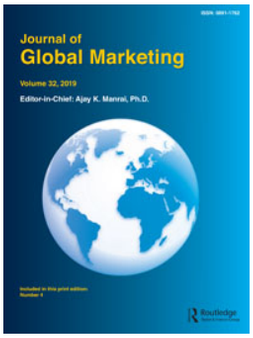

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Gender, E-Banking, and Customer Retention

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ABSTRACT

This research seeks to investigate the role of gender in the relationship between e-banking dimensions and customer retention. A measure of the key constructs was developed based on prior research. A survey approach was adopted to gather the research data. The study is guided by the social script theory. Gender plays different roles in the relationship with e-banking dimensions and customer retention. The study provides critical evidence to support the social script theory, such that gender moderates the relationships between convenience, website design and customer retention. The study aids managers of banks to recognize e-banking components that are not affected by gender and those that are ingrained. This has implications for e-banking segmentation strategies and tactics. Gender issues are important to the local and national economies, and also the global community. The study is focused on a specific industry and thus curtails our understanding in other sectors of the economy.

KEYWORDS

Gender; e-banking; customer retention; social script theory

Introduction

Gender's role in decision making with respect to technological adoption appears to be narrowing among the consuming public, particularly with regard to decisions about using electronic banking technologies to do business. Culturally, men are more likely than women to be influenced to use these technologies. There are numerous initiatives to ensure that there is parity among consumers, no matter their gender. Technology adoption is no longer the preserve for a certain gender category. In addition, gender issues remain quite relevant in academic circles. It is not surprising that the *Journal of Global Marketing* published a special issue on gender issues in marketing and entrepreneurship in 2017. This signifies the potency of gender-related issues in the academic literature and demonstrates that they are worthy of continued research. Globally, works on the role of technology in business performance have been conducted in extant scholarly literature (Lim et al., 2017; Nysveen, Pedersen & Thorbjørnsen, 2005; Wolin, 2003). Gender as a moderating or mediating variable has been considered in prior studies (Floh & Treiblmaier, 2006; Nysveen et al., 2005; Wolin, 2003). These studies demonstrate that the area of inquiry is not new and that this current investigation is only seeking to extend knowledge by making a modest contribution to the existing body of empirical knowledge.

In contemporary times, the banking industry is global in nature. As a result, the industry faces a competitive environment; banks are forced to adopt new technologies in carrying out their operations. Thus, electronic banking may be the instigator of this new environment and the prime mover in terms of providing the potential solution for a bank's survival in the near future (Anyasi & Otubu, 2009; Kadir, Rahmani, & Masinaei, 2011a, 2011b; Musiime & Biyaki, 2010). Research has proven that electronic banking services (EBS) are the wave of future banking by providing enormous benefits to consumers in terms of ease and cost of transactions through online banking (Markku, 2012; Nsouli & Schaechter, 2002). It will be interesting to both practitioners and academics to understand how

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gender dovetails in the e-banking and customer retention relationship. Would gender moderate the relationship between e-banking dimensions and customer retention? This current study is focusing on the role of gender in the relationship between e-banking and customer retention.

The study is relevant to bank managers for their strategic planning purposes. It will inform managers about the role gender plays and what emphasis they need to place on gender in making strategic decisions with respect to e-banking. Customers of e-banking might also find the study to be useful since it reveals a certain behavior pattern in relation to gender. Though there are studies on e-banking and customer retention, research on gender roles is very inadequate. Through contributing to the body of knowledge in this area, this research adds significant value. Moreover, the study presents valuable information on the market behavior of customers in Ghana, which may be unfamiliar to many readers, particularly at the global level. The key objective of this study is to establish the moderating role of gender as a categorical variable and the association between e-banking dimensions and customer retention. Having identified the research problem and the research objective, the study is organized as follows: Following the introduction of the study is the theoretical underpinning. Next is a literature review of the major constructs of the study, followed by the methodology, the results and findings of the study. Discussions and implications follow. The conclusions, limitations, and directions for future studies are presented subsequently.

Theoretical underpinning

The theoretical underpinning of this study is the social script theory. The social script theory explains how social constructs influence socially mediated meaningful activities (Lim et al., 2017). In assessing the usage of e-banking services, according to the social script theory, social constructs can influence the user's response and evaluation by pre-defining the roles and scripts of users based on their distinct social groups (Clair, Robert, Thomé-Williams, & Lichang, 2005). It is emphasized in this theory that social behavior is scripted. Consequently, two individuals who are presented with identical stimuli will react differently to the situation because they have defined the context of that situation differently. Relating this to gender, the concept of self, significant others, social roles, social relationships, defining the context of the situation, episodic memory, and social scripts have been socially defined differently for males and females. Those differences have been present in several ways. For instance, previous research indicates that females are less satisfied than males with their online experience (Rodgers & Harris, 2003). In addition, Sanchez-Franco, Ramos, and Velicia (2009) found that females show greater risk aversion and less trust in the use of the Internet. Also, while males value their ability to post content online (convenience and reliability), females value the responsiveness of the online platform (Awad & Ragowsky, 2008; See-To & Ho, 2014).

Literature review

The process involved in reviewing the literature was through a web search of credible academic databases for scholarship which have previously investigated the subject matter.

Electronic banking

Electronic banking services are operationalized as banking services driven by information technology that enable customers to acquire a service without direct employee involvement (Yaghubi & Seyedin, 2015). Propelled by the Internet, electronic banking is referred to as online banking (Bauer, Hammerschmidt, & Falk, 2005; Floh & Treiblmaier, 2006), and it comprises the services provided by a bank to its customers over the Internet (Daniel, 1999).

Technological developments in the area of information and telecommunications technology are transforming the banking sector. Electronic banking is facing a new revolution with the development of this technology. Largely, it seems clear that the effect of electronic banking is facilitating a more economical way of exchanging information (Sohail & Shanmugham, 2003).

