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Using social presence theory to predict online consumer engagement in the emerging markets

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Abstract

The purpose of this paper was to contribute to the dimension of online consumer engagement in the emerging markets. The study is based on the social presence theory factors. The study evaluated 443 data sets obtained through a standardized Qualtrics online survey to examine social presence theory to predict online consumer engagement in the emerging markets. The study employed AMOS v24 with the covariance-based structural equation modelling technique to investigate the relationship between social context, online communication, interactivity, privacy and online consumer engagement. The study also assessed social gratification as a mediator in the relationship between online communication and online consumer engagement. Furthermore, the study evaluated technology gratification as a moderator of interaction effect in the relationship between online communication and online consumer engagement. The study results showed that the effect of social context was not significant. In contrast, online communication, interactivity and privacy's effects on online consumer engagement were significant. The social gratification as a mediator and technology gratification as a moderator were significant towards online consumer engagement. This paper is pioneering in that it generates the effects of social presence theory factors and some intervening variables in the context of online consumer engagement in the emerging markets at the micro-level. This area is relevant to scholars, marketing and brand practitioners in digital consumer social behaviour.

Keywords Social presence theory, Online consumer engagement, Emerging markets, Ghana

Introduction

The use and application of the internet and electronic platforms have brought critical transformation to the central activities of marketing programmes. Noticeably, many consumers in advanced markets mostly use online platforms to accomplish their consummation purposes [1, 72]. Online consumption of products has

played a crucial role over the last two decades (as in the recent COVID-19 pandemic). Numerous dynamics have occurred due to the pandemic, affecting social behavioural operations such as consumer production and lifestyles, public interaction, transportation and energy consumption [119, 120]. More than 1.6 billion consumers globally consider the online approach to buying products, amounting to 1.9 trillion US dollars in 2016 [96]. The online shop application has shaped ways of exchanging value, such as distribution, promotion, pricing, sales approach and competitiveness. Most importantly, these online shops (platforms), such as social media kinds (amazon.com, ebay.com, alibaba.com and jumia.com), are used to exchange seller–buyer values [21, 77, 83, 101, 121]. Recent social media statistics in January 2021 indicate 4.20 billion active social media users, constituting

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approximately 53.6% of active social media users since January 2020. Google search hits for customer engagement increased from zero in 2007 to more than 690 million as of 7 April 2021 [24, 121].

Adoption of online shopping by consumers is evolving in developing markets and is fast-growing, particularly in sub-Saharan Africa. This is so because there has been a sharp expansion of internet connectivity, enhancement of online payment systems and growth of mobile transactions [27, 47, 56, 57], which can be categorized as a huge virtual market opportunity [45, 87]. Consumer buying online is also emerging in markets like Ghana, which has an estimated population of about 31 million, with 11 million internet users [46]. However, online brand community platform adoption and continuous use for buying products have not seen major progress as expected in Ghana. This is despite government investment in electronic commerce and mobile commerce sector. This is so because there have not been any specific online buying guidelines and measures put forward to encourage consumers. Consumers still prefer the traditional brick-and-mortar physical in-shop social contact, with the massive patronage of many shopping malls. This has not made the realization of the goal of the government and stakeholders' effort to restructure the Ghanaian market based on digital development smooth. The state and marketing-oriented firms are losing from e-tailing market opportunities. Hence, the brand and marketing portfolio practitioners must make much effort to develop specific marketing programmes to reach out to existing and potential buyers who practically have expressed their desire for online engagement [6, 29]. Thus, the consumer's desire to adopt and use online buying decisions can bring a major transformational trend in the retailing industry [2, 3, 101].

The marketing literature presents various conceptualizations of consumer online engagement in other market environments [21, 83, 96, 121]. Among such conceptualizations are online consumer engagement and platform preference [35], socio-psychological gratification and consumer values in social media brand engagement [85], online shopping in the city of Dhaka [94], factors affecting online shopping behaviour [114], Gotland consumers' online shopping attitude [106], nationwide online shopping behaviour in China [34], social commerce in emerging markets [4], online shopping values and website cues on purchase behaviour [91], determinants of online purchasing behaviour in Nanggroe [127], online-offline comparative and the impact of social media [8], perceptions on online purchasing [20], factors influencing online shopping behaviour [60], gamification in online shopping [31], interactivity engagement in mobile e-commerce [113], self-escapism motivated

online shopping engagement [77] and consumer engagement with marketer-generated content [125]. These studies have mainly focused on consumer purchase intention using social media platforms. Accordingly, a study proposed that extensive research is required across African countries and emerging markets on online engagement [1]. Another research encouraged the exploration of socio-psychological dimensions on online engagement by using explanatory design, which is the aim of the present study [85]. Further research suggests that studying consumers' online interactivity can take distinct roles in the engagement process, such as buying [14]. This aligns with the unique manifestation of the online adoption culture of consumer needs and wants. This study conceptualizes consumer engagement in emerging markets in online buying adoption. Given this, the current research builds on [1, 4, 14, 85] by addressing a socio behavioural approach from the consumer's online personal experiences and the potential users to adopt the changing needs and desires of buying from virtual markets. It can provide a better understanding of online engagement behaviour leading to how to restructure the Ghanaian retailing market. This is an opportunity to tailor a firm's executive decision at both micro- and meso-level through online community groups. This current research contributes to advanced knowledge in the growing knowledge based on social presence theory (SPT) factors, as well as social gratification (mediator) and technology gratification (moderator), generating field findings relevant to marketing retail practitioners, policymakers, portfolio brand managers and scholars. Also, the study contributes to digital consumer social behaviour by advancing e-market segmentation strategy vis-a-vis the essence of re-targeting and re-positioning approaches. Further, the study contributes to e-communication programmes leading to a solid virtual relationship between buyers and shop operators (retailers). In this regard, the current study is guided by an integrated conceptual model and was designed to:

- Investigate the potential relationship between social presence theory (SPT) factors (i.e. social context, interactivity, online communication, privacy) and online consumer engagement (OCE) in the emerging markets.
- Examine the mediating role of social gratification (SG) in the potential relationship between online communication and online consumer engagement (OCE) in the emerging markets.
- Explore the moderating effects of technology gratification (TG) interaction between online communication (ONC) and online consumer engagement (OCE) in the emerging markets.

The remainder of the study is structured in sections as follows: “**Literature review and hypothesis formulation**” section presents a theoretical review of consumer online buying engagement, a discussion of social presence theory factors and the development of the conceptual model and hypotheses. “**Social presence theory (SPT) factors and hypothesis formulation**” section discusses the methodology, including data sources, key variable measurement and estimation techniques. “**Research conceptual model**” section presents the results, and “**Methodology**” section discusses the study’s findings. Finally, “**Analysis and results**” section presents the conclusions of the study, implications of the study, limitations and future research.

