

“Why would you buy from a stranger?” Understanding Saudi citizens’ Motivations and Challenges in Social Commerce

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Abstract. Consumers in many countries like the Kingdom of Saudi Arabia (KSA) are increasingly turning to social media platforms like Instagram and WhatsApp to buy and sell products and services. Commercial activities within these platforms are increasing in popularity because of important qualities they provide, such as convenience of use, social aspects, and the variety of the types of products available. Using social media in this way has become popular, even though social platforms lack support for conducting e-commerce. In our study, we aim to understand this new trend, to investigate the needs of social media consumers within KSA, and to investigate how social platforms can be better designed to meet those needs. Using data collected through interviews with 26 social media users, we discuss and propose design directions and trust mechanisms for supporting commercial activity within social media platforms with the aim of improving user experience and increasing user acceptance.

Keywords: Social commerce, social media applications, e-commerce, peer-to-peer exchange, trust, social features, commercial functions, consumer needs.

1 Introduction

The rise of technology and Internet connectivity has led to new methods of commerce and communication. This is evident through popular world leading e-commerce platforms like Amazon and eBay, as well as popular social media platforms such as Facebook and Instagram [1]. While e-commerce has grown quickly since overcoming early problems such as; trust; information security; and general customer satisfaction [2], social media is also now used by commercial enterprises in what has come to be known as social commerce (s-commerce). However, s-commerce is still at the development stage, and is plagued by problems that need to be investigated and solved.

Western countries have been at the forefront of the development and adoption of internet technologies, and many countries around the world are catching up, particularly

in terms of using social media for communication [3], and also for commerce [4]. There is a clear need for new research in none Western countries where important cultural factors can have a strong influence on the way users perceive and make use of online technology for commercial activity [11][12]. The focus of this study, KSA (Kingdom of Saudi Arabia), is among the largest proportional users of social media because of its collectivist culture that places a high value on family and social groups [5]. Moreover, there is massive growth every year in the use of social media platforms in Saudi Arabia, being one of the top countries for annual growth of social media users in 2018 [6]. Conducting the study in Saudi Arabia will help us understand the motivations and needs of a particular social group that has not been widely studied compared to other user populations such as users in the West. For such reasons, this study focuses on Saudi Arabian users, which is a relatively new context for HCI.

From a technological perspective, previous studies that have investigated social media commercial use have mostly examined the use of Facebook [7][8]. However, currently the most popular social media network used as an s-commerce platform in Arabic countries such as Saudi Arabia, Kuwait, and Egypt is Instagram [9]. Therefore, conducting a study on the use of Instagram will help us understand a different platform that has not been a focus of study before. A few social media platforms have indeed started to add some commercial functionality [9][10], but much more needs to be done. Also, designers should understand the preferences of users from different cultures. In order to be able to design future social media applications or improve existing ones, particularly for conducting business transactions whilst also providing optimal user satisfaction, it is essential to investigate the experiences and needs of both the providers (sellers), and the consumers who use these applications [13][14][35][41]. In this paper, the focus is placed on the needs of the consumer, while future work will consider the needs of the seller [13].

The aim of this study is to explore user routines and behaviours, and to investigate the factors behind the success of social media-based businesses in KSA. A principal objective of our work is to understand the users and how they make use of current platforms to conduct business. The study focuses on trust in the context of social and cultural aspects to provide design directions for s-commerce platforms, specifically for social features, commercial functions and trust mechanisms.

In summary, our paper makes the following contributions:

- Provides an understanding of the behaviours, routines, and needs of consumers while conducting commerce through social media platforms (Social Commerce) in the context of the Kingdom of Saudi Arabia.
- We investigate factors influencing trust, before, during, and after conducting commerce using social media platforms.
- We discuss and propose design directions and trust mechanisms for social media platforms in order to improve the social commerce platform and to help in minimising the feeling of risk thereby enhancing trust while conducting commerce on such platforms.

2 Background

2.1 Social commerce (s-commerce)

S-commerce is a new area of research that encompasses many disciplines, including psychology, marketing, computer science, business, and sociology. As a result, s-commerce has a variety of different definitions. In general, it can be defined as a development in which individuals are connected, and can execute commercial transactions by using social networks [17]. It can also be defined as a form of e-commerce in cyberspace that makes use of user-generated content and social media to conduct commercial transactions [18]. The social commerce concept was introduced by Yahoo in 2005 [19]. Since 2008, research on s-commerce has grown [20]. Some social media networks such as Facebook have recently started to introduce commercial functions on their applications [9][10].

Several studies point to the importance of s-commerce, as they both increase business values and revenues, as well as enhancing the shopping experience of customers [8]. Some of these studies even suggest that in future people will no longer use traditional e-commerce as a way to buy or sell because of the significantly increased use of social media applications in business [8]. The reason behind the growing use of these applications is their increasing social acceptability and their ability to meet people's need more effectively than traditional e-business channels [15]. Recently, several studies have presented literature reviews on s-commerce, and they provide a foundation for future research [8][20]. In addition, some HCI studies explore the use of social media for commercial activities [21][7]. They investigate user experiences of s-commerce platforms and provide some design directions mostly for Facebook. Another previous research study examined the acceptance of social commerce in Saudi Arabia and found that there is a positive association between habit, price saving, social support and social commerce constructs on the one hand, and behavioral intentions on the other hand [22]. However, there is still a lack of studies that examine user routines and behavior in using s-commerce platforms [16], especially in KSA.

