly to avoid misunderstanding. Also, the researchers checked the face validity of the items through a panel of scholars familiar with the s-commerce and Instashopping arena.

In light of the above limitations, we suggest that the proposed model be tested on a different sample from within the UAE in future research, such as understanding the antecedent of trust from sellers' perspectives or experienced traders. This should include more samples from other emirates of the UAE than the three considered here and should encompass a broader range of residents to generalise the findings better. The work here should also be extended to the Gulf region (such as Saudi Arabia, Oman, Bahrain, and Qatar) as these countries share trading companies, societal values, and cultural features. Future research should also consider interpretivism-based research through a qualitative approach, such as investigating the impact of cultural and social dimensions on user trust in Instashopping, to better understand trust in s-commerce based on their stories and detailed experiences.

Given the limitations mentioned, we recommend that future research tests the proposed model with a varied sample within the UAE. This could involve exploring trust antecedents from the viewpoints of experienced sellers or seasoned traders. It would be beneficial to include participants from more than the three emirates considered in this study, aiming for a comprehensive representation of UAE residents to enhance the generalizability of the findings. Moreover, expanding this research to other Gulf countries like Saudi Arabia, Oman, Bahrain, and Qatar is advisable, given their shared business entities, societal norms, and cultural attributes. Additionally, adopting an interpretive approach through qualitative research could offer deeper insights into the cultural and social factors influencing user trust in Instagram shopping. Suggested research topics could explore Hofstede's cultural dimensions on users' trust in Instashopping, or investigate the impact of social influences on institution-based trust and disposition to trust. This would allow for a richer understanding of trust in social commerce, drawing from individual narratives and in-depth experiences.

6. Conclusion

In light of the research conducted on customer trust in Instagram shopping within the UAE, it is evident that McKnight's 2002 theory of trust remains highly relevant in the context of modern e-commerce platforms. The theory, which emphasises the importance

of perceived trustworthiness, institutional-based trust, and situational normality, provides a comprehensive framework to understand the dynamics of trust in Instashopping. Our findings suggest that the perceived trustworthiness of Instagram sellers, particularly in terms of their ability, benevolence, and integrity, plays a pivotal role in influencing consumer trust. UAE customers are more likely to engage in transactions when they believe that the seller possesses the necessary competence, has genuine intentions of delivering on promises, and adheres to ethical standards.

Furthermore, institutional-based trust, which revolves around the structural assurances and guarantees provided by the platform, is of paramount importance. Given the rapid growth of Instagram shopping in the UAE, there is a pressing need for more robust regulations and safeguards to ensure that customers feel secure in their online transactions.

Lastly, situational normality, or the extent to which online shopping on Instagram aligns with the UAE's cultural and social norms, also plays a significant role. As the platform becomes more ingrained in the daily lives of UAE residents, the normalisation of Instagram shopping will likely bolster customer trust. While technology and platforms evolve, the fundamental principles of trust remain consistent. For Instagram shopping to continue its growth trajectory in the UAE, sellers and the platform alike must prioritise building and maintaining trust with their customer base, guided by the insights from McKnight's seminal theory.

Eventually, a buyer's trust in Insta-shopping cannot be fostered by any individual seller. Still, it can be achieved only at a group level, including the user, Instagram as the third party, and the seller. Since Instagram is a massive social media platform that allows buyers and sellers worldwide to meet virtually and transact, buyers have considerable freedom to decide which item to buy and which seller. This mostly depends on the buyer's trust in the seller and their goods and their trust in Instagram as a reliable and fair shopping platform that can adequately manage the relationship between the parties involved.

Declaration

The study, survey, and its elements, questionnaires were approved by *Zayed University Research Ethics Committee*, with the application Number **ZU22 017 F**, obtained on 12th, March 2022. Informed consent was obtained from all study participants, all study participants were over 18 years old.

Data availability statement

Collected Data are not available, however they will be made available upon request.

CRedit authorship contribution statement

Mousa Al-kfairy: Writing - review & editing, Writing - original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Ahmed Shuhaiber:** Writing - review & editing, Writing - original draft, Visualization, Validation, Supervision, Software, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Ayman wael Al-khatib:** Writing - review & editing, Writing - original draft, Visualization, Validation, Software, Resources, Methodology, Formal analysis, Data curation, Conceptualization. **Saed Alrabaee:** Writing - review & editing, Writing - original draft, Visualization, Validation, Software, Resources, Methodology, Formal analysis, Data curation, Conceptualization. **Souheil Khaddaj:** Writing - review & editing, Writing - original draft, Visualization, Validation, Software, Resources, Methodology, Investigation, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: \Mousa Al-kfairy reports financial support was provided by Zayed University. Mousa Al-kfairy reports financial support was provided by Zayed University.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2023.e23332>.

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