Literature review and hypothesis formulation

Theoretical perspectives of online consumer engagement

The development and rapid growth of consumer engagement through online shopping has been applied in different theoretical views, including the theory of reason action (TRA) propounded in 1975 by Fishbein and Ajzen, which postulates that the intentions to adopt a particular behaviour are estimated by an individual’s attitude towards achieving a given behaviour [80], and theory of planned behaviour (TPB) the extension of the theory of reason action (TRA), which describes consumer decision as planned and predictable [7, 96, 124]. The autoregressive integrated moving average (ARIMA) and back-propagation neural network (BPNN) were integrated methods used to stimulate the prediction of countries’ level consumption [117], and the study used the autoregressive integrated moving average (ARIMA) in conjunction with back-propagation (BP) to evaluate consumption relationship as simulation mechanism [115]. The classical attitude theory, which is applied to various purchasing behaviour [60] and technology acceptance model (TAM), referred to as a recognized way individuals can use technology to achieve their usage aim [59, 78, 90, 103]. Innovation diffusion theory (IDT) also consists of a social process that occurs among consumers in response to learning about new things or innovations [19, 78] has been used. Wang et al. [118] applied a combined hybridized model including an autoregressive integrated moving average (ARIMA) model and metabolic nonlinear grey model (MNGM) as a forecasting technique for consumption outcome. Another study reported using the unified theory of acceptance and use of technology (UTAUT) which explains predictors to adopt sustainable household technology [100]. Gratification theory was applied to explain the relationships between the media and consumers to fulfil their needs and desires [126], and grey theory comprises the single linear, hybrid linear and nonlinear which have been used to predict consumer consumption [116]. As a result of the complexity

of consumer social behaviour, these theories do not adequately explain the dimensions of the individual consumer’s social and personal concerns and thoughts leading to online engagement [15, 66].

Social presence theory (SPT)

This paper draws on the social presence theory (SPT) propounded by Tu and McIsaac (2002) but originally developed by Short, Williams and Christie (1976). The SPT was developed to predict and explain individual consumer behaviour. Given the different abilities of media to transmit visual and verbal cues, the theory contends that media differ in their ability to convey the psychological perception that other people are physically present. The SPT is considered more efficient for relationships, as it involves social, personal issues and thought. Additionally, SPT presumes that the outcome of consumer interaction can be predetermined by the capacity of the selected medium to support the type of engagement required. The SPT distinguishingly proposed key dimensions, which include social context, online communication, interactivity and privacy [15, 48, 66]. Furthermore, SPT explains how individual consumers use social media, as they see it as a form, behaviour or sensory experience that projects some form of intelligence and social acceptance [84]. Additionally, SPT explains the feelings of being with another, the degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships. It is considered the central design principle for social computing technologies. For example, online chat, email and online communities [54]. SPT has been extensively applied to various application contexts, including students and teachers socially interacting online [66]; knowledge contribution in virtual communities [98]; social presence conceptualization and measurement [54]; virtual human resource development [13]; online brand engagement [52, 84]; and demystifying consumer digital co-created value [42].

Online consumer engagement defined

Despite the similarities in several definitions, there is no universal definition of online consumer engagement. This notwithstanding, scholars have put together various definitions of online consumer engagement based on context and area of discipline. Thus, online engagement refers to consumer willingness to exchange electronically [6]. Online engagement may constitute selling and purchasing products and services over a computer network strategy designed to order and receive [9]. Similarly, online engagement is the form that enables the consumer to purchase products through the internet [86]. In another perspective, online engagement allows consumers to shop anytime from anywhere through the

internet [23]. Another study [128] suggests that internet engagement refers to consumers' inclination to purchase from a particular online store in the future and willingness to recommend it to other persons. Additionally, it has been described as consumers' decision to perform a particular purchase behaviour through the internet. It has also been reported that online engagement involves consumer shopping for products online [104]. A study [96] described online engagement as a consumer accessing the internet to search, select, buy and use products. A related study [76] disclosed that online is the act of buying and selling products electronically. Online consumer engagement has also been classified as online brand communities for specific and interactive experiences between consumers and the brand [72].

Noticeably, studies revealed that an appropriate online customer engagement strategy in the context of social media platforms such as Facebook and Instagram [121] has personality traits including extraversion, openness to experiences and altruism related to online consumer engagement [72]. Technology, hedonic and utilitarian gratifications also greatly affect the continued intention to use WeChat [30]. Research also shows that a male consumer has more edge in making an online engagement decision than a female consumer [17]. In contrast, price, convenience and product variety benefits significantly affect women's online engagement [9]. In another study, time-saving, available varieties of products and services for males and females both have the same type of behaviour towards liking and disliking factors [94]. The nature of website features, convenience, time-saving and security have been important determinants for online shoppers in Gotland [114]. Furthermore, age and attitudes show that more elderly people are reluctant to engage online. Higher education and income have little influence on online participation [106]. Regarding Chinese consumers, their age, income, education, marital status and perceived usefulness engender online engagement [34], website affects consumer online engagement [91], perceived behaviour control attitude and internet trustworthiness have a significant relationship with online engagement behaviour, as well as the normative structure and unauthorized secondary use [127]. The social network encourages online engagement even to greater impulsive consumption [8], subjective norm and perceived usefulness positively influence online engagement [60] and the risk of credit card transaction is found to be most significant towards online engagement [20]. A study posits the importance of a website to the specific segment and preferences of the individual visitor to increase their desires, and online sales [88] and electronic word of mouth (e-WOM) influences the purchase behaviour of consumers, especially online shopping behaviour [81].

Social presence theory (SPT) factors and hypothesis formulation

Social context and online consumer engagement

The concept of social context is used to predict online consumer engagement. Social context is described as social platforms that support the communal creation of knowledge and information. It is important to note that individual consumer engagement can be applied in many dimensions but also the result of the social context that drives platform choices [51]. Social context also refers to the specific setting where social interaction occurs. Thus, social context consists of specific, often unique meanings and interpretations an individual assigns within the given group. The social context of a particular setting requires that individuals understand and interpret the meaning to those setting [33]. Similar studies [10, 123] explained that social context (social environment) had been generally used to describe the types of settings in which individuals are engaged. The sort of settings occurs among groups with whom they interact and the culture in which they live. People's customs, mindsets, traditions and behaviours influence social context. In this case, the individual's learned behaviours are a form of recognition of the social context in the environment. Another study emphasizes that individual innate behaviours are used to predict how others connect and interact effectively with their environment [26]. For proper online consumer engagement, it has been suggested that a positive social context towards online engagement related to actual online consumer engagement is the recommended behaviour. From the discussion, it is hypothesized that:

H1 Social context towards online engagement has a positive significant relationship with actual online consumer engagement.

Interactivity and online consumer engagement

Studies used the interactivity concept to predict consumer engagement from a different angle [50, 84, 105]. Interactivity has been classified as a consumer's approach to participating in various dimensions of communication between two or more parties. Interactivity in the online platform is crucial to consumers' engagement in various activities to reach their respective goals [35]. Accordingly, [93] interactivity has been viewed as a crucial concept for evaluating social communication. The interactivity terminology has been used to describe new media's ability, such as computer talkback, to react to user input. Sociology and interactivity concepts are considered as a mutual relation that occurs among groups of persons who perceive each other and attempt to orient their actions

towards each other through communication. Consumers and firms use interactivity for communication purposes. They are connected through technological systems such as chatting with multiple users. Similarly, interactivity lies in its ability to exchange information, user responsibilities and control [55]. A study [18] asserts that interactivity is seen as a key element of contemporary digital media and communication and an essential communicative formation that enhances understanding of the relationship between identity and digital media. Baños-Moreno et al. [12] claim that interacting has been a complex concept that manifests in various forms. Interactivity was first associated with face-to-face conversation, but recently, it has been based on technologies, particularly internet usage, that mediates communication through cyber interactivity. The scholars further suggest that interactivity constitutes the degree to which a communication technology can create a mediated environment in which participants can communicate and participate in the reciprocal message exchange. According to another view, interactivity serves as a determinant of telepresence, the extent to which users can modify the form of content of the mediated environment in real time [50]. This current study proposes that a positive interactivity towards online engagement, related to actual online consumer engagement, is the recommended behaviour. From the discussion, it is hypothesized that:

H2 Interactivity towards online engagement has a positive significant relationship with actual online consumer engagement.