Comparing electronic and offline banking, the quality dimensions are not far apart (Bauer et al., 2005). Fundamentally, the quality dimensions of services and products are a key determinant of customer loyalty behaviors, such as retention (Caruana, 2002; Cronin & Taylor, 1992; Parasuraman et al., 1988). In e-banking, the quality of the electronic products and services, as well as the tools for delivery, are criticial in determining customer retention and other loyalty behaviors. These customer service quality dimensions, nonetheless, represent a useful starting point for assessing the quality of e-banking. Also to note, the quality dimension specifically related to online systems is the cognitive analysis of quality, under which a compensatory process is employed to evaluate the quality attributes of technology-based products and services (Dabholkar, 1996). Several studies have proposed differing constituents of e-banking quality dimensions. For instance, Ganguli and Roy (2011) identified e-banking quality dimensions as ease of use, reliability, security, convenience, information quality, and customer service. Jun and Cai (2001) also developed 17 dimensions of e-banking, which include diverse features/product variety, courtesy, responsiveness, reliability, competence, access, ease of use, credibility, communication, understanding the customer, esthetics, collaboration, continuous improvement, accuracy, security, content, and timeliness. Similarly, Mäenpää (2006) examined e-banking quality with seven dimensions: auxiliary features, convenience, security, status, investment, personal finances, and exploration. In another study, Joseph, McClure, and Joseph (1999) used efficiency, accessibility, convenience/accuracy, queue management, customization, and feedback/complaint management to measure the quality of e-banking. Kumbhar (2011) proposed that the dimensions of e-banking should include system availability, accuracy, e-fulfillment, efficiency, security, responsiveness, ease of use, convenience, cost-effectiveness, compensation, problem handling, and contact. Auta (2010) found security, queue management, user friendliness, time, accessibility, and fund transfer to be the most important dimensions of e-banking quality. Trust also emerged as a fundamental determinant of e-banking in a study conducted by Zhou (2012). Sohail and Shanmugham (2003) suggested accessibility, reluctance, costs, trust, security, convenience, and ease of use as the most significant dimensions of e-banking. In a similar study by Liao and Cheung (2002), convenience, user experience, user friendliness, user involvement, security, and speed emerged as the significant dimensions of e-banking. Other reliable and trusted dimensions, such as usefulness, seamlessness, gratification, irritation, etc., were not considered, as they were only reliably tested in contexts other than e-banking, most notably in online shopping (see Lim, 2013a, 2013b, 2015; Lim & Ting, 2012a, 2012b, 2014).

This study adopts only the key dimensions which are related to customer service and, at the same time, related to online systems (Jiang et al., 2016). The following are the core dimensions of e-banking adopted for this study: trust (Masoud & AbuTaqa, 2017; Sohail & Shanmugham, 2003), reliability (Jiang et al., 2016; Yaghubi & Seyedin, 2015), responsiveness (Asfaw, 2017; Ibrahim et al., 2006; Yap et al., 2010), website design (Ahmad & Al-Zu'bi, 2011; Bacinello et al., 2017), convenience (Jiang et al., 2016; Sohail & Shanmugham, 2003), and personalization (Lee & Lin, 2005; Rod et al., 2009).

Trust

For quite some time, trust has been viewed as a catalyst for buyer/seller exchanges that provide buyers with the required fulfilling trade relationship (Spekman & Carraway, 2006). For instance, Akbar and Parvez (2009) identified trust as necessary for attaining customer loyalty. It has been identified as the main issue of concern when engaging in electronic business. Trust is essential whenever there is the existence of interdependence and uncertainty (Yousafzai, Pallister, & Foxall, 2009). The connection existing between electronic banking and level of trust has not fully been clarified. However, it is one of the essential parts in most social and business relationships at whatever point doubt and risk exist (Mcknight et al., 2002). Trust has been identified as a basic factor for the achievement of electronic banking. This is due to the open and worldwide nature of different web systems as an exchange framework

where uncertainty emerges; risk in online exchanges makes trust an important component of electronic banking. The lack of direct physical contact between parties in the online transaction means that consumers cannot use physical cues, such as observing the physical office space, to judge trustworthiness (Yap et al., 2010). Findings from extant research show that trust not only activates intent to use e-banking (Liu & Wu, 2007; Suh & Han, 2002), but trust in e-banking has also been found to be an antecedent to commitment to e-banking (Kassim & Kader Mohammed Ahmed Abdulla, 2006; Vatanasombut et al., 2008). Lee et al. (2007) reported that, in online transactions, trust permits partners to rise above short-run disparities or dangers to focus on long-term benefits. This can ensure long-term patronage by customers (retention).

Moreover, Lee and Turban (2001) found that the lack of physical interaction and a physical branch provide a distinctive environment in which trust is of utmost importance. Most consumers and customers find it difficult to adopt the services of e-banking due to privacy and security concerns. Aladwani (2001) thus confirmed that trust is an essential aspect for Internet banking. Consequently, the survival of Internet banking is dependent on the ability of banks to persuade consumers and customers to make transactions online or bank electronically. Mukherjee and Nath (2003) argue that banks can build a mutual relationship with customers via trust-based collaboration procedures. In general, trust improves the consumer's beliefs about the e-retailer and the associated infrastructure, attenuating the perceived level of risk associated with the transaction process (Yousafzai et al., 2005, 2009). Trust reduces the risk involved in transacting with an e-retailer. Thus, trust in an e-banking institution reduces risk beliefs about online banking transactions with that e-banking institution.

Empirically, Ndubisi (2006) discovered that significant gender differences exist in the trust-loyalty relationship. Women are found to be significantly more loyal than men at higher levels of trust in the bank. This finding implies that gender issues are pertinent in the banks' e-service delivery and their ability to retain customers. As cited in Kim and Peterson (2017), a study including online trust and gender revealed that females exhibited lower levels of trust with respect to shopping via the Internet than males. In another study, there was no critical distinction in trust between males and females. Kivijärvi, Laukkanen, and Cruz (2007) noted that, with regards to online financial services, it is helpful to test the role of gender in trust-based research.