2.2 Features of E-commerce and Social Commerce

E-commerce comprises three categories of technical features, which are transactional features, relational features, and social features [23]. Transactional features support activities such as searching for a product or placing an order. Relational features involve relationships between consumers and sellers, such as membership or loyalty programmes. Social features are related to the relationship between consumers and their interactions, such as ratings and reviews. These features can be categorised as promoting and attracting others, creating self-identity and a sense of community, generating content, and acting collectively [23]. In the social commerce business model, consumers play the main role [8], and for this reason, social features should be further considered and studied.

A recent study of user preferences found the essential features to implement in s-commerce platforms are "Comment", "Like" and "Send" button [16]. These mostly

help in reviewing and ranking the products and provide consumers with the knowledge that impacts their purchase decision and their shopping experience [16][8]. These studies are helpful in designing s-commerce platforms and understanding the impact of these features on purchase activities. However, to our knowledge, there is a lack of research into the impact of these features on trust.

2.3 Trust

Trust is one of the essential factors in human interaction, especially in the context of online shopping [24]. It can affect the success of e-commerce [25], as it has a significant effect on consumers' buying intentions [26]. In other words, e-commerce would not reach its full potential without trust [27]. In e-commerce, trust has been defined as individuals' beliefs regarding sellers' ability, benevolence, and integrity [24]. From these beliefs, consumers can feel more confident in trusting the other party [24].

In commerce activities, trust is commonly divided into two main categories; hard and soft trust [26]. Hard trust focuses on security and technical aspects, where soft trust concerns the quality of vendors' services and knowledge. This study focuses on soft trust, which is related to users' perceptions of trust [26].

In order to enhance users ability and feelings to perceived trust, three mechanisms have been discussed in previous studies [28]. The first mechanism is process-based, and is based on the history of previous transactions. This type can be affected by customer satisfaction, which builds reputation [28]. Therefore, trust can be affected by the experience of customers during online shopping [24]; new customers can be attracted by the existing consumers [24]. Reputation systems can create trust between peers based on previous experience [2][29], which also can be presented by reviews[20]. The second mechanism is characteristics-based, related to the person, which can be established by similarities such as sex and nationality [28]. For example, a previous study explored how family and friends' recommendations initiated mobile commerce activities and encouraged trust in the site [26]. The third mechanism is the institutional-based mechanism, related to formal societal structures which are commonly established by a third party [28]. Another study discussed a calculative-based mechanism, related to cost and payment, which in this case are the consumers' rational assessment of the cost and benefits of the other party [24].

A key concern of HCI research is to develop design features to improve the trust of e-commerce platforms [30][31][7]. Irina et al. in [32] discussed the importance of design in gathering trust, especially concerning visual, reputational, and contextual factors. There are some features that can establish trust, such as social channels where users can communicate and build their trust network, and profiles [33]. If these channels are used to send recommendations, particularly to friends and family, then trust in a product or service is generally improved [1][26]. Moreover, when people find that their family or friends (even friends of friends [34]), like a service or product and post it on social networks, this will be perceived by them as a recommendation[35].

Furthermore, social features can build trust through [23]: reviews, recommendations, promotion tags and ratings generated by trustworthy social content (user-generated content) [33]. In addition, the relational features can also build trust by encouraging

relationships between the sellers and consumers [23]. Therefore, there is a need to have trust creation features [14]. Trust can also be established by purchase knowledge (vendor's reputation, previous experience with the vendor, reports from trusted third parties), interface properties (familiarity and attitude) and informational content [25]. Another study discussed the effect of images on building trust [32].

2.4 The Context: The Kingdom of Saudi Arabia (KSA)

The Saudi Arabian culture includes two main systems, Islam, and tribalism [36]. Islam is the national religion of KSA. It is a system that is also followed in law, and it is related to life. Tribalism is one of the values that is related to the family and the need to show loyalty towards tribe members [37]. Triandis's considered Saudi Arabia to be a modern but collectivistic society as the society relies on trust and helping family members and friends, depending on superiors and supporting subordinates [5]. Collectivism can be defined as the society relies on trust and helping family members and friends, depending on superiors and supporting subordinates [5]. A collectivistic society means that the individuals cooperate with each others [5]. In some collective culture, individuals rely on other people and discuss the options with them before making a decision [22].

The KSA government has established a 2030 vision and one of the vision's programmes is the "National Transformation Program 2020", in which one of the objectives is maximising local content and digital transformation. In addition, one of the initiatives for this programme is to "Design a program to stimulate e-commerce among individuals and businesses and to provide the technical and legal support necessary to start-ups, small and medium-sized enterprises and logistics companies" [38]. For this reason, more studies in KSA should be conducted to support this transformation and to implement the vision.

Maroof is an initiative from the Ministry of Commerce and Investment in the Kingdom of Saudi Arabia, which provides free business services for development and operation [39]. This is known as a new service that supports e-commerce in the kingdom, and is helpful for all e-commerce dealers, whether sellers or buyers [39]. It enhances trust between the buyer and the seller, as well as providing the opportunity for sellers to be involved in a community where they are reviewed by consumers [39].

3 Research Method

We chose a qualitative method (interview) to investigate and understand user behaviours and routines in using s-commerce in KSA. A semi-structured interview study was conducted with social network users based on Lazar et al, where the authors provide guidelines on how to prepare, conduct and analyse interviews [40]. This was completed over three months, from May to July 2017. Our initial research questions focused on understanding how Saudis use social media for commercial activities, and exploring what trust mechanisms they use for conducting these activities.