Online communication and online consumer engagement

Scholars have recognized and paid substantial attention to the application of online communication in different areas [69, 122]. Online communication is the type of communication among individuals using the internet. This involves sending a message, sharing information, making virtual conversations, transferring money, connecting with someone and many others through digital tools [110]. Online communication relates to mechanisms such as chat and thread discussion through a web-based collaborative environment. Online communication promotes social interaction and collaboration [102, 109]. Also, social networking site operators motivate users on online communication to revisit a social networking site by developing a long-term relationship to enhance market control and competitiveness [62]. In a related study, firm professionals have encouraged consumers to engage with each other by initiating online communication. It leads to information acquirement and exchanges of online communication between buyers and

sellers which has been found to be an important element in customers' buying decisions [67]. Additionally, the introduction of the internet serves as a new platform for individuals and organizations to communicate through media technology, including email, online fora, social networking systems and internet-based systems [97]. The study further posits that online communication has been crucial for getting consumers interested enough to stay on the web page [63]. Suppose consumers consider online communication as a platform to acquire information, then they will consider engaging in actual online consumer consumption essential, thus making it a recommended behaviour. Hence, in this study, it is hypothesized that:

H3 Online communication towards online engagement has a positive significant relationship with actual online consumer engagement.

Privacy and online consumer engagement

It has been established that consumer privacy concerns are not new. This is because consumers have been disturbed for decades about the way business operators use their data. Most importantly, the consumer privacy issue has increased, as the number of consumers with greater access to the internet's information resources grows exponentially. Thus, protecting the consumer's privacy on the internet is a crucial issue. It is observed that online operators are concerned about the way privacy is handled in the information age. Among the crucial issues about privacy is the security concern, which is one reason that deters Web users from buying over the Web. Thus, the consumer's reluctance to engage on the internet, which is a barrier to online shopping, is relatively high [112]. Similarly, the protection of privacy cannot be separated from technological development. Lately, due to the advancement of science and technology, the possibility of intruding into a person's privacy has increased [68]. Privacy concerns regarding collecting, storing and using personal information have been considered a normative concept deeply rooted in philosophical, legal, sociological, political and economic tradition. Privacy is the right to be let alone and is an essential component of the right to one's personality. This notwithstanding, most firms have adopted technical safeguards to address growing data privacy risks. The understanding of using these technical safeguards is to protect individual consumer privacy with legal and social norms [79]. The study also suggests that privacy is an intangible apprehension of an individual property. It is an individual right to keep personal information and matters secret and has control over the information. Consumers are more concerned

about information privacy due to their engagement with and the growing trends of adopting new technologies. Firms must see privacy concerns consumers raise as a significant issue in the context of the information storing, analysing, sharing and maintaining computer-based information systems [95]. From the discussion, it is reasonable to presume that privacy is another pertinent factor in acquiring actual online consumer engagement. Hence, it is hypothesized that:

H4 Privacy towards online engagement has a positive significant relationship with actual online consumer engagement.

Mediator: online communication, social gratification and online consumer engagement

The concept of social gratification has been generally associated with the gratification internet users obtain from chatting and interacting with a group of persons as an outcome of internet availability. Thus, social gratification starts from interactivity with other identified individuals through media. The said interactivity constitutes the level at which consumers can swap information with each other on the media platform. For instance, Instagram provides the option of following to keep connections with each other. The ability of a consumer to stay connected brings social gratification by satisfying the need for social interaction. The online media type with a high level of connection is more likely to satisfy and retain consumers. Internet users choose many media to satisfy their communication, information, escapism, companionship or entertainment needs [11]. In a related study, customers and businesses are connected by a plethora of devices on a real-time basis. Customers are becoming more connected and familiar with mobile app use [41]. Subsequently, the use of social media has become a favourite pastime for most consumers. Most importantly, consumers use media because they derive specific gratification from media consumption. The concept of media refers to both the traditional and the internet, which allows the creation and sharing of information through virtual communities and social networking sites. Social networking sites are applications based on the web that permit individuals to build a public and connect with other users. Audiences find diverse gratifications by selecting media and its content, particularly satisfaction with information needs, social interaction and entertainment [64]. It may be concluded that social gratification facilitates the relationship between online engagement and actual online consumer engagement. From the discussion, it is hypothesized that:

H5 Social gratification mediates the positive significant relationship between online communication and online consumer engagement.

Moderator: technology gratification interacts on online communication and online consumer engagement

Online websites, as a technology tool that is easy to use, have been one of the most crucial factors in consumers' activities. Technology enables consumers to access what they want with the click of a button. Consumers derive technology gratification from the suitable and convenient atmosphere engendered by a system. For instance, YouTube gratification is associated with the benefits of the mobile and innovations drive [11]. A study established that social media, such as Facebook, WhatsApp, WeChat, YouTube, Line, Instagram, LinkedIn and Google Plw, have changed how consumers communicate through these innovative platforms. The use of these platforms, to a larger extent, provides gratification to consumers [43]. Also, Facebook is about having fun and understanding the social activities occurring in one's social networks. Furthermore, instant messaging is geared more towards relationship maintenance and development [92]. Additionally, internet use has become impossible to ignore as its use rises daily. It is the best system for acquiring information, communication, entertainment and shopping. Across cultures, internet application is growing and accessibility is also increasing as the years pass. The internet has become an essential part of the consumers' survival. The diversity of internet usage has driven the consumer gratification through different uses [32]. Hence, it is presumed that a consumer will consider technology gratification as a reason to involve in actual online activities for buying decisions. As a result, it is hypothesized that:

H6 Technology gratification moderates on the positive significant relationship between online communication and online consumer engagement.

Research conceptual model

The study model is developed based on social presence theory factors which have been identified and are expected to influence online consumer engagement. The model establishes specific direct variables (i.e. social context, online communication, interactivity, privacy) and indirect variables (social gratification and technological gratification) as an indicative set of responses. Further, the conceptual model provides the current practices of online consumer engagement that focus on different consumer personal experiences.

Methodology

Data collection

The study employed an explanatory research design to investigate the social presence theory factors, as well as social gratification (mediator) and technology gratification (moderator) as determinants of online consumer engagement in emerging markets. This is so because the study predicted relationships and its theory testing [5, 71, 75]. The study used these social presence theory factors as depicted in the conceptual model to examine whether they related to online consumer engagement, with the help of the intervening variables. These explained individual behaviours were selected based on the personal experience of consumers with the desire to adopt online platforms for consumption purposes. Data were collected using a standardized Qualtrics online survey. The link to the Qualtrics survey was sent via emails and social media (WhatsApp), inviting respondents to participate in the study using a convenience sampling approach from respondents in Ghana. The cities in Ghana demonstrate significant differences in internet connectivity and their urbanized cross-culture, such as retailing engagement and consumer attitude [82]. Thus, it was important that the sample represented the cross-cultural nature of the population. The study set a minimum age of 18 years for respondents who were active internet users [16]. A total of 592 questionnaires were collected. Only fully completed questionnaires were included in the analysis. After data screening, 443 valid questionnaires were retained, having rejected invalid and incomplete questionnaires [25, 89].

