Antecedents and Moderators of Promotion Messages for Trust in Mobile Banking Services: An Elaboration Likelihood Model Perspective

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Abstract

This paper applies a theory of persuasion using the elaboration likelihood model to explain how communication messages from mobile banking services are interpreted by receivers to increase their trust in mobile banking. We explain how users' security and privacy concerns moderate the central route persuasion relationship between argument quality and trust. A questionnaire survey is employed to test a research model. The findings indicate that central and peripheral route persuasion cues enforce users' trust in mobile banking services. Users with strong privacy and security concerns are more likely to rely on the quality of arguments of the messages. Theoretical and practical implications are discussed in the paper.

Keywords: *Mobile Banking, Privacy concern, Security Concerns, elaboration likelihood model, Trust.*

1. Introduction

Despite the claimed benefits of mobile banking services, their acceptance is still lower than the expectations of the industry (Zhu et al., 2021; Siyal et al., 2019; Singh and Srivastava, 2018). According to the American Bankers' Association (ABA), fewer than 50% of consumers use mobile banking services as their primary banking channel [1]. More specifically, only 35% and 20% of Boomers and Gen X, respectively, use mobile banking as their primary channel. One of the most cited factors for the adoption of mobile banking is trust in the service (Merhi, Hone and Tarhini, 2019; Singh and Srivastava, 2018; Sun et al., 2017; Srivastava et al., 2013). Capital One's massive data breach in 2019 and other big-tech breaches, including Facebook and Google, are barriers to consumers' use of mobile banking services as their primary banking channel. Therefore 47% of respondents consider the ability to temporarily turn off a payment card as extremely important for mobile banking services[2]. While there are studies that reveal the importance of trust and its antecedents in the user acceptance of mobile banking, we still do not fully understand how mobile banking managers need to use the knowledge in their marketing activities to increase users' trust in mobile banking. We do not understand how the communications conducted by banks to alleviate such concerns are making an impact on clients' trust in the services. This study, to the authors' knowledge, is the first to investigate how the attributes of communication messages for mobile banking promotion influence users' trust in mobile banking.

[1] https://thefinancialbrand.com/107582/online-mobile-banking-adoption-rates-covid/

[2] https://www.businessinsider.com/mobile-banking-market-trends?r=US&IR=T

Despite studies on mobile banking, its adoption by banking customers is still an important research issue in the Information Systems and Marketing disciplines (Shankar, Jebarajakirthy and Ashaduzzaman, 2020) in different cultural contexts, including the US, Thailand (Changchit et al., 2019), the UK, Lebanon (Merhi, Hone and Tarhini, 2019), Iran (Hamidi and Safareeyeh, 2019) and Malaysia (Foroughi, Iranmanesh and Hyun, 2019) among others. Existing studies contribute to our understanding of the antecedents of trust in mobile banking services and the role of trust in customer behaviour and use of the services. For example, electronic word-of-mouth (Shankar, Jebarajakirthy and Ashaduzzaman, 2020) and convenience (Shankar and Rishi, 2020), security and privacy (Merhi, Hone and Tarhini, 2019), channel preference (Foroughi, Iranmanesh and Hyun, 2019), and the quality of information, systems, and services (Albashrawi and Motiwalla, 2019) are recent examples of factors that affect trust and the intention to use mobile banking services.

However, despite such studies identifying factors that affect the adoption of mobile banking, there is a lack of studies that provide mobile banking managers with practical implications as to how to communicate with consumers to increase trust in mobile banking services. Bank managers conduct various types of communication with their customers to facilitate their use of mobile banking services by highlighting the benefits of the services through direct email, dedicated web pages, and as part of online banking services. The goal of the communication messages to the customers is to persuade customers to change their behaviour: therefore, understanding the effectiveness of the communication message needs to be approached based on a theoretical framework that is related to persuasion rather than IS adoption. As the users' lack of confidence in the privacy and security of

mobile banking services is a key challenge user adoption (Merhi, Hone and Tarhini, 2019; Bharti, 2016; Islam, 2014; Zhou, 2012), it is necessary for managers to understand how persuasive communication messages affect customers' trust in relation to privacy and security concerns.

The success of mobile banking services largely depends on how banks can deliver the right information about the system correctly to their users (Zhang and Daugherty, 2009). Al-Saleh et al. (2017) confirmed that applying accurate security policies might not be successful without good communication with users who know about the consequences of security threats. For mobile banking managers, understanding the persuasive process of privacy and security information can help them to know how to achieve efficient persuasion, and further persuade users to trust and use this system.