3.1 Participants

We recruited 26 participants from KSA by posting a Google form on social media applications such as WhatsApp, Twitter and Instagram in order to reach social media users. The form includes basic questions regarding age, level of education, gender, whether they use social media applications for business, whether they use e-commerce websites, and their contact details. The reasoning behind using the form is that it can assist in gathering a far-ranging sample. We received 67 responses and selected people from different age groups, education levels and buying experiences to establish a variety of participants.

The targeted audience for the interviews was consumers who use social media applications in trading products and services (mostly peer-to-peer); however, it was interesting to ask them whether they have attempted to open a business on a social network to check if they have different perceptions than who did not. The first author conducted all 26 interviews (12 female, 14 male). Ages ranged from 19 to 44; the level of education for 22 participants was undergraduate, and of the remaining participants, three were postgraduate, and 1 had a high school degree. The median monthly income for the participants ranged from approximately \$2,200 to \$5,500. Our demographics data shows that we have a more general sample.

Each participant used at least two social media applications. The top social media applications, which were used by at least 21 participants, were WhatsApp, Twitter, Instagram and Snapchat. All participants had been using social media applications for at least two years (the range for the sample was from 2 to 10 years). All but one of the participants had used a social media application to conduct commercial transactions, while 22 of the participants had used e-commerce websites. The mobile phone was the most popular device used to buy (19 by smartphone, 3 by tablet, and 4 by laptop).

3.2 Procedure

The first author conducted semi-structured interviews through social media applications such as Line, WhatsApp and Skype, because the participants were Saudi users living in KSA and the location of the interviewer was the United Kingdom. The first author, who is bilingual (Arabic and English), conducted and recorded the interviews with the Saudi participants in Arabic, to allow them to fully express themselves. We then transcribed the interviews, also in Arabic. After conducting 26 interviews, we stopped recruitment because the patterns of the interviewee's experiences were recognised and the last few interviews were confirming them. Examples of the patterns include the similarity in how interviewees find the sellers, such as finding sellers by searching, and through family and friends.

Questions were divided into four main categories (See Appendix A). First, we asked participants general questions about their use of social media applications. Questions included which social media applications they used, when they started to use them, and how long they spent using them each day. The second category of questions examined the commercial use of social media applications. We asked questions exploring which applications they used, how they used these applications, what motivated their use, how

trustworthy they considered the applications to be, and how their experience was in general. The third category concerned their use of e-commerce websites. Participants were asked whether they used them, which ones they used, what their experience was, which they preferred, and what device they used for shopping online. The final set of questions collected demographic data. We asked them which city they were currently living in, and what their monthly income was. In the end, participants were offered a \$15 gift card to thank them for their time.

3.3 Data analysis

The interviews were transcribed in Arabic and analysed using thematic analysis. We began by reading all 26 transcripts to identify main themes and develop codes. The first author conducted an initial coding, open coding, so that the first cycle of coding was open to all possible directions, following the techniques described in [41]. We used ATLAS.ti, which is software that assists in the analysis of qualitative data [42], to code our data. The first author coded the transcripts, then, for the second cycle of coding, the codes were grouped under categories and subcategories (e.g. habits before purchasing, trust mechanisms, etc.) and themes by using affinity diagrams, and were translated into English. Axial and selective coding were used to identify the relationships between concepts [43]. The second author analysed two interviews to confirm the codes and categories. Finally, all authors discussed the codes and themes and agreed on them. From coding the first three transcripts, we generated 65 codes; after the fourth and fifth we generated 77 codes. Themes emerged during the iteration. The codes and themes were altered by reading and analysing the coded transcripts.

4 Finding

We first describe the motivations for using social media applications to conduct commercial transactions, followed by a description of three purchasing stages (pre-purchase, purchase, post-purchase), and the factors that affect trust in each stage. Finally, we explain the risks that prevent consumers from buying through social media applications.

4.1 Motivation

When the participants were asked about what motivated them to buy through social networks, the responses pertained to three main categories: 1) Social aspect and Instagram design. 2) Products. 3) Ease, convenience and speed.

Social Aspect and Instagram Design

Commonly, participants described how the availability of social features in Instagram (such as profile, followers, comments and likes), as well as having other social media such as Snapchat, motivates them to buy and trust the sellers on Instagram. First, many (10) participants mentioned that having many e-shops on Instagram, with information

on profiles that can be followed, motivates them to buy: *Communicating and following sellers' accounts becomes a passion and addiction-P11*. They indicated that they follow some sellers' accounts in order to be updated on new and available products. One of the participants mentioned that if he did not have the money to buy a specific product he wanted, then he would follow the account until he could obtain it: *If I find a product that I like but cannot afford its cost, I followed the account until I can buy it in the future-P14*.

Many (15) participants mentioned that they browse through Instagram, which may lead them to view photos of products that someone has tried or are advertised by influencers, or even those posted by sellers' accounts that they followed, which attracts consumers to buy.

Family and friends also influenced most of the participants (23). They receive online and offline recommendations to buy from accounts on Instagram. This supports previous findings regarding the effect of social support on online buying interactions[22]. Furthermore, few (three) participants mentioned that they are motivated to buy to support the sellers as they are from their friends or family members. In the "Finding Sellers and Products" section, we will explain more about family and friends' sharing activities and their effects on trust.

Two participants mentioned that people in Saudi Arabia are active in social media, and this motivates them to use it for everything, not just for the common use of sharing and communicating: *We love to buy by using Instagram and social media applications more than the websites, because we are active in social media, and browsing a website does not suit us, as we do not like them-P2*.