Instrument and measures

Existing measurement scales drawn from the literature were used to evaluate the research variables. The scale items for social presence theory factors (IVs) and online consumer engagement (DV) were adapted to suit the context of this study. The scales for privacy were taken from [54, 111], social context and online communication [61, 65], interactivity [12, 105], online consumer engagement [84], social gratification [30] and technology gratification [30] to enable measure the constructs in the hypothesized model in Fig. 1 [32, 109]. All items were measured using a five-point Likert-type scale anchored between 1—strongly disagree and 5—strongly agree. Respondents were asked to rate their responses on each social presence theory factors and the intervening variables [6, 49].

Data analysis

The data collected were analysed using SPSS v24 and AMOS v24. A descriptive analysis and covariance-based

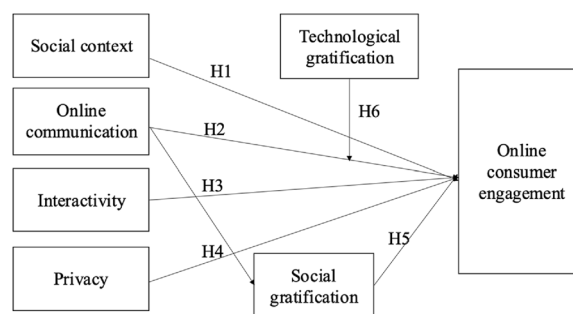


Fig. 1 Proposed conceptual model

structural equation modelling (CB-SEM) were carried out by testing the proposed theoretical relationships [75]. The two-step approach to SEM was used: the measurement model and path analysis/structural model. More specifically, the SPSS v24 was used to analyse the demographic characteristics of respondents. The study further tested for direct pathways of the hypothesized relationships (H1–H4), mediation (indirect) of social gratification (H5) and moderation of technology gratification (H6) [71, 80, 129].

Analysis and results

Characteristics of respondents

Table 1 shows the demographic characteristics of respondents. The results show that 154 (38.9%) respondents were males and 242 (61.1%) females. The ages of respondents were from 18 to 24 years 52 (13.1%), 25–31 years 138 (34.8%), 32–38 years 131 (33.1%), 39–45 years 52 (13.1%) and 46 and above years 23 (5.8%). Regarding marital status, 218 (55.1%) were single, 164 (41.4%) were married and 14 (3.5%) were separated/divorced. Concerning education level, 19 (4.8%) had master’s degree, 170 (42.9%) were first-degree graduates, 175 (44.2%) were diploma graduates, 24 (5.1%) had professional qualifications and 8 (2.0%) had other forms of educational qualification. The analysis of employment status revealed that 127 (32.1%) were employed in the public sector, 123 (31.1%) were employed in the private sector, 44 (11.1%) were unemployed but looking for work, 78 (19.7%) were students and 24 (6.1%) were others.

Exploratory factor analysis (EFA)

Before carrying out SEM, performing exploratory factor analysis (EFA) is considered relevant to comprehend the factors’ underlying primary relationship and examine the construct validity with principal axis factoring (PAF) and varimax. A major reason for this analysis is to test whether there was sampling adequacy to conduct the SEM. Based on this, Kaiser–Meyer–Olkin (KMO)

Table 1 Characteristics of respondents

| Respondents | Frequency | Per cent |
|--------------------------------|------------|------------|
| <i>Gender</i> | | |
| Male | 201 | 45.4 |
| Female | 242 | 54.6 |
| <i>Age</i> | | |
| 18–24 | 86 | 19.4 |
| 25–31 | 151 | 34.1 |
| 32–38 | 131 | 29.6 |
| 39–45 | 52 | 11.7 |
| 46 and above | 23 | 5.2 |
| <i>Marital status</i> | | |
| Single | 265 | 59.8 |
| Married | 164 | 37.0 |
| Separated/divorced | 14 | 3.2 |
| <i>Education</i> | | |
| Masters | 19 | 4.3 |
| Bachelor/bachelor technology | 175 | 39.5 |
| Diploma/HND | 195 | 44.0 |
| Professional | 27 | 6.1 |
| Other | 27 | 6.1 |
| <i>Employment</i> | | |
| Employed, in public sector | 132 | 29.8 |
| Employed, in private sector | 137 | 30.9 |
| Not employed, looking for work | 53 | 12.0 |
| Student | 91 | 20.5 |
| Other | 30 | 6.8 |
| Total | 443 | 100 |

test was used to measure sampling adequacy (MSA). The MSA was 0.972, the Bartlett test of sphericity was 1344.821 and with a significance of $0.000 < 0.05$, the KMO values exceeded the recommended cut-off value of 0.60–0.70 [80, 107, 108].

Measurement model estimation process

The data were analysed using the two structural equation modelling (SEM) steps with Analysis of Moment Structures (AMOS v24). The study carried out the confirmatory factor analysis for all the measurement scale items for the measurement model (see Table 2, Fig. 2). Also, construct validity measures were assessed, which consist of composite reliability, convergent validity and discriminant validity (HTM). For convergence to be achieved, the standardized threshold for composite reliability should be 0.70 and ≥ 0.60 [37], and the average variance extracted (AVE) standardized value should be greater than 0.50. It has also been recommended that when values are marginally below the standardized threshold, it is acceptable to use them based on shared variance on testing system model fit [28]. Accordingly, whenever

the thresholds are slightly below 0.50, and the model fit well, then even items with low composite reliability (CR) and average variance extracted (AVE), in the data set can work well because measurement error terms were already taken into account. Thus, the basis of any validity issues is the fit of the model supporting the structure of the factor model [28, 58]. In addition, goodness-of-fit indicators of the measurement model indices were assessed, that is, Chi-square (χ^2/df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), standard root mean residual (SRMR), normal fit index (NFI), Tucker–Lewis index (TLI), comparative fit index (CFI) and the root mean squares error of approximation (RMSEA). The cut-off points for the goodness-of-fit indices are $\chi^2/df \leq 3$ [36, 38]; $GFI > 0.90$ [22]; $AGFI > 0.80$ [70]; $SRMR < 0.08$ [44]; $NFI > 0.90$ [44]; $TLI > 0.90$ [39]; $CFI > 0.90$ [39]; $IFI > 0.90$ [74]; and $RMSEA \leq 0.08$ [44]. The reason for these indices was to check the sample discrepancy and measures based on the population discrepancy of the study. Most importantly, all the recommended indices were higher than the recommended thresholds. On the whole, the model fit of the results shows a significant level (see Tables 2, 3) [53, 80, 99] (see Fig. 2).

As noted [40], it is insufficient to measure discriminant validity using AVE, MSV or MaxR(H) square roots, predominantly when indicator loadings vary slightly. As a result, the heterotrait–monotrait ratio (HTMT) (Table 4) was developed. Discriminant validity fails when the HTMT value exceeds 0.9 or a value greater than 1. Although interactivity and privacy are nearly indistinguishable and similar results were obtained for privacy and online communication, they are all within the acceptable range. Table 4 shows values within the acceptable criteria, indicating discriminant validity.