Reliability

Reliability is described as the ability for organizations to provide expected standards, deliver and address customers' problems, and deliver promised services at the right time. Yang and Fang (2004) mention that reliability comprises accurate processes of orders, billing, and fulfillment, which keeps the service attractive to the consumer. Nui Polatoglu, and Ekin (2001) found that the reliability dimension was an important determinant for consumers who used electronic banking. Reliability is the consistency of delivery and dependability in e-banking systems (Cox & Dale, 2001; Tih & Ennis, 2004). Online banking is considered reliable if it performs the service as promised (Tan et al., 2003), if the banking platform is available 24/7 and is in working condition (Yang, 2003; Zeithaml et al., 2000). Also, according to Liao and Cheung (2002), reliability was positively related to the use of electronic banking. They concluded that the more reliable a consumer perceived electronic banking to be, the more likely they were to use electronic banking. Inherently, reliability is an important determinant of general service quality (Parasuraman et al., 1988). It is further established that customers of electronic banking services may be especially concerned about the reliability of new service delivery options based on technology because they may envision some performance risk in that these options may not work well (Dabholkar, 1996). Reliability, performance, and dependability of e-banking systems are therefore a very important dimension of e-banking quality that can determine customer retention.

Responsiveness

Responsiveness is explained as the capacity for firms to attend to the requirements of customers on a flexible and timely basis. Mariappan (2006) mentioned that the business environment has experienced changes due to the revolution of information technology in the banking and financial institution sectors. Consequently, banks need to embrace electronic banking to deliver good service and also to decrease cost by creating value-added services for customers and consumers (Zhu, Wymer, & Chen, 2002). In the case of the responsiveness dimension, Karjaluoto et al. (2002) demonstrated that electronic banking users believed that electronic banking responded faster to their needs than other traditional modes of banking; for example, the speed of bill payment via the Internet. In addition, Nui Polatoglu and Ekin (2001) identified instant feedback, quick transactions, and easy access as important attributes in electronic banking. Furthermore, Liao and Cheung (2002) and Gerrard and Cunningham (2005) found that the transaction speed (the perceived speed of response from electronic banking) and the fast access to electronic banking accounts were important attributes for consumers who used electronic banking. The willingness to assist users by responding speedily to customers explains the responsiveness measurement (Bauer et al., 2006). Bauer et al. (2006) posited that the responsiveness measurement has appeared to impact the term of relationships with clients.

Website design

It is essential to understand the objectives of a website before they are designed. A well-designed website helps to create added value and motivates customers to repeatedly pay visits to the website. As such, firms need to create an interactive and content-rich website to attract more customers.

Udo and Marquis (2001) found that a very interactive website helps to attract and keep customers in the long run, reducing customer support cost as well as increasing revenues. In a similar vein, Nielsen (2001) reported that as electronic banking is increasing all the time, banks should therefore focus more on designing their websites for effective communication. The performance of a firm's website determines their ability to retain their customers (Cheung & Limayem, 2005; Chiu et al., 2009). Scherer et al. (2015) confirmed the positive link between website performance and customer retention. In the banking sector, Jayawardhena (2004) used e-client assessments for the quality of banking service and proposed an access model consisting of four dimensions: web interface, trust, attention, and credibility. He also found that customers placed a greater emphasis on web elements (download speed, ease of navigation, visual presentation aids, search function and efficiency). If a consumer is satisfied with a firm's website, he/she can continue his/her relationship with the website. However, the consumer might discontinue the relationship if he/she is dissatisfied with the website (Ltifi, 2018). Ladhari and Leclerc (2013) posited that there are contrasts in gender impressions of e-trust, e-loyalty, e-satisfaction, and website service quality. Lin and Sun (2009) reported that, in order to attract and retain clients, e-retailers must comprehend that the principal necessity is to provide great website quality to their clients. Clients' worries about how reliable the quality of an online channel may be influence whether they embrace an e-financial services website and how frequently they utilize it (Yousafzai et al., 2003). According to Sohail and Shanmugham (2003), good website design not only provides a direct contact between the firm and its consumers or customers, but it also provides room for innovation to take place.

Convenience

Convenience has been one of the key motives for using electronic banking. Convenience is the ability of online banking to meet users' needs using the different features availabile (Malarvizhi, 2011). Convenience focuses on resources such as time and effort required of the consumer in shopping for a product (Brown, 1990). Kaura et al. (2015) define a convenience-oriented consumer as one who seeks to accomplish a task in the shortest time with the least expenditure of human energy. Service convenience can be thought of as a means of adding value to consumers by decreasing the amount of time and effort a consumer must expend on the service

(Colwell et al., 2008). According to the Pew Center (2005), convenience provides an impulse for the usage of Internet banking among American users. Huang (2002) mentions that people will choose between traditional or electronic services based on convenience. Akbar and Parvez (2009) stress that convenience is one of the major factors to be considered when an individual wants to adopt Internet banking. It is because of this motive that banks need to make sure that their banking systems are integrated in a way to increase customers' convenience. Kerem (2002) emphasizes that banks therefore need to make sure management aspects are reviewed to ensure better convenience for customers for the success of electronic banking.

Personalization

Personalization involves customizing products and services to the needs and wants of consumers and customers. It has become one of the most important factors to consider when determining which things need to be personalized and how they should be presented (Hiltunen, Heng, & Helgesen, 2004). Mittal and Lassar (1996) defined personalization as the social content of interaction between service employees and their customers. Personalization concerns the manner in which service employees relate to customers as people–either coldly and impersonally or warmly and personally. Personalization is distinct from customization and responsiveness, both of which can be offered with a total lack of personalization. First, both can be offered by a service delivery system that need not entail any interpersonal contact; second, an interpersonal contact employee could be quite responsive, attending to customer needs promptly and dutifully but in a mechanical fashion; and third, a service employee could be warm and friendly, yet ignore task imperatives such as being responsive. Hanson (2000) highlights that a bank that provides personalized service differentiates itself from other competitors. Thus, when there is high service differentiation, it provides banks with the opportunity to compete effectively in the marketplace, become more profitable, and improve performance (Chan Kim & Mauborgne, 2005).

Tam and Ho (2006) and Xu et al. (2014) found that personalization has influenced different aspects of decision making and information processing. It was discovered that personalization in various settings increases performance expectancy (Ahmad & Al-Zu'bi, 2011; Mathew & Stone, 2003). The electronic environment enables advertisers to construct profiles of their clients (both males and females) and to build up an intelligent relationship with the goal of promoting correspondence that can be personalized, keeping in mind the end goal of addressing customers' issues and needs (Yang et al., 2014).