Products

Most of the participants (16) described how product types, availability and uniqueness attracted them to buy from Instagram. They can find unique products, such as new brands, imported goods, customised products or handmade products – for example, t-shirts with Arabic words, or homemade food or sweets. Several participants mentioned that product quality is good, or even considered to be high quality. Some (4) participants indicated that sellers having up-to-date products motivates them to buy from these shops, which means these products are new, and not even available in the physical market: *I follow many sellers on Instagram, as their products are not available in market or e-commerce websites-P16*. Two participants noted that they want to support sellers on Instagram, because they are national people: *I mostly buy from Instagram for two reasons: support national people who run these small businesses and the prices-P13*. In addition, six participants mentioned that product prices are lower than those of market. One of the participants also explained that the ability to compare prices between shops and find the more reasonable prices motivates.

Ease, Convenience and Speed

Almost half of the buyers described the processes of buying a product as easy. Some of the buyers liked being able to communicate with sellers directly. Nine buyers did not want to buy by using a link, they prefer to talk using WhatsApp and order through it: *If*

I found a website for the sellers' accounts, I may open the links to view and find the products I want, but I will order through WhatsApp as it is easier for me-P2. They also mentioned that people know how to use Instagram and WhatsApp, it is easy for them to use, and for this reason they use it more than the websites.

Most of the participants agreed that they liked to have products delivered to their home, and that if a seller would not, they may not order. Few (3) participants mentioned that the delivery when they order from Instagram is typically faster than from an e-commerce website: *If I am going to travel and I need a product within a short time, it is easier and faster to order it by Instagram. However, if I do not need it urgently, I am going to order it by Amazon, which may take time-P26.* These results match an earlier study that indicates that members of “sale groups” on Facebook find buying and selling easy and quick [7].

4.2 Pre-Purchase

Finding Sellers and Products

Before purchasing a product, consumers need to find the product that they desire, and the seller's account to subsequently place an order. Participants were asked how they find a product/seller account on a social media application. They use three ways to find sellers' accounts, which are family and friends, searching, and advertisements; each way affects consumers' trust differently.

First, it was clear that participants find sellers' accounts mostly from their friends and family, both offline and online. Most of the participants mentioned that they totally trust any accounts that were recommended by their friends or family. The majority of the participants noted that they often receive online recommendations from their friends and family via different methods. This was also the case in a study conducted in North America where it was found that study participants receive recommendations from their friends, which they browse to decide whether to place an order or not[26]. Several (5) of the participants capture the account and send it to a WhatsApp group, which may be composed of close friends, family or even include employees from the same company. Others mentioned their friends under the product's post by writing the friend's account in a comment under the post. They also send direct messages to share the accounts or products that they like, or mentioned each other under the photos in sellers' accounts in Instagram. Additionally, they may take a photo or video and send it by Snapchat. Participants described buying from Instagram as a social habit, because they communicate with their friends and family when deciding whether to buy from a seller's account or not. This indicates that social commerce involves social support that enhances communication with others, which was also found in previous research [8].

Participants described the methods they use for searching to find a product or seller account. First, most of the participants reported that they search using Instagram by two methods: using “hashtags”, and using an Instagram search engine, where they can search for people or tags, or they use the account search feature. Six participants reported that it is difficult to search using Instagram (accounts/hashtags), especially due to having unrelated posts using the same hashtags. Participants reported that they had faced difficulties in finding a product when they did not know the sellers' accounts. To

overcome this issue, two participants mentioned that they might use Google to search for a product on Instagram as it is the easiest way and better than using hashtags: *I search by using google, and it directs me to what I want, and this is the easiest way and better than using hashtags, where you may get irrelevant results-P3.*

Ten participants find seller accounts from advertisements, mostly through Instagram's/Snapchat's accounts belonging to celebrities, influencers, bloggers and specialised accounts (all will be referred as influencers), which mostly provide advice and recommendations in a specific area. Influencers post a photo with a tag or mention a seller account, and this is how people get to about it, or some sellers write a comment about what they sell under an influencer's post. Three participants trust the influencers that they follow and do not need to check anything. However, the rest of the participants reported that they need to check if they should trust these accounts.

Check Seller Practices

Participants described how they gain trust in buying from strangers by checking the sellers' practices, which mostly regard their professional practices, prices, payment, delivery and communication. Commonly, buyers described the importance of sellers' professionalism, which may convince them to trust and buy. They assess professionalism in different ways, specifically by looking at profiles and the included photos, details, and information. Sixteen of the participants mentioned that they check the posts (photos/videos) in the sellers' profile before ordering. This result implies that the social presence of sellers influences consumer trust, which is consistent with previous research [14]. For example, having clear and high-quality posts represents a more professional seller. They reported that they could sense whether the product's quality was good or not from checking the photos. Participants commonly check the included details and information in sellers' profiles to discover more about sellers and products, and whether they should trust them or not. Participants were varied in their views regarding included details and information. Most of them mentioned that having more information about the seller raises the level of trust and makes them feel more comfortable; this information may include the real name of the seller, their mobile number (it is linked to their national ID), and their personal Twitter account: *I can trust the accounts that include the real name of the sellers and have a mobile number to communicate with them directly-P7.*

Seven participants agreed that it is important to have an official account with, for example, a commercial registration, a logo and a public account. Three participants mentioned that they are willing to trust more if they find a link to the e-shop website included in the seller's profile on Instagram: *Sellers who just have Instagram accounts may close them anytime; however, having a link to a website gives me the feeling of trust-P3.* One of the participants reported that he trusts sellers who deal with physical stores and mentioned the name of stores in their profile.