Structural model

The study assessed direct relationship paths and described them. Also, the results obtained from the indirect relationship path are presented in Table 6. The study used the mediation procedure by Zhao et al. [129]. Hence, moderating mechanism of interaction effect applied steps by Memon et al. [73].

Paths analysis: direct hypothesis results

After the assessment of the measurement model, the study proceeded to analyse the paths/structural model. The direct paths analysis (H1, H2, H3, H4) represents the effect of independent (IVs) constructs/variables (exogenous) (i.e. social context, online communication, interactivity, privacy) towards the dependent variable (DV) (endogenous) (online consumer engagement) of the study theory model.

Table 2 Confirmatory factor analysis of measurement model

| Constructs and scale items | Item code | Factor loading | CR | AVE | Cronbach's alpha |
|--|-----------|----------------|-------|-------|------------------|
| Social context [64] | | | | | |
| Having familiarity with the social media site is essential | SCT1 | 0.902 | 0.964 | 0.844 | 0.964 |
| I do not have trust issues with the social media site I visit | SCT2 | 0.884 | | | |
| I visit social media platforms to engage in fun activities | SCT3 | 0.95 | | | |
| I have developed key interest in the social media site I visit | SCT4 | 0.936 | | | |
| The information required to access online activities is not complex | SCT5 | 0.919 | | | |
| Interactivity [12, 105] | | | | | |
| It is possible to communicate with the digital salesperson | ITV1 | 0.915 | 0.966 | 0.851 | 0.966 |
| The information posted on the digital platform received a swift response | ITV2 | 0.928 | | | |
| You can comment on the information shared on the platform | ITV3 | 0.932 | | | |
| You can be allowed to vote on the new product | ITV4 | 0.923 | | | |
| Users can make modifications to the previous post | ITV5 | 0.914 | | | |
| Privacy [54, 111] | | | | | |
| I am comfortable with a website that does not share information with the third party | PRV1 | 0.912 | 0.967 | 0.855 | 0.967 |
| I am comfortable with the website that provides safety measures to consumers | PRV2 | 0.922 | | | |
| I am keen to the websites that do not entertain fraudulent activities | PRV3 | 0.934 | | | |
| The site that treats private data as such is a paramount | PRV4 | 0.919 | | | |
| The site should be made to visit without fear of loss | PRV5 | 0.936 | | | |
| Online communication [64, 65] | | | | | |
| It does not require a particular skill to engage in online activities | ONC1 | 0.906 | 0.969 | 0.862 | 0.968 |
| It brings unique feelings when getting to the site of my choice | ONC2 | 0.927 | | | |
| I get attention from the recipient of the site I visit | ONC3 | 0.933 | | | |
| There are brand professionals that support in site discussions | ONC4 | 0.945 | | | |
| One can easily express him/herself freely without fear or favour | ONC5 | 0.931 | | | |
| Technology gratification [30] | | | | | |
| I like WhatsApp because I can make a buying decision | TCG1 | 0.831 | 0.936 | 0.744 | 0.934 |
| I like YouTube because I can watch videos about how the product works | TCG2 | 0.888 | | | |
| Instagram provide me required and current fashion products desire | TCG3 | 0.881 | | | |
| Facebook is among the easiest platform to communicate effectively | TCG4 | 0.9 | | | |
| I like LinkedIn because it helps build a social network with others | TCG5 | 0.81 | | | |
| Social gratification [30] | | | | | |
| I get what I want from online platforms, such as information seeking | SCG1 | 0.887 | 0.959 | 0.823 | 0.958 |
| Using online platforms enhances my status and image | SCG2 | 0.923 | | | |
| I feel sociable and fashionable on the online platforms | SCG3 | 0.923 | | | |
| The online platforms have made me build relationships with others | SCG4 | 0.912 | | | |
| I have built social network leading to personal achievement | SCG5 | 0.88 | | | |
| Online consumer Engagement [84] | | | | | |
| I use social medial platforms to make a buying decision, such as clothing, shoes, etc. | OCE1 | 0.848 | 0.942 | 0.764 | 0.942 |
| I have used social media platforms to search for fashion brands | OCE2 | 0.823 | | | |
| I use social media platforms to enable me to share my experience | OCE3 | 0.895 | | | |
| I use social media to reach my personal goals | OCE4 | 0.91 | | | |
| I recommend social media platforms used by others | OCE5 | 0.892 | | | |

$\chi^2_{df} = 2.977$; SRMR = 0.0149, GFI = 0.821, AGFI = 0.791, NFI = 0.927; IFI = 0.950, TLI = 0.945, CFI = 0.950; RMSEA = 0.067

Accordingly, Fig. 3 and Table 5 findings reveal that there is statistically insignificant relationship between social context and online consumer engagement with

a regression estimate of 0.033, standard error (S.E.) of 0.028 and critical ratio (CR) of 1.169 at $p = 0.242$, $p > 0.05$ threshold (H1). This is based on the prediction and the