Customer retention

Ahmad and Buttle (2001) report that customer retention can be seen as the mirror image of customer defection, where a high retention rate has the same significance as a low defection rate. Customer retention management can be problematic if it is not defined precisely in a way appropriate to the firm's business. Bowen and Chen (2015) note that satisfying a customer is not enough, implying that banks must not only satisfy, but also exceed, customers' expectations so as to ensure customer loyalty. Increasing customer loyalty increases the odds of customer retention. According to Zineldin (2006), customer retention is a commitment to continue to do business or exchange with a particular company on an ongoing basis. Oliver (1997, p. 392) views it as a "deeply held commitment to rebuy or repatronise a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior." Motiwala (2008) defines customer retention as maintaining the existing customer base by establishing good relations with all who buy the company's products. In simple terms, it is the ability to maintain existing customers by establishing profitable and cordial relationships with them while delivering superior quality services.

The ability of banks to attract, grow, and retain customers in this competitive landscape has led to the development of certain marketing strategies. Customers can be satisfied with the services provided by a service provider, but this

satisfaction does not guarantee retention. With this in mind, banks must focus on a variety of strategies that go beyond satisfying a customer to ensuring customer retention. Concentrating on retaining customers can yield numerous benefits and, for this reason, good retention strategies that will identify barriers and deter customers from switching to a competitor must be developed (Buttle 2004; Ahmad & Buttle, 2002). Numerous researchers have indicated that increasing customer retention has a positive impact on business profits; also, a company can increase its customer retention rates by being responsive to customers' problems and ensuring that problems are addressed properly and on time. In view of this, service firms should strive to increase their customer retention rates by developing a good retention strategy and being responsive to customer needs. This will serve as a competitive advantage over competitors in the market, which is vital for business growth and profitability (Flambard-Ruaud, 2005). Richard et al. (2010) reported that women were observed to be more relationship-oriented than men. This is confirmed by women's associations online with consumers and service providers.

Conceptual model and hypotheses

The study makes an important contribution by proposing a conceptual model about electronic banking and customer retention as influenced by e-banking site usage factors such as trust, reliability, responsiveness, website design, convenience, and personalization. The model uses a moderating variablel namely, gender (see Figure 1).

Gender, e-banking dimensions, and customer retention

Gender is often identified as a key moderator in consumer behavior studies (Bendall-Lyon & Powers, 2002; Dommeyer & Gross, 2003; Lim et al., 2017). It is posited that women and men differ in their perception and evaluation of online platforms and systems. For instance, Venkatesh and Morris (2000) find gender differences in the motives for using a new software system at a workplace. The literature on gender issues in, for example, technology adoption is vast and findings suggest that women and men make decisions with respect to technology adoption differently, and consequently, respond differently to innovation efforts of companies. The results from previous studies indicate differential effects of gender on motives for using information technology. Identifying such effects is important, both for better being able to tailor technological products and marketing communication to gender segments and for better understanding the different motives underlying new technology adoption (Nysveen et al., 2005).

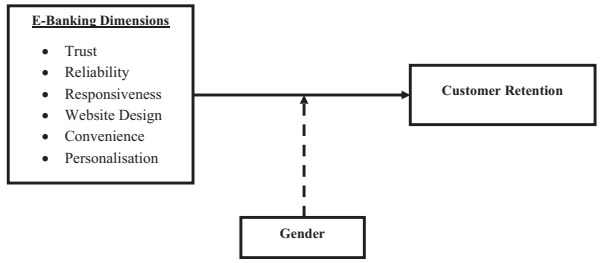

Figure 1. Conceptual framework.

Gender differences exist in the extant scholarly literature (Colley et al., 2009; Shi, Chen, & Chow, 2016). In this regard, gender differences are entrenched in a social interaction in a given culture. The social script theory highlights that men and women respond and evaluate marketing information and online platforms differently due to the different social roles and social relationships into which they have been indoctrinated. This suggests that gender differences in the results should be expected for the relationships between the dimensions of electronic banking and customer retention. As established in the extant literature reviewed, the dimensions of e-banking are expected to have a significant relationship with customer retention.

Trust, customer retention, and gender

The works of Lee et al. (2007), Ndubisi (2006), and Kim and Peterson (2017) empirically stipulate that trust plays a significant role in customer patronage of e-banking services. Specifically, Lee et al. (2007) established that trust makes customers transcend short-term problems to focus on long-term usage and benefits. Trust ensures continuous patronage of online banking systems,

even after initial setbacks and challenges, hence leading to customer retention. On gender differences in the use of e-banking with trust as a factor, Kim and Peterson (2017) observed differences between men and women. They found that women exhibited lower levels of trust with respect to shopping via the Internet than men. Similarly, Ndubisi (2006) revealed that women are found to be significantly more loyal than men at higher levels of trust in the bank. It is therefore hypothesized that:

H1: The effect of trust in electronic banking and customer retention is moderated by gender.

Reliability, customer retention, and gender

Reliability has been empirically tested as a dimension of e-banking by Dabholkar (1996), Nui Polatoglu and Ekin (2001), and Liao and Cheung (2002). They all established that reliability of an e-banking system is positively related to its use, satisfaction, and subsequent retention of customers (Sindwani & Goel, 2015). As previously mentioned, gender has been used to moderate the relationships between e-banking qualities and retention, where several authors have recognized the differences between men and women (Bendall-Lyon & Powers, 2002; Dommeyer & Gross, 2003; Lim et al., 2017). For instance, Kadir et al. (2011a) found significant differences between male respondents and female respondents in their assessment of the reliability of a bank's e-banking service. It is therefore proposed in this study that:

H2: The effect of reliability in electronic banking and customer retention is moderated by gender.

Responsiveness, customer retention, and gender

Empirically, responsiveness has been postulated as a quality dimension of e-banking by several authors. For instance, Nui Polatoglu and Ekin (2001) found that, in e-banking, instant feedback, quick transactions, and easy access were essential attributes in assessing the quality of the system. Also, studies by Liao and Cheung (2002) and Gerrard and Cunningham (2005) discovered that the perceived speed of response from electronic banking is a determinant of e-banking patronage by bank customers. Sindwani and Goel (2015) also noted that the responsiveness of the e-banking systems attracts customers, improves satisfaction, and enhances loyalty and retention. As a moderating variable, Floh and Treiblmaier (2006) discovered differences in the responses between male samples and female samples in their study on e-banking dimensions and customer loyalty. This study, therefore, proposes that:

H3: The effect of responsiveness in electronic banking and customer retention is moderated by gender.