Most of the participants mentioned that the price and payment methods affect trust and buying decisions. Seven participants felt that they could trust after checking the available prices. They check the price of a product and compare it with other accounts or sites, and, if they find it reasonable, they will trust: *My trust depends on the product that I am going to buy; I will have an average price in mind, if the price is near to my*

average then I will trust-P14. Five participants mentioned that they are more willing to trust when buying items that are less risky (not expensive) with regard to money. They would purchase even if they did not feel that they could trust the seller, so if anything went wrong, they would not regret it: *I do not buy expensive products in order not to have regrets if anything goes wrong-P1.*

Eight participants reported that they trust sellers when they can pay cash on delivery. They mentioned that they would look for payment details in sellers' profiles and under the posts, and if they did not find them, they would communicate with the sellers to ask them. However, four participants have trust issues with a seller's account that does not indicate the prices under the products, as they felt sellers would play with prices: *I check whether they include prices for the product or not, if not I would not buy from them. I feel they will change the prices-P15.*

Communicating directly with the sellers and having several contact methods will enhance trust. Nine participants felt more comfortable when they communicated directly with the sellers. They reported that ways of communicating with sellers motivate them and help them to feel more trust. Additionally, they may receive more information and details related to the product, such as more photos, the actual size, and how to use it, which may convince them to buy: *I usually ask the seller to send more photo directly to me before adding the order-P3.*

Some sellers register in Maroof and include it in their profile, which can be considered to be a practice that enhances trust. Eleven participants mentioned that they knew Maroof, but they varied in their use of it: Three of them check it frequently and others only sometimes and they trust the registered sellers: *I just deal with verified e-shops that I found in Maroof-p13.* However, of these eleven, four participants did not use it at all. The reason for that is they did not find it useful, as it does not include many of the sellers' accounts, which was also a concern for some of the participants who do use it: *It is not rich enough; few seller accounts are registered-P25.* Two participants reported that they had heard about it, but did not actually know how to check it. They simply found it written in a seller's profile. The remaining participants, who did not know about the application, mentioned that they were very interested and happy to have such a service – they can trust the sellers who are registered, as they are able to complain if anything goes wrong: *This service will motivate me to buy and trust -P11.* These findings are consistent with previous research that a third party can enhance trust [26].

Some sellers post a screenshot of the positive private comments that have been sent by buyers to gain other buyers' trust. Thirteen participants mentioned that they do not trust an account with such a photo, because they suspect it is a fake used to cover up a seller's negative points. It may have a negative effect, which means instead of increasing trust, it is in some cases a cause for suspicion, and few (2) participants may not buy from accounts using such posts. Two participants reported that other people would believe and trust in such a practice: *to be honest, I do not trust them, but I know a lot of people see the screenshots as a standard with which they can evaluate the account-P2.* A participant mentioned that as a seller in the past, she did it to gain trust, and thinks it is useful. Alternatively, four participants mentioned that they believe this kind of screenshot, and that it may motivate them to trust and buy from the seller's account.

Previous Experiences

Participants also commonly check previous experiences in different ways. They can access these experiences by looking at the number of followers, examining who the followers are (for example, some of their friends or family, or even influencers), number of likes, number of mentions, and checking the comments under each post, which affect trust as well as tags.

One of the participants mentioned that if there were no comments at all, she would not buy from the account. Another participant mentioned that the presence of tags has a strong effect on trust when people post their experiences and tag the seller, because it is more real. For example, personal accounts that include personal experiences of different products and different sellers that they tag. However, five participants mentioned that they did not read the comments because they think they are not helpful. As an example, people taste food differently, one may like this kind, but others may not.

Half of the participants mentioned that having several positive comments and mentions under products motivates them to trust and buy. They read the comments in order to gain an impression of the seller's behaviour and attitude, and to help them to know more about products. For example, these may mention the product's material. One participant mentioned that she would search on Google to read more generally about the products. They described how good experiences affect their trust. Good experiences may include their own, friends, family or previous consumers' experiences: *If anyone tried the product and wrote positive comments, then I trust to buy-P19*. One of the participants mentioned that the most important thing is to look for negative comments, because the positive comments may be fake.

4.3 Purchase

Placing an order depends on what methods sellers provide to communicate and place the order. Mostly they add the WhatsApp number in their profile; two participants mentioned that this method makes them feel more comfortable, as the mobile number is usually linked to their national ID. Five participants reported that orders are placed by sending direct messages within Instagram, which sometimes feels risky; Eight mentioned that calling sellers directly feels safer. One participant mentioned that the order was placed via using a link in their profile.

The payment method is most commonly cash on delivery, as it is safer and can be trusted. However, fifteen participants mentioned that if they have to, they may transfer the money to the seller's account, because it is documented and the bank account should be in KSA. They also mentioned that if they have to transfer the money, they need to know more about the seller and feel that the seller is trustworthy.

Most of the participants reported that they communicate with a representative to deliver their order, with incurs an extra charge. Some sellers may offer a "pick-up" option; however, participants generally prefer products to be delivered to their home, as the pick-up location may be too crowded or may not be nearby. Eight participants mentioned that if accounts are not in Saudi Arabia, of which most will be within the Gulf countries, then deliveries will be made by shipping companies.