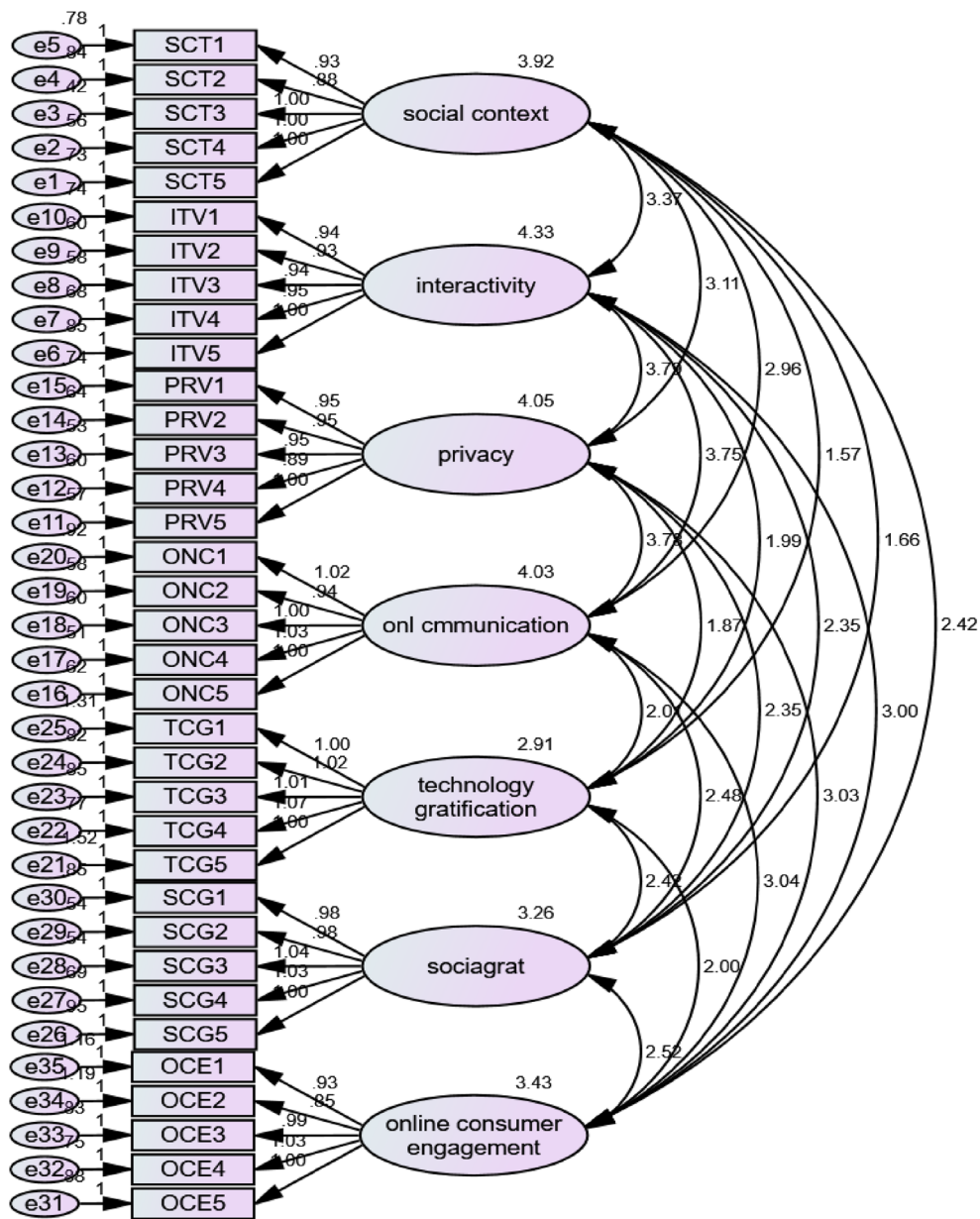


Fig. 2 Measurement model

set of confidence level of 95%. The results suggest that social context does not have any relationship towards consumers’ participation in online engagement practices.

The relationship between online communication and online consumer engagement was statistically significant with a regression estimate of 0.359, S.E. of 0.030 and CR of 11.978 at $p=0.000$, $p \leq 0.05$ threshold (H2). This is based on the prediction and the set of confidence level of 95%. The finding suggests that online communication can influence consumer behaviour with the experience and desire to participate in online engagement practices.

Additionally, the relationship between interactivity and online consumer engagement was statistically significant with a regression estimate of 0.116, S.E. of 0.027 and CR of 4.350 at $p=0.000$, $p \leq 0.05$ threshold (H3). This is based on the prediction and the set of confidence level of 95%. The results indicate that the interactivity variable can significantly drive consumers participation towards online engagement practices.

Lastly, the results indicate that the relationship between privacy and online consumer engagement (H4) was statistically significant with a regression estimate of

Table 3 Goodness-of-fit indices indicators of the measurement model

| Measures | Estimate | Recommended value | Interpretation |
|--------------------|---------------------------------|----------------------|----------------|
| X ² /df | 2.977(× 2 = 1604.345, df = 539) | Between 1 and 3 [38] | Excellent fit |
| GFI | 0.821 | > 0.90 [22] | Acceptable fit |
| AGFI | 0.791 | > 0.80 [70] | Acceptable fit |
| SRMR | 0.0149 | < 0.08 [44] | Acceptable fit |
| CFI | 0.95 | > 0.90 [39] | Excellent fit |
| TLI | 0.945 | > 0.90 [39] | Excellent fit |
| IFI | 0.95 | > 0.90 [74] | Excellent fit |
| NFI | 0.927 | > 0.90 [44] | Good fit |
| RMSEA | 0.067 | < 0.06 [44] | Excellent fit |

GFI goodness-of-fit index, AGFI adjusted goodness-of-fit index, CFI comparative fit index, TLI Tucker–Lewis index, IFI incremental for index, RMSEA root mean square error of approximation, NFI normal fit index, SRMR standard root mean residual

0.297, S.E. of 0.029 and CR of 10.123 at $p = 0.000$, $p \leq 0.05$ threshold. This is based on the prediction and the set of confidence level of 95%. The finding suggests that privacy can influence consumer behaviour with the experience and desire to participate in online engagement practices.

Mediation analysis: indirect hypothesis results

This study assessed the second part of the theoretical model. Accordingly, Zhao et al. [129] proposed the indirect effect, as presented in Fig. 4, is an independent variable’s effect on the dependent variable through the mediating variable. A study suggests that the indirect effects between the construct/variable may be determined by measuring the mediating effects. This study focuses on the significance of the indirect effect to ascertain whether or not there is a mediating effect of social gratification as specified in hypothesis H5. From the indirect (mediation) effects for the hypothesized path as presented in Table 6, the results show that social gratification has a statistically significant indirect relationship

between online communication and online consumer engagement with an estimate of 0.934, standard error (SE) of 0.033 at $p = 0.000$, with p less than the 0.05 threshold. This is based on the prediction and the set of confidence level of 95%. The results revealed that social gratification indirectly affected consumers’ desire to participate in online engagement practices.

Moderation analysis

The main approach of moderation evaluation is to measure the variation effect of the independent variable on the dependent variable as a result of the moderator [73]. This study hypothesized technology gratification on the relationship between online communication and online consumer engagement. Figure 5 and Table 7 results indicate that the regression weight for technology gratification in prediction has a significant effect on online consumer engagement of critical ratio (t) = 13.308 at $p = 0.000$, $P \leq 0.05$. Thus, the interaction effect of technology gratification in the prediction of online communication and online consumer engagement is statistically significant. The interaction effect reported here suggests that individual dimensions of technology gratification largely enhanced the desire of the consumer to engage in online activities.

Discussion

This study applies the social presence theory to predict online consumer engagement in emerging markets like Ghana. The study was conceptualized in a framework that derives from social psychology to find the role of SPT factors in online consumer engagement, given that consumers’ ability shapes their actions, interest and behaviours regarding social interactions. The current study is in reaction to [1, 4, 14, 85] concerns by addressing a socio behavioural approach to the consumer experience and readiness in emerging markets to consider the changing needs and desires of buying from virtual markets. This study can provide a better understanding

Table 4 Discriminant validity of heterotrait–monotrait ratio (HTMT)

| | Social context | Interactivity | Privacy | Online communication | Technology gratification | Social gratification | Online consumer engagement |
|----------------------------|----------------|---------------|---------|----------------------|--------------------------|----------------------|----------------------------|
| Social context | | | | | | | |
| Interactivity | 0.817 | | | | | | |
| Privacy | 0.778 | 0.905 | | | | | |
| Online communication | 0.744 | 0.900 | 0.938 | | | | |
| Technology gratification | 0.466 | 0.568 | 0.551 | 0.591 | | | |
| Social gratification | 0.464 | 0.630 | 0.651 | 0.687 | 0.791 | | |
| Online consumer engagement | 0.657 | 0.770 | 0.810 | 0.814 | 0.640 | 0.753 | |