Website design, customer retention, and gender

The design of an e-banking website is not only evidence of e-banking quality, but it is also necessary for the retention of customers. A study by Scherer et al. (2015) postulated that customers exhibit loyalty behaviors such as retention for firms with superior website performance. Ltifi (2018) confirmed by iterating that consumers continue to interact with a firm's website when its performance is satisfactory. However, they might discontinue the relationship when they are dissatisfied with the website. On the other hand, Ladhari and Leclerc (2013) theorized that there are differences in gender impressions of e-trust, e-loyalty, e-satisfaction, and website service quality. For this reason, the study proposes that:

H4: The effect of website design in electronic banking and customer retention is moderated by gender.

Convenience, customer retention, and gender

Convenience is inarguably one of the essential factors of e-banking quality. Since e-banking uses the Internet, customers are able to use the platform at any time in any properly equipped location, and so convenience is expected as an e-banking quality dimension. Tan and Thompson (2000) expressed the relationship between convenience as a dimension of e-banking and customer retention. On gender moderation, studies by Riquelme and Rios (2010) and Lichtenstein and Williamson (2006) on e-banking adoption and retention registered differences in male and female responses. Given such differences, it is proposed that:

Table 1. Sample demographic characteristics of respondents.

Variable	Classification	Males	Females	Total	Percent
Gender	Male			337	55.2
	Female			273	44.8
Age	18–25	206	159	365	59.8
	26–33	81	75	156	25.6
	34–41	35	31	66	10.8
	42–49	12	5	17	2.8
	50+	3	3	6	1.0
Type of Account	Student	22	16	38	6.2
	Current	89	72	161	26.4
	Savings	200	163	363	59.5
	Fixed Deposit	7	4	11	1.8
	Investment	7	10	17	2.8
	Other types of accounts	12	8	20	3.3
Duration with bank	1 year	23	31	54	8.9
	1–3 years	132	96	228	37.4
	4–6 years	113	82	195	32.0
	7–9 years	34	29	63	10.3
	10 years +	35	35	70	11.5
Length of using e-banking service	1 year	95	87	182	29.8
	1–3 years	156	120	276	45.2
	4–6 years	64	51	115	18.9
	7–9 years	17	10	27	4.4
	10 years +	5	5	10	1.6
Average number of times e-banking services are used in a month	Once	79	72	151	24.8
	1–3 times	148	123	271	44.4
	4–6 times	74	43	117	19.2
	7–9 times	18	15	33	5.4
	10 times	1	3	4	0.7
	More than 10 times	17	17	34	5.6

$n = 610$.

H5: The effect of convenience in electronic banking and customer retention is moderated by gender.

Personalization, customer retention, and gender

According to Sindwani and Goel (2015), personalization has a direct relationship with customer satisfaction and retention. In their study on technology-based self-service banking, it was found that personalization improves service delivery by acknowledging customers by their names, providing product offerings according to their preferences, and providing the precise and sufficient information customers require. Moreover, Agarwal et al. (2009) confirmed the gender disparities in response to e-banking quality dimensions. This study therefore proposes that:

H6: The effect of personalization in electronic banking and customer retention is moderated by gender.

Methodology

Instrument design

The questionnaire consisted of three sections. The first section gathered information on the demographic characteristics of respondents (see Table 1). The second section entailed a 5-point Likert scale (SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, and SD = Strongly Disagree), which was used to determine respondents' perceptions and attitudes regarding the electronic banking services of their respective banks. Similarly, the third section considers the outcome variable after engaging in electronic banking to determine whether it results in customer retention. Based on the conceptualization of e-banking dimensions with reference to extant literature on electronic service quality dimensions and customer retention (Kimery & McCord, 2002; Zeithaml et al., 2002), a set of questions was generated to develop the questionnaire for the survey. A pilot test was conducted with a number of people to ensure relevance and avoid bias before the final distribution of the questionnaire took place.

Data collection

This study employed a survey on users of electronic banking services. The aim was to gather relevant and significant data related to the subject

matter and for hypothesis testing. A well-structured questionnaire was personally administered to customers face-to-face at different branches of several banks that were randomly and conveniently selected. Respondents had to identify on the questionnaire whether or not they use their banks' e-banking platform and how often they use it. Convenience sampling was employed; a total of 1000 questionnaires were distributed to customers in Accra, which is the capital of Ghana. Accra is suitable for this kind of study due its cosmopolitan nature. Moreover, Accra is the economic center of Ghana, and all of the banks have their headquarters situated in the city of Accra. However, out of the questionnaires returned, 610 respondents identified as e-banking users and thus were found to be useful for inclusion in the analyses. In adherence to ethical practice in data collection, participants were guaranteed anonymity and confidentiality of the information they provided. In addition, voluntary consent of participants with respect to their participation in the study was obtained.

Analysis of data

A quantitative research approach was adopted to approve or disapprove the hypotheses. This study has been analyzed using both the SPSS statistical software and AMOS 21 structural equation modeling software to ascertain the relationship between the postulated relationships (reliability, trust, personalization, convenience, website design, responsiveness) and customer retention, as well as the gender effect on these relationships. The data were initially explored using exploratory factor analysis to discover the interrelationships among the variables. We conducted an exploratory factor analysis using SPSS software with principal component analysis as a method of extraction, along with the Varimax rotation method. This summarizes and minimizes the number of variables with high loadings on one factor. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and the Bartlett's Test of Sphericity were extracted to verify if the data would be suitable for factor analysis. According to Tabachnick and Fidell (2007), the Bartlett's test of sphericity should be significant (that is, 0.50 or smaller) and the KMO value should be 0.60 and above for it to be considered suitable for factor analysis. Factor loadings below 0.50 and eigenvalues less than 1.0 were ignored; 37 items of the scale were reduced to 21 after EFA under 7 factors which represent trust, reliability, responsiveness, website design, personalization, convenience, and retention. The factor loadings, communalities, Cronbach's alpha, eigenvalues, and the KMO are represented in Table 2. The retention factor which first consisted of six items was reduced to five. Reliability consisted of six statements reduced to three; website design, personalization, and convenience were reduced to two statements. Factor analysis resulted in measured variables with communalitiesabove 0.50, which indicates a high reliability and validity. The acceptable Cronbach's alpha level should be 0.70 or better (Nunnally & Bernstein, 1978). As illustrated in Table 2, the 31 statements which were reduced to 21 items under the 7 factors have an acceptable KMO value of 0.941. The factor loadings measured variables with communalities above 0.05, indicting high reliability and validity. The Cronbach's alpha for most of the factors was also good, as each factor exceeded the acceptable level, which is 0.70 or better.