4.4 Post-Purchase

Two participants mentioned that they check the product and its quality before handing over money. Most of the participants mentioned that they tended not to write comments under products' posts; however, nine of them will write a direct or private message to the seller to thank them, and offer their comments on the products, even telling them about the negative things. Six participants received messages from sellers asking them about their opinion of the products; the participants then provide their feedback. Three participants mentioned that after writing a private message to sellers to thank them, the sellers took a screenshot of the message and posted it under their profile to gain the trust of other customers. Participants who have been asked and took a screenshot of their private message, did not trust this way, and did not like it, but they agreed to do it as they thought it might help the sellers. Two participants told us that they might write a comment under the product post only if the seller was good and polite in communicating with them, but otherwise they would not: *Writing comments is dependent on the sellers, if they were helpful, respectful and kind, then I feel that I have to write to thank them-P1.*

Three participants mentioned that they might write comments, particularly positive comments, under the products, including information about their experience with the product and the seller, or by giving likes to support the sellers: *After buying a product, I may write a comment to help others to know how the product was, and how sellers dealt with me-P26.* One participant described writing negative comments on Instagram as a waste of time, as the sellers can delete them, which the participants had experienced. However, four participants stated that they do not write public comments at all. Their reasons included the matter of privacy, hating to be seen by the public.

4.5 Perceived Risks

Most of the participants described many different risks that they might face when buying through Instagram, mostly regarding sellers' accounts, products and delivery. Ten participants were concerned about dealing with fake accounts and losing their money, in the case of transferring money and nothing being delivered in return.

Half of the participants (13) mentioned that they were concerned about having issues related to the product. These may include receiving a product that is not as the picture/description suggested, receiving a poor quality product, or being sent the wrong size/material: *I ordered a cake from an Instagram account; the picture was great. I received it; it was great and delicious, but it was tiny, which was not clear from the photo. I was embarrassed as I ordered it for a party-P12.* One of the bad experiences was having an issue with a product that was very different from the one in the picture; one participant asked the seller several times to refund, but the seller refused. She then used religion to make the seller afraid, by suggesting that she would pray for God to punish the seller; the seller then agreed to refund: *she gave me the refund after sending to her a lot of prayer to be punished-P9.*

Five participants mentioned they were concerned by the possibility of having issues with delivery. For example, the delivery being late or not arriving on the date or time they were told, especially if payment is made before the product is delivered.

Five participants mentioned refund and exchange as one of the issues that they were concerned about having to face. For example, if payment is made in advance and they have received the product, then it is almost impossible to obtain a refund or an exchange: *I ordered something and asked them to write a message on top of it; they wrote a totally different message. I called them and tried to complain, but nothing happened-P2*. However, nine participants mentioned that they did not feel any risk, especially if they mostly ordered with cash on delivery, as they could check the product before paying the money.

5 DISCUSSION

The aim of this study is to understand the use of social media applications as commercial platforms even though they lack traditional commerce features [7]. Social commerce has different features in other types of commerce. Table 1 shows a comparison between consumer to consumer (C2C) brokered e-commerce, community commerce [7], and social commerce (Instagram and WhatsApp) features discovered in our study (with respect to C2C (consumer to consumer), and B2C (business to consumer)). The comparison is conducted with respect to type of sellers, how to find a product, how it is delivered, the payment methods, type of products, and how trust is established. We can see that there are more similarities between community commerce and social commerce. There is some similarity in finding products by monitoring news feeds and having the up-to-date information which they can find by monitoring new posts or news feed. Furthermore, the way trust is established in both community commerce[7] and social commerce, relies more on the social presence and social support. The findings reveal strong agreement with literature on one key theme, which is trust [7][14][35]. There are varied trust mechanisms when using social commerce (e.g. Instagram). We can categorise them into four main categories: social aspects (including seller activities), purchase cost and payment method, and Maroof.

5.1 Social Aspect

The main aspect that affects trust is the social aspect. The findings of our study show that family and friends are the main, and sometimes the only, source of consumer trust. People establish trust based on the experience of their family and friends more than anything else [26]. The Saudi culture is a collectivism culture [44], which reveals the importance of the social aspect in designing s-commerce platforms. The preference interface for a collectivist culture should focus on relationships and groups [45]. Previous studies show the effect and role of friends and family on trust [26]. It may be helpful to show the accounts that have been trusted by friends and family. In addition, a study shows that in KSA people trust their family members and even share their authentications [46]. This matches some of our findings, as several participants share

their income with their partners or family, by buying for their friends or family, or by giving their visa debit/credit card to their family to use for buying things online.

Furthermore, as Saudi users are active users of social media applications [47], it may be helpful if Instagram had the facility to build a community where buyers could find nearby sellers and sellers could find nearby buyers. This would enable them to communicate and exchange their experiences and even enhance trust. Members of the same community trust each other more [7].

Table 1. Comparison between C2C e-commerce, Community commerce [48] and social commerce features (our study).