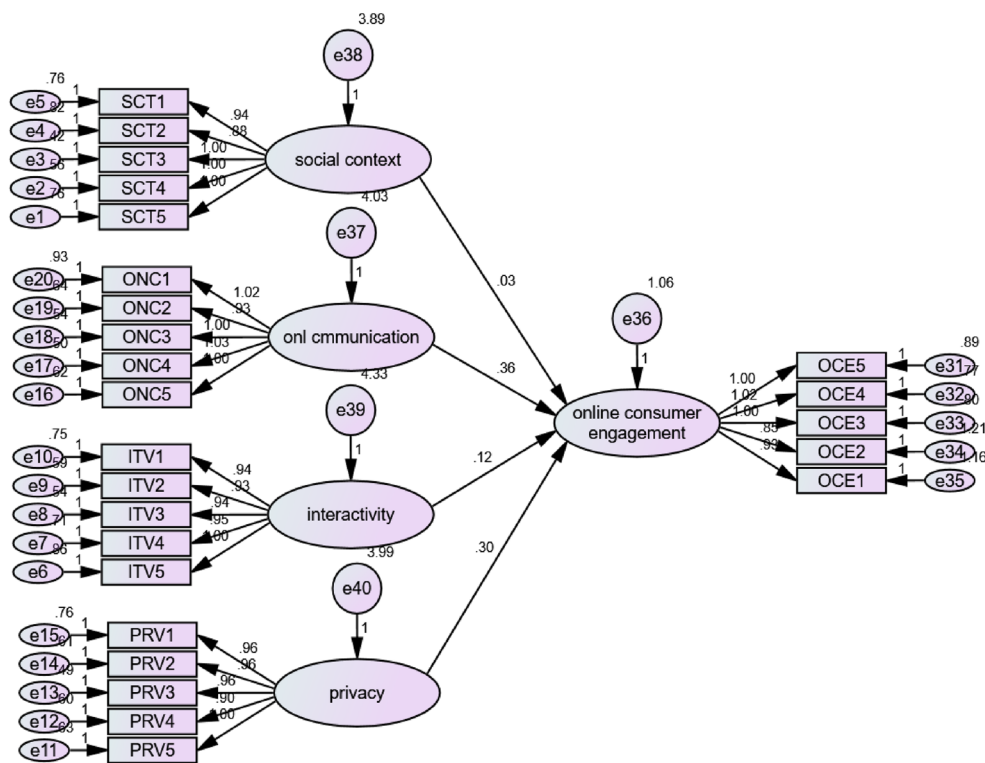


Fig. 3 Direct structural model pathways—analysis of hypothesized results

Table 5 Analysis of hypothesized structural paths

| Relationships | Estimate | S.E | C.R | 95% Confidence interval for β | P |
|---|----------|-------|--------|-------------------------------------|-------|
| Social context → Online consumer engagement | 0.033 | 0.028 | 1.169 | 0.242 | 0.000 |
| Online communication → Online consumer engagement | 0.359 | 0.030 | 11.978 | 0.000 | 0.000 |
| Interactivity → Online consumer engagement | 0.116 | 0.027 | 4.350 | 0.000 | 0.000 |
| Privacy → Online consumer engagement | 0.297 | 0.029 | 10.123 | 0.000 | 0.000 |

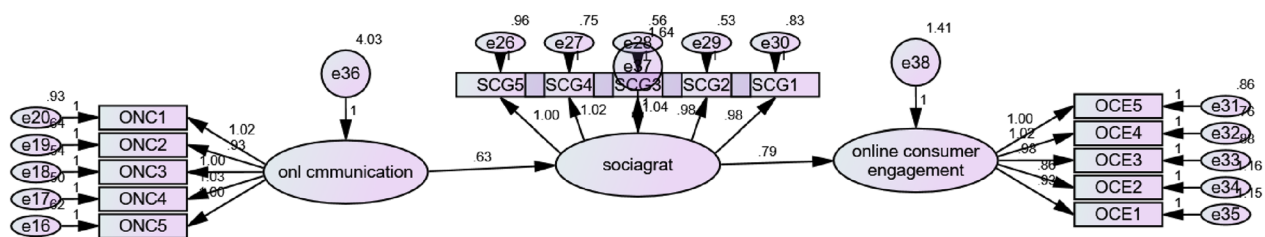


Fig. 4 Mediation (indirect) analysis of hypothesized results

of online engagement and contribute uniquely to the literature in digital consumer social behaviour engagement. The findings, whether supported or rejected, provide the essential role of the SPT factors (social context,

interactivity, online communication and privacy) in engendering consumer behaviour towards online engagement in emerging markets. Additionally, the mediating effects of social gratification in the relationship between

Table 6 Mediation results

| Relationship | 95% Confidence Interval for β | | |
|--|-------------------------------------|-------|-------|
| | Estimate | SE | P |
| Online communication → Social gratification → Online consumer engagement | 0.633 | 0.038 | 0.000 |

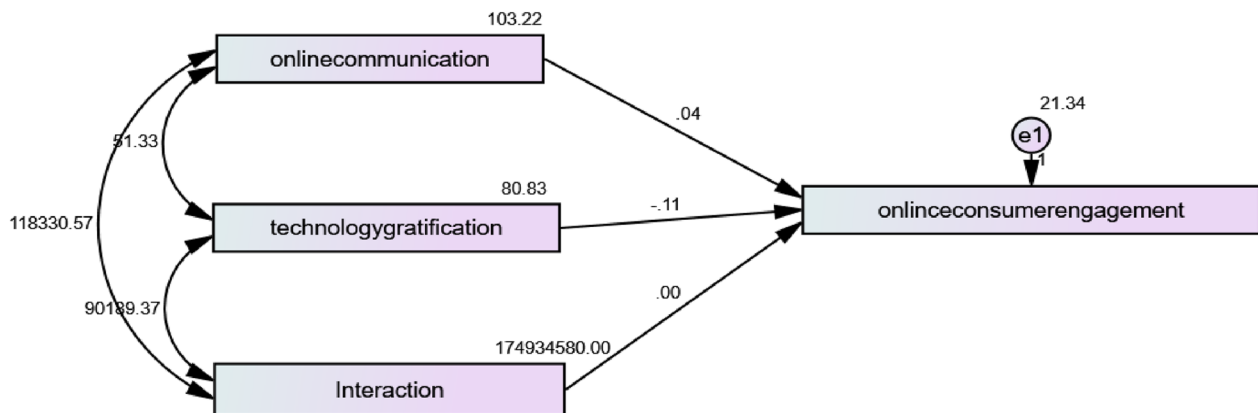


Fig. 5 Moderation analysis hypothesized results

Table 7 Moderating results

| Relationships | Estimate | SE | 95% Confidence Interval for β | |
|--|----------|-------|-------------------------------------|-------|
| | | | CR | P |
| Online communication → Online communication engagement | 0.035 | 0.049 | 0.727 | 0.467 |
| Technology gratification → Online consumer engagement | -0.114 | 0.040 | -2.851 | 0.004 |
| Interaction → Online communication engagement | 0.001 | 0.000 | 13.308 | 0.000 |

online communication and online consumer engagement add an interesting dimension to the better understanding of emerging markets using social media. Furthermore, the moderating effects of technology gratification on the online communication and its relationship with online consumer engagement make crucial contributions towards emerging markets.

The results suggested that the conceptualized relationship between social context and actual online consumer engagement did not have a statistically significant effect towards consumer behaviour having the experience and readiness to use online to buy products. This means consumers in emerging markets like Ghana do not show commitment to online engagement based on social context. Despite this outcome, there is an underlying potential to change the mindset of consumers by stimulating knowledge and information to access products virtually. The contention of social context not associating with consumer online buying could be a divergent

conceptualization attributed to the usefulness of websites, type of website setting and/or lack of knowledge as well as information, as the existing literature established [10, 34, 123].