Results and findings

Using ordinary least square (OLS) regression for latent variables may result in biased estimates because OLS neglects the relationship between the latent construct and the observed indicators (see Horrace & Oaxaca, 2006). Thus, structural equation modeling (SEM) was chosen to analyze the relationships between the constructs.

Unidimensionality was achieved without further scale purification for trust, reliability, responsiveness, website design, convenience, and personalization. As shown in Table 3, indicator reliability was achieved with all observed variables having loadings above the 0.50 threshold suggested by Hair et al. (2011). Composite reliability and Cronbach's α values were satisfactory with all values above 0.50 (Nunnally & Bernstein, 1978). Table 3 shows that average variance extracted (AVE) was 0.50 or higher for all latent constructs, and thus convergent validity was achieved.

Table 2. EFA results.

Factors	Code	EFA Factor loadings	EFA Cα
Trust (TRU)			0.788
I have complete trust in my bank's e-banking services.	**TRU1**	0.589	
My bank's e-banking service is easy to operate.	**TRU2**	0.522	
I feel safe using my bank's e-banking service.	**TRU3**	0.804	
My bank's e-banking service instills confidence in customers.	**TRU4**	0.741	
Reliability (REL)			0.798
The e-banking service of my bank is consistent.	**REL1**	0.784	
My bank's e-banking service is reliable.	**REL2**	0.766	
The e-banking service of my bank delivers on its undertaking to do certain things by a certain time.	**REL3**	0.578	
Responsiveness (RES)			0.742
I think the e-banking service of my bank gives prompt service.	**RES1**	0.597	
I believe the e-banking service of my bank is always willing to help customers.	**RES2**	0.697	
I believe the e-banking service of my bank is never too busy to respond to customer requests.	**RES3**	0.582	
Website Design (WSD)			0.802
The e-banking website of my bank is visually appealing.	**WSD3**	0.850	
The user interface of my bank's e-banking service has a well-organized appearance.	**WSD4**	0.838	
Personalization (PER)			0.519
My bank's e-banking service provides customers with a free personal homepage.	**PER2**	0.809	
The e-banking service of my bank provides targeting e-mail to customers.	**PER3**	0.708	
Convenience (CON)			0.606
No experience of delayed transactions.	**CON4**	0.785	
I believe in the confidentiality of my bank's e-banking services.	**CON5**	0.609	
Retention (RET)			0.906
I strongly recommend that others use my bank's e-banking service.	**RET1**	0.721	
In the future, I will continue to carry out e-banking at my bank.	[b]**RET2**	0.795	
If I had to do it all over again, I would choose the same e-banking service of my bank.	**RET3**	0.794	
I will repurchase the e-banking services of my bank.	**RET5**	0.712	
I would recommend the e-banking service of my bank to friends, family members and acquaintances.	**RET6**	0.736	

Note. Overall KMO = 0.941. Total variance explained for the factor solution in EFA = 62.291.

Hypotheses testing

AMOS was employed in building a structural model in order to estimate the hypothesized path coefficients existing among the variables. As shown in Table 4, trust, reliability, responsiveness, website design, convenience, and personalization represent the exogenous variables; customer retention represent the endogenous variable. The sample fit indexes showed adequate absolute fit indices as follows —χ^2-test = 1.919, GFI = 0.988, RMSEA = 0.027—and relative fit indices—CFI = 0.990, NFI = 0.980.

The moderating role of gender in the link between e-banking service dimensions and customer retention

Trust significantly influences both male and female customer retention; thus, the relation is positive and significant in both males and females (see Table 4). However, since the chi-square difference between the male and female samples is not significant (t-value = 0.684, p-value = 0.494), hypothesis H1 is not supported. Similarly, reliability was found to significantly drive e-banking and customer retention in both males ($\beta = 0.153$, $p < 0.01$) and females ($\beta = 0.128$, $p < 0.01$). Yet, the statistical difference between the males and females is insignificant (t-value = 1.592, p-value = 0.112). As a result, hypothesis H2 is not supported. Similarly, in hypothesis H3, responsiveness as a dimension of e-banking has a significant effect on customer retention in both samples: males ($\beta = 0.323$, $p < 0.001$) and females ($\beta = 0.419$, $p < 0.001$). However, since the difference between the males and females is not statistically significant (t-value = 1.254, p-value = 0.210), hypothesis H3 is not supported.

Table 3. Pearson's correlations.

	TRU	REL	RES	WSD	PER	CON	RETENTION
TRU	1						
REL	0.844	1					
RES	0.808	0.828	1				
WSD	0.603	0.663	0.656	1			
PER	0.673	0.739	0.804	0.682	1		
CON	0.883	0.784	0.827	0.648	0.608	1	
RETENTION	0.774	0.762	0.886	0.594	0.683	0.769	1
SD	3.880	3.799	3.765	3.519	2.745	3.596	3.537
Mean	0.563	0.571	0.558	0.586	0.426	0.548	0.600
CR	0.815	0.800	0.778	0.803	0.711	0.759	0.914
AVE	0.525	0.572	0.539	0.670	0.552	0.612	0.640

Table 4. Moderating effect of gender.