	Brokered C2C E-Commerce Example: eBay	Community Commerce Example: Facebook groups	Social commerce Example: Instagram and WhatsApp	Participants perceptions
Sellers	<ul style="list-style-type: none"> • (C2C) 	<ul style="list-style-type: none"> • Member to member within the same group 	<ul style="list-style-type: none"> • (B2C) • (C2C) 	<ul style="list-style-type: none"> • It is not easy to distinguish between customer or business accounts.
Product finding	<ul style="list-style-type: none"> • Sophisticated search engine and product filters • Product categories 	<ul style="list-style-type: none"> • Monitoring News Feed • Mobile push notifications • Basic search engine • Photo albums for product categories 	<ul style="list-style-type: none"> • Monitoring new posts • Search engines: Google and Instagram (search accounts, search hashtags) • Friends and family • Advertisement 	<ul style="list-style-type: none"> • New posts are reasonable and can catch buyers interest • Searching in general is difficult • Searching by hashtags are likeable but not always related • Friends and family recommendations are helpful • Advertisements sometimes are too much and annoying
Delivery	<ul style="list-style-type: none"> • Shipped to home 	<ul style="list-style-type: none"> • Drive to pick up on porch 	<ul style="list-style-type: none"> • Drivers hired to deliver from sellers to buyers with extra charge. • Shipping company if from a Gulf country • Sometimes pick up. 	<ul style="list-style-type: none"> • Delivery costing a large amount of money, but useful, not late. • Reasonable cost; waiting for shipping. • Not preferred
payment	<ul style="list-style-type: none"> • Escrow payment systems 	<ul style="list-style-type: none"> • Leave payment under the door 	<ul style="list-style-type: none"> • Cash on delivery. • Transfer the money. 	<ul style="list-style-type: none"> • Feel safer; do not worry if the delivery is late. • Sometime easier but with risk.
Marketplace	<ul style="list-style-type: none"> • (Global) • Large pool of products 	<ul style="list-style-type: none"> • (Local, Restricted) • Fewer products 	<ul style="list-style-type: none"> • (Local, Gulf countries) • Large pool of products and services 	<ul style="list-style-type: none"> • Productive and unique
Trust	<ul style="list-style-type: none"> • Reputation systems • Escrow payment systems 	<ul style="list-style-type: none"> • Membership in closed group • Regulation of behaviour by admin members & group • Transactions visible to group • Shared group identity • Profiles 	<ul style="list-style-type: none"> • Sellers accounts: profile (content and activities) • Technology (having a website) • Friends and family • Previous experiences • Cash on delivery • Direct communication • Third-party "Maroof" • Cheap product 	<ul style="list-style-type: none"> • Viewing profile can give the first feel of trust; Knowing more, trusting more. • Feel trustworthy. • Friends and family create trust • Having previous experiences can establish trust • Feels safer; cannot be fooled. • Communicating with the seller give the first feeling of trust. • Not enough sellers; trusted as controlled by government

Moreover, one method of benefitting more from the social aspect is to introduce a recommendation system based on use by family and friends, especially in social media applications. This would increase trust, as consumers would know that recommended accounts are ones that their family or friends, or even friends of friends [34], have tried.

The findings of our study are consistent with those of Al-Maghrabi, who mentioned that “positive word of mouth” between family and friends may enhance trust in a specific website [48].

In the past, exchanges between users were handled by a third party, whereas now this can be done by social features such as ranking, rating and feedback [49]. Formal reputation or feedback systems can establish trust [23], which does not exist on Instagram. However, some social features can build trust between consumers and sellers [23] and work as rating and feedback systems – for example, mentions, tags, and comments. Our findings show the significant effect of comments on consumers’ trust and motivations, which should be added and considered, as reported in [50]. People tend to believe the comments and recommendations made by strangers if there are many responses [26]; as in our case, the participants look at the number of followers, likes and comments. Features such as liking and the number of followers work as a rating system [35]. Therefore, user-generated-content is one of the important factors that may affect trust [33] as well as public relations [51]. Social features can help users to create their own trusted network [33] and to find the sellers [21].

Therefore, s-commerce platforms, in general, need social engagement to enhance trust. Additionally, social engagement is needed when designing for a collectivism culture. People in Saudi Arabia are active users of social media and enjoy sharing with others [47]. For this reason, there is a need to link social media to e-commerce and to integrate commercial functions with social media features. Social media features that are effective for a specific culture, or localised features, can be different depending on the region or culture, as shown in a previous study [52].

Furthermore, from our study, we found that people in Saudi Arabia prefer writing reviews and comments about products in a private and direct message to the seller rather than in public comments. Therefore, it would be helpful to give the seller the ability to publish some of these private messages automatically, after gaining permission from the private message writer instead of capturing the message and post it which may seem fake. Alternatively, after conducting a commercial transaction and having the order delivered, an automatic comment requestor could be sent to the buyer, which could then be published anonymously.

Furthermore, some of our participants trust the influencers who advertise these accounts – a study showed that 15% of consumers trust advertising [50]. When designing s-commerce platforms, adding a feature that shows accounts that are trusted by influencers would be useful.

Trust can also be established from seller activities such as having a professional profile and communicating with consumers directly. Our findings show that consumers trust sellers when they can learn more about them and feel that they are professional. The seller’s profile is one of the tools that can enhance trust [7]. Therefore, platforms like Instagram need to be designed to actively encourage sellers to provide more information about themselves, which will help buyers to feel confident about spotting genuine accounts. In addition, sellers should present a professional image by having a commercial registration, which is posted clearly on their account; using clear photos with full details about their products; displaying a logo; and having a clear profile, giving their full details. This result also matches a previous result, which is that high-

resolution photos with a wide-angle make participants feel more trust [53]. Therefore, some design features can enhance trust. In an exploratory study on Airbnb, it was reported that people tended to trust accounts on Airbnb because they were professional, attractive and contained high-resolution and wide-angle photos [29]. Another study examined the use of profiles on Etsy, which requires the sellers to create a profile as well as a shop profile [54], which enhances trust [14].

As our participants feel more trust when they find that a seller's account includes an e-commerce website, sellers can enhance trust by creating a website, even if it is just for viewing the products. Website design can affect consumers' trust [55]. This means that consumer trust is enhanced by using technology and being professional. Moreover, it would be useful if Instagram provided a tool for sellers to give them the ability to create their own website on Instagram (maybe as a blog) or by having business accounts that enable consumers to buy directly using Instagram.