Aside from this, the conceptualized relationship between online communication and actual online consumer engagement was found to have a statistically significant effect of consumer online buying behaviour in the emerging markets. The study informs that consumers highly consider this sub-type of SPT as part of engaging in online consumption. Awareness towards online engagement in emerging markets should be employed to generate more interest among the youth. In line with [62, 63, 67, 110], consumers consider using online platforms to transfer money, carry on virtual conversations, stay longer on the interested web page and develop long-term relationships to enhance market control and competitiveness, where buying and selling occur. Therefore, this finding confirms the view that online communication is

essential to the behaviour of consumers who engage in online buying. This significantly provides emerging markets with opportunities and value.

The interactivity sub-type of SPT was found to have a statistically significant relationship with online consumer engagement in emerging markets. This finding aligns with existing literature where interactivity is viewed as a crucial concept for evaluating social media communication [93]. It is also noted as a key element of contemporary digital media and communication and an essential communicative formation that enhances understanding of the relationship between identity and digital media [18]. The digital marketing practitioners should see this result as an opportunity in emerging markets to engage consumers using various interactive platforms to drive consumer digital behaviour, such as Facebook and Instagram [121].

Privacy was another dominant SPT factor of consumer online engagement that emerged statistically significant from the analysis. The study confirms that this sub-type of SPT has a high potential to negatively affect consumers online engagement in emerging markets. The finding of this study supports this claim and maintains that consumers in emerging markets consider privacy to be a key component that drives online engagement. Thus, privacy should be a critical concern to firms who sell online with respect to information storage, sharing and maintaining computer-based information systems [95] and use of technical safeguards to protect individual consumer privacy in relation to the legal and social norms [79].

Evaluation of the mediation effects of social gratification on online communication and its relationship with online consumer engagement in the emerging market has a significant indirect effect. In line with [30, 64], consumers consider social gratification when selecting media and its content, particularly, satisfaction with information needs, social interaction and entertainment. Consumers also view social gratification as satisfying the need for social interaction. Thus, consumers become more socially gratified with a high level of connection of online media type for consumption [11, 30]. This finding confirms the assertion that the social gratification effect significantly enhances their personal online engagement satisfaction levels.

Examination of the moderation effects of technology gratification and its relationship with consumer online engagement has a significant interaction effect. This is in line with [11, 30, 79], which assert that consumers gain and achieve technology gratification based on the suitable and better systems in place. The use of these systems or platforms (Facebook, WhatsApp, WeChat, YouTube, Line, Instagram, LinkedIn and Google Plw), to a large extent, provides gratification to consumers. Furthermore,

the benefits accrued to consumers from the various platforms enhance their experience of continued usage. This finding supports the notion that consumers enjoy engaging in online activities when systems provide quick and reliable personal values.

Conclusion

The study evaluated social presence theory factors to predict online consumer engagement in emerging markets. More specifically, it assessed the relationship between social context, interactivity, online communication, privacy and online consumer engagement in emerging markets. A further examination of social gratification has been presented. Additionally, an investigation of technology gratification has been presented. The study's findings have indicated how online communication, interactivity and privacy are related to online consumer engagement in emerging markets. Conversely, the results also revealed how social context related to online consumer engagement. In addition, the results indicated how social gratification plays a mediating role in the relationship between online communication and online consumer engagement. The results further revealed how technology gratification plays moderating a role between online communication and online consumer engagement.

The current study's findings show that the consumer's experience and desire to participate in an online engagement is influenced by online communication, interactivity, privacy, social gratification and technology gratification. It has been reinforced that the individual consumer desire can stimulate adoption and increase in the use of online platforms for business engagement in Ghana. These are the ways to cater to both potential and current users to adopt and continue with online engagements. This research is crucial, as the government and business executives need to create the desire for consumers to adopt online platforms. Such a unique proposition approach will create excitement within the macro-level and meso-level of buyers' perspective.

Implications of findings

This study unearthed some useful contributions with respect to the field of digital consumer social behaviour. The specific contributions made by this study include:

From the theory perspective, the findings have shown how the current study contributes to the growing body of knowledge on the use of social presence theory in the consumer online engagement literature from the social behavioural dimensions. The study employed social presence theory factors to explain how consumer experience and desire behaviour and the intervening variables of social gratification and technology gratification related to the online consumer engagement. More specifically,

social presence theory was applied to test consumers' and potential consumers' experiences with intervening variables towards online consumer engagement. Also, the social presence theory facilitates the need to highlight how outlined factors which serve as social behaviour were conceptualized in different consumer experience ways by proving that the development of online platforms plays an important role in fulfilling online consumer programmes in emerging markets. Further, this study broadly advanced the course of literature, extending from the contextualization of developing and developed markets.

Regarding practical implications, the results of this study offer insights for brand and marketing practitioners on how to approach online consumer engagement to stimulate desired consumer experiences in emerging markets like Ghana. Also, the findings of this study call for business executives and marketing practitioners to aspire to develop better strategy and skill to enhance the consumers' desire to adopt online buying. This can only be realized when particularly marketing practitioners are prepared for the paradigm shift. It is the key to success in the online transformation. Hence, government, business executives and marketing practitioners must collaborate with digital service providers to ensure that users can access their online exchanges in easier, more convenient, more enjoyable and cost-effective ways on the various online platforms.

Limitations and future research

Although this study has some limitations, it offers significant new insight into digital consumer social behaviour. This study used SPT factors with intervening variables on online consumer engagement in emerging markets. This study employed a convenience sampling approach to select the respondents in Ghana. This sampling method makes it difficult to generalize the study's findings to other emerging markets. While this study mainly focused on adopting and using online engagement, future research should consider cultural space as a mediator in the relationship between online communication and online consumer engagement. Future research can employ an explanatory design but should focus on the youthful respondents, emphasizing a specific social media platform. Despite differences in demographic data such as gender, age, marital status, education and employment, the sample represents Ghana's users and potential user categories. Furthermore, future research should consider gender (male and female) as a moderator when predicting the relationship between online communication and online consumer engagement. Further investigation is urged to assist explain the non-significant direct association shown in this study, which is more essential in the light of the non-significant

relationship between social context and online consumer engagement. Lastly, this study used SPT and other gratification variables to reflect online consumer engagement. Future studies should attempt to introduce gratification theory to complement SPT as the main theory to examine online engagement in emerging markets.

Abbreviations

| | |
|-----|----------------------------|
| STP | Social presence theory |
| SCT | Social context |
| ITV | Interactivity |
| PRV | Privacy |
| ONC | Online communication |
| SG | Social gratification |
| TG | Technology gratification |
| OCE | Online consumer engagement |

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Author contributions

AY was involved in writing—conceptualization, original draft, data curation, methodology and formal analysis and interpreted the data of social presence theory regarding the online consumer engagement. OA was involved in conceptualization, supervision, software, data curation and review and editing. VO-P was involved in writing—review and editing, supervision and conceptualization. KBP was involved in supervision and conceptualization, analysed the data of social presence theory regarding the online consumer engagement and contributed to validation.

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Availability of data and materials

The data sets generated and analysed during the current study are available upon request.

Declarations

Ethics approval and consent to participate

The Ethics Committee at the University of Professional Studies, Accra, reviewed and approved the research ethics application for implementation. Also, a survey statement was provided on the questionnaire to assure participants' confidentiality about their contributions towards this paper.

Consent for publication

The authors have given consent for the publication of this paper to be published in the *Future Business Journal*.

Competing interests

The authors declare that they have no competing interests or personal relationships that could influence the findings reported in this paper. Hence, the authors declare that they have no conflict of interest.

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