		Males			Females			*Statistical comparison of paths*	
Hypothesis	Path	β estimate	*S.E.*	*p*-value	β estimate	S.E.	*p*-value	*t*-value	*p*-value
H1	RET <— TRU	0.402	0.060	***	0.335	0.080	***	0.684	0.494
H2	RET <— REL	0.353	0.055	0.004**	0.228	0.055	0.015*	1.592	0.112
H3	RET <— RES	0.323	0.052	***	0.419	0.056	***	1.254	0.210
H4	RET <— WSD	0.065	0.044	0.149	0.198	0.042	0.017*	2.156	0.032*
H5	RET <— CON	0.184	0.043	0.019*	0.045	0.040	0.338	2.223	0.027*
H6	RET <— PER	0.079	0.038	0.097	0.043	0.030	0.457	0.719	0.472
	Controls: Age	0.048	0.030	0.203	0.018	0.015	0.630		
	Type of Account	0.082	0.021	0.030	0.002	0.024	0.964		

Note. Structural model fit indices: $\chi^2/df = 1.919$; GFI = 0.988; CFI = 0.990; NFI = 0.980; RMSEA = 0.027. $R^2 = 0.524$.
***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

Hypothesis H4, proposing a positive effect of gender on the relation between e-banking and customer retention, is only significant for the female sample: males ($\beta = 0.065$, $p > 0.05$) and females ($\beta = 0.108$, $p < 0.05$), implying that female customers are more prone to website design in e-banking impacting customer retention. The difference between the males and females is statistically significant (t-value = 2.156, p-value = 0.032), onfirming hypothesis H4. Hypothesis H5, which states that there is a positive effect of gender on the relation between e-banking and customer retention, is significant and supported in the male sample and not significant for the female sample: males ($\beta = 0.114$, $p < 0.05$) and females ($\beta = 0.045$, $p > 0.05$). The implication is that more male customers than female customers prefer convenience in e-banking in order to for a bank's e-banking services to retain their patronage. With a chi-difference of t-value = 2.223 and p-value = 0.027, hypothesis H5 is supported. Finally, hypothesis H6 was not significant for both males ($\beta = 0.98$, $p > 0.05$) and females ($\beta = 0.89$, $p > 0.05$), and had no statistically significant difference (t-value = 0.719 and p-value = 0.472). Personalization as a dimension of electronic banking and its relationship with customer relation were found not to be moderated by gender. Type of account as a control variable was significant with males ($\beta = 0.082$, p-value = 0.030) but not females ($\beta = 0.002$, p-value = 0.964), while age of customer was not significant for either gender group.

The differences between male and female users of e-banking are further examined by statistically comparing the path coefficient for males with the corresponding path coefficient for all the dimensions of e-banking identified (Chin, 1998). The procedure suggested by Chin (1998, 2000) to develop multi-group analysis was used in this study. Chin's (2000) formula follows that:

$$t = \frac{Path_{male} - Path_{female}}{\left[\sqrt{\frac{(n_1 - 1)^2}{(n_1 + n_2 - 2)}} \times SE^2_{male} + \frac{(n_2 - 1)^2}{(n_1 + n_2 - 2)} \times SE^2_{female}\right] \times \left[\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}\right]}$$

where $Path_{male}$ is the path coefficient in the structural model (males); $Path_{female}$ is the path coefficient in the model (females); n_1, sample size of males; n_2, sample size of females; SE_{male}, standard error of paths in structural model (males); SE_{female}, standard error of paths in structural model (females); t, t-statistic; and $(n_1 + n_2 - 2)$ is the degree of freedom.

The comparison of path coefficients between male and female users of e-banking is displayed in Table 4. The results reveal that website design and convenience show statistical differences between the two subgroups at the 0.05 significance level. While website design has a significantly greater effect for woman than men, convenience has a greater effect for men than for women. This is an indication of the differential effects of e-banking dimensions on customer retention in male users and female users.

Discussions

This research builds on the existing literature on gender-related cognitive and behavioral differences in order to assess the role of gender differences on the relationship between e-banking and customer retention. The results of our analysis confirm several differences between men and women, thus highlighting how gender may affect consumers' e-banking and customer retention. In particular, we have tested how different dimensions of electronic banking are related to customer retention and, subsequently, the effect of gender. With the exception of personalization, trust, reliability, responsiveness, website design, and convenience were all found to be drivers of customer retention in the banking industry.

The core objective of this study is, however, to establish the influence of gender in the relationship between the dimensions of e-banking and customer retention. With the premise set by the social script theory, the study sought to establish the differences in effects of gender on the dimensions of e-banking and customer retention. It is found that trust significantly influences customer retention in both males and females (i.e., the relationship is positive and significant in both males and females). However, considering trust as an e-banking dimension, no significant differences exist with respect to the female and male influence on customer retention. Therefore, hypothesis H1 is not supported. Nonetheless, both males and females demand trust in electronic banking services to remain with their banks. This finding is consistent with findings in extant literature on e-banking and customer retention (Hogan & Campbell, 2008; Valaei et al., 2016). Odumeru (2013) has established the linkage of trust on the use of e-banking. Similarly, Kim and Prabhakar (2004) also discovered trust as a key ingredient in determining the connection between e-banking and customer retention. The banking industry, as one of the key users of information technology, depends heavily on storage and sharing of personal data. Due to the sensitive nature of the data handled by firms in the banking industry, trust is inherently required for clients to reduce their perceived risks, such as due to data breaches and insecurities. System communication channels encourage electronic transactions (Hogan & Campbell, 2008). In order for clients to continue patronizing the electronic services of their banks, trust must be established between clients and the electronic systems and channels used for such transactions.

Also, both males and females demand reliable e-banking services for customer retention to occur. Unreliable e-banking services will frustrate both genders, with no considerable differences between the effects on males and females. Floh and Treiblmaier (2006) established gender effect on reliability as a dimension of e-banking. They found that reliability is critical for banks offering electronic banking services to retain customers. Previous scholars have found that the reliability dimension was an important determinant for retaining consumers who used electronic banking (Nui Polatoglu & Ekin, 2001). Liao and Cheung (2002) found that reliability was positively related to the use of electronic banking. They concluded that the more secure that consumers perceived electronic banking to be, the more likely they were to use electronic banking.