5.2 Payment and purchase costs

From our study, we found that calculative-based trust is one of the mechanisms that has an impact on the decision to buy and trust in KSA. Some participants trust by rationally assessing the costs and benefits of the other party, which similarly found by [24]. Participants tend to trust and use cash on delivery, which is considered a high Calculative-Based Antecedent [56]. PayPal Insight found that 80% of online purchases in the Middle East use cash on delivery [57]. This also matches a study in China where people tend to use cash on delivery [56] as well as in Turkey [58]. Even though the Saudi culture has a high score in uncertainty avoidance by Hofstede [44], Saudi Arabians take risks sometimes and buy from strangers, especially if the cost is not high or if they can pay with the cash on delivery method. However, it is better to have a payment method that uses the same platform, which in our case is Instagram, as people may then trust it more. Etsy provides customers with the opportunity to make the payment through the website, which enhances trust [59].

5.3 Maroof

The Kingdom of Saudi Arabia is a high power distance culture, and also high in uncertainty avoidance [44]. This is represented by our findings, as people believe in the government and need to have a clear policy and regulation to trust and follow. Therefore, institutional-based trust mechanisms still play a significant role in trust in KSA, especially if provided by the government. Our results show that consumers trust more when the government controls and supports sellers, as it is considered to be a trusted third-party platform. Therefore, in order to enhance trust in these applications, they may be linked to the Maroof service. Accounts belonging to registered sellers could then display a special icon to show registration. Another solution is to have verified account techniques on Instagram. The verifying techniques can help to gain trust, as shown in a previous study on Airbnb – sellers display a verified photo, which has been taken by a photographer sent by Airbnb [53]. Previous studies are consistent with these findings as having a third party to verify the sellers accounts can establish

trust [26] We found that there is a potential in Maroof as the participants who did not know about it were encouraged to use it once they had about it from us.

5.4 Limitation of social commerce in the Kingdom of Saudi Arabia

The results also show that users face some limitations. Some buyers found difficulties when searching for a product. The difficulties with searching will affect purchase activities because consumers will not be able to find the right product. This can be addressed by adding and enhancing Instagram search engines to suit commercial searches. Another solution is to have a separate application that includes sellers' and buyers' accounts with social features and commercial functions. The current search tools enable users to only search for Users or Hashtags [60]. Some people may find Hashtags attractive, and they were used before as hashtag commerce [61]. However, having many unrelated images frustrates the consumers. Therefore, there should be a mechanism that stops unrelated photos from being displayed.

Delivery is still considered to be an issue; previously, it was one of the factors that slowed down the adoption of e-commerce in KSA [62]. Consumers find that delivery is too expensive. The price of the product may be less than the price for delivery. A suggested solution for this is to have a linked application to Instagram which can calculate the distance between the seller and buyer, and give a delivery cost depending on the distance. In addition, trying to find the nearest representative to the sellers would reduce the cost, similarly to Uber's technique. An article describes how representatives can earn a fortune from delivering products, sometimes around \$400 per day [63]. Issues with delivery include the need for consumers to send their home address each time they place an order. A solution for this would be for Instagram to supply a service where consumers can register their home address so that when they order, they do not need to send any details.

One of the challenges of s-commerce in KSA is that people want to feel and touch a product. They also may have issues with product sizes and the materials used in products [64]. A solution for this is to provide the facility to give more details about products, to have a selection of photos taken from different angles, with zooming capabilities, and to show the sizes clearly. Consumers should have almost the same impression as touching and feeling the product. Another solution is to give consumers the ability to view the products from different angles as if it is in front of them, which was found to be effective in another study [29].

6 CONCLUSIONS AND FUTURE WORK

Our study explores how consumers use social media applications to conduct commercial transactions in KSA even though social media platforms lack commercial functionality. The main finding is that social aspects enhance trust and motivate users to buy products and services using these platforms. Therefore, we strongly believe that social media applications, as well as e-commerce websites, should leverage their social features to build additional functionalities that can improve customer experiences while

conducting s-commerce. As an example, the methods by which customers review and comment on both products and sellers within social media platforms should be enhanced for commercial purposes. Such methods could include, for example, giving sellers the ability to share publically, private feedback on products when the buyer has given consent to do so. In addition to the findings and recommendations presented in this paper, we have also conducted research to gain a deeper understanding of s-commerce user behaviours and routines from the perspective of the sellers. This work can be found here [13], where we make further recommendations on social commerce functionality with a focus on seller needs. In the future, further studies will be conducted to test the implementation of social commerce functionality discussed in this paper and in [13]. We would like to look more deeply at cultural issues that may influence the design of social commerce platforms in KSA. Moreover, it would be interesting to conduct a comparative study between the perceptions and needs of users in Arabic countries such as Saudi Arabia, and Western countries such as the UK.

Appendix A

Section1- their use of social media applications:

1. Which Social networks do you use most?
2. Since when have you started using social network?
3. How many hours do you spend on social media? Daily/weekly
4. Are your accounts on social media private or public?

Section 2- the commercial use of social media applications

5. Do you use social media for online shopping? Why?
6. Which social media application do you prefer more in buying?
7. What motivate you to buy from a shop on social media?
8. How do you use social media for shopping?
9. Can you explain how you find product and buy it by social media?
10. Can you explain your experience in writing and reading comments?
11. What do you like or dislike about this experience?
12. What do you think the risks of buying using social media?
13. How do you trust to buy on social media?

Section 3- the use of e-commerce websites:

14. Do you shop online by using e-commerce websites and applications? why?
15. Do you prefer buying by websites or by social media and why?

Section 4- demographic and general information:

16. Gender and age
17. The highest degree of education you have completed
18. Occupation
19. Nationality:
20. What is the device that you use mostly for shopping online?

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