Responsiveness as a dimension of electronic banking was also a significant factor in customer retention. Both males and females were found to be positively and significantly influenced by the e-banking dimension of responsiveness and customer retention. Men and women prefer to have e-banking service that is responsive to their needs in order to be retained as customers. This finding is consistent with Riquelme and Rios' (2010) studies in gender differences in terms of responsiveness of banks in e-banking services. Responsiveness is how fast the e-banking services respond to customer requirements. Accordingly, the customer tolerance level must not be overstretched. A bank's e-banking services must be able to respond to customer needs within a reasonable time.

The relationship between website design and customer retention was positively significant for females only, but not males. For males, website design was not found to be relevant to their retention level. This implies that female customers are more inclined to the esthetics of a bank's e-banking platform, and that can influence their continuous use of the platform. This is supported

by similar studies by Ismail and Panni (2009), which established that, generally, women are more attracted to the physical appearance of products and services than men. The looks of the e-banking platform, particularly the color of the website, are more important to women than to men. It is therefore pertinent that academics and practitioners give closer attention to this phenomenon. This finding resonates with studies by Wan, Luk, and Chow (2005).

On the other hand, convenience in the use of e-banking services was a significant determinant of retention in men but not in women. Men require convenience in e-banking services. In practice, this discovery is not unusual, as customers using e-banking services do not require the presence of bank employees for the services to be delivered effectively, especially since, with innovation and the era of mobile apps, banking services are now at the fingertips of customers. Banking customers can now execute banking transactions in their private offices and homes without interacting with the personnel of the banks. However, in this context, the number of men who may use e-banking services is greater than the number of women. This implies that the demand for more convenience will be most significant in men. Also, speed and convenience in banking will be of greater necessity to ensure retention, taking into consideration contextual factors. The social script theory lends credence to this finding by dictating the roles of men and women, hence the differences. The studies of Ladhari and Leclerc (2013) confirm the findings of this study.

Finally, personalization as a dimension of electronic banking and its relationship with customer retention was not moderated by gender. Among both men and women, personalization had no significant influence on their retention. This is partially due to the security requirements of banking services, such that e-banking systems cannot permit personal customizations or allow individual customers to alter the e-banking platforms. Consequently, customers and users of e-banking services do not have expectations for the personalization of the services and platforms for e-banking. Therefore, the lack of personalization of the e-banking services does not affect the retention of customers, whether males or females. These findings are supported by studies from Ahmad and Al-Zu'bi (2011), as well as Swaid and Wigand (2009), where retention is derived from satisfaction with e-banking services.

Implications

For theory

From the theoretical viewpoint, this study added empirical evidence to the existing knowledge on the social script theory. The study confirms that the roles, responsibilities, and scripts dictated to each gender by society result in the differences we find in gender responses to marketing communications. The study is also important to the literature on e-banking by establishing a relationship between e-banking dimensions and customer retention. It confirms that the dimensions of e-banking (trust, reliability, responsiveness, convenience, website design, and personalization) are good predictors of customer retention in the banking arena. Although trust, reliability, responsiveness, and personalization did not produce any significant difference in the results between males and females, differences in the relationships for website design, convenience, and retention were seen to exist between males and females. From a theoretical standpoint, this study shows that gender is an essential differentiating factor in assessing the quality of e-banking. This is an important knowledge added to the study of e-banking and gender, in which extant literature have focused predominantly on the qualities of e-banking without recognizing the differences in acceptance of the technology among different segmented customers. Not only does the study fill the gap in this respect, it sets the pace for more studies in different business contexts.

For practice

From a practitioner perspective, our findings improve the knowledge of the relationship between e-banking and customer retention, particularly the role of gender in this relationship. In order to develop effective e-banking platforms for customers, managers should pursue a gender-segmented strategy. While traditional global marketing campaigns have focused on cultural elements

such as historical tradition and religion, modern brand strategists should also stress gender-related differences in order to better segment their consumer target. Regarding male consumers, the focus should be on improving convenience, ease of use and speed, in addition to trust, reliability, and responsiveness in e-banking systems to foster customer retention.

In contrast, in order to increase female consumers' retention, e-banking services should focus on e-banking services capable of affecting personal perceptions, and not only should the e-banking systems be trustworthy, reliable, and responsive, but they should also be visually appealing and esthetically apt to positively influence customer retention. In light of our results, gender matters in electronic banking and customer retention management are critical and should be taken into consideration when designing e-banking services. For instance, a focus on website design may be more effective to foster customer retention in female consumers, but, in turn, it could prove ineffective for male customers. Similarly, efforts to enhance convenience and speed may be more effective for a male consumer audience. Consequently, critical care must be taken to achieve a balance in the integration of the elements of e-banking, as banks cannot choose which gender should use their platform but must serve each gender segment satisfactorily. It is important for banks to consider factors that mutually satisfy the e-banking needs of both males and females, while making room to achieve parity to meet the exclusive desires of both genders when designing their e-banking platforms. Meanwhile, understanding how different customer segments can be differentiated, particularly in a service-oriented business environment, may enable companies to better target their customers' needs, which may give them a competitive edge. Notwithstanding the security concerns and performance standard that must be taken into regard in e-banking, the study identifies that "one-size-fits-all" solutions may be problematic for the different customer segments of the bank. Management should therefore make an effort to recognize the differences that exist within their segments.

Conclusions, limitations, and directions for future research

The findings of this research form part of a development in the knowledge of gender-related cognitive and behavioral differences in the electronic banking and customer retention environment. Specifically, we have focused on exploring such differences in consumers who are part of a developing economy context. From a theoretical perspective, this research contributes to both e-banking and gender literature. Explicitly, it analyzed dimensions of electronic banking and customer retention from the perspective of the relevance of gender differences, which is a topic that has not been thoroughly explored. However, another relevant contribution is the set of practical implications concerning the need for managers of banks' electronic platforms to tailor electronic banking services according to the gender of the targeted consumers. For men, more engaging strategies are needed, and for women, clear communication seems to be a gender-sensitive approach. Nevertheless, notwithstanding its contribution, this research also presents some limitations. The study is based on only one industry: the banking industry. As a consequence of this, results are not fully generalizable and may prove to be valid only in this context. Nevertheless, we selected the banking industry due to its steady stability for the past several years in the context of investigation. This study represents a benchmark and may prove replicable for future studies. It could be possible to precisely evaluate the moderating roles of gender-related cognitive and behavioral differences in the light of cultural differences.

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