Limited studies have explored the effect of privacy and security concerns in the persuasion process for increasing trust. To examine the role of privacy and security concerns in the persuasion process, we extend the Elaboration Likelihood Model (ELM) as the theoretical base by which to understand how the persuasion message, including privacy and security policy of mobile banking services, can alleviate privacy and security concerns and increase trust in this system.

Developed by Petty and Cacioppo (1984), the ELM suggests that there are two different routes which affect attitude change among users. The first one is the central route: users will develop their attitude through this route when they have the ability and the motivation to do so (Petty, Cacioppo and Goldman, 1981; Petty and Cacioppo, 1986). The central route is represented by the argument quality of an informational message, which refers to "the persuasive strength of arguments embedded in an informational message" (Bhattacherjee

and Sanford, 2006, p. 811). The second is the peripheral route, which is represented by trustworthiness and source expertise. Users will develop their attitude through this route when they have low ability or low motivation (Petty, Cacioppo and Goldman, 1981). Petty and Cacioppo (1986) suggest that "the ability and motivation of the user are two important considerations that moderate the effects of information on their decisions" (Cited by Cao et al., 2017, 407). Petty and Cacioppo (1986) stated that users in the high elaboration likelihood state (based on privacy and security concerns, in this case) are more persuaded by the argument quality of an informational message (Bansal and Zahedi, 2008). To employ these considerations, we chose privacy and security concerns as a proxy for this motivation.

Considering the above, we apply ELM to address the following two research questions in this paper:

Q1. What are the persuasive cues of trust in mobile banking services?

Q2. How do privacy and security concerns moderate the relationship between persuasive cues and trust?

To examine these two questions, we take a deductive approach to develop a research model based on ELM, which is verified through a questionnaire survey. We collect data from 358 mobile banking users in the UK. The data is analysed using a Structural Equation Modelling tool (AMOS) to test the research model. The results indicate that argument quality, trustworthiness, and source expertise of promotion messages for mobile banking services play a role as pervasive cues to increase trust in these services. Also, security and privacy concerns moderate the positive relationships between argument quality and trust.

Our study has the following implications. Firstly, the literature lacks knowledge that can be used by mobile banking managers to develop promotion strategies for their services. We

do not know the features of promotion messages that have the stronger impacts, or the impacts of the interaction between those features and the characteristics of the recipients on the persuasiveness of the messages. This paper is expected to provide mobile banking managers with practical implications to develop such strategies. Secondly, the moderators in the persuasion processes differ across different contexts and this paper provides a theoretical implication to the ELM literature by revealing the security and privacy concerns as moderators for the relationship between a persuasive cue and trust in mobile banking services. Testing the moderating roles offers better understanding of the persuasive process in the mobile banking context.

The remainder of this study is structured as follows. In section 2, we review trust in mobile banking, privacy and security concerns and the ELM. In Section 3, we present the research framework and research hypotheses. The data collection method, measurement and hypothesis testing are presented in section 4. Findings are presented in section 5. Section 6 provides a discussion and conclusion.

2. Conceptual background

This study investigates how promotion messages increase trust in mobile banking services. We review studies on the role of trust in the adoption of mobile banking services. Then the conceptual background of ELM is provided as a trust change mechanism via persuasive communications.

2.1 Security, Privacy and Trust in Mobile Banking

Trust has long been considered as a catalyst in online transactions. It is undoubtedly an important component in different domains such as psychology, management, marketing, communication, and information systems. Trust also plays an important role in the acceptance of mobile banking services (Sharma and Sharma, 2019; Sun et al., 2017; Afshan and Sharif, 2016; Lee and Chung, 2009; Gu, Lee and Suh, 2009; Liu, Min and Ji, 2009; Kim, Shin and Lee, 2009).

Trust affects intention to use mobile banking services (Saparudin et al., 2020; Sharma and Sharma, 2019; Sharma, 2019; Merhi et al., 2019; Lafraxo et al., 2018; Alalwan et al., 2017; Chaouali and Hedhli, 2017; Chiu et al., 2017). The unified theory of acceptance and use of technology (UTAUT) is the most common theoretical framework to integrate trust to explain intention to use mobile banking (Saparudin et al., 2020; Merhi et al., 2019; Lafraxo et al., 2018; Alalwan et al., 2017). Lafraxo et al. (2018) report that trust, perceived privacy and security directly affect behavioural intention to use mobile banking. In Saparudin et al. (2020), trust directly and indirectly (through performance expectation, effort expectation, and social influence constructs) affects behavioural intention. Sharma and Sharma (2019) adopt DeLone and McLean's IS success model and argue that trust, along with IS quality factors, can directly influence the intention to use mobile banking. Sharma (2019) adopts the Technology Acceptance Model (TAM) and finds that trust is one of the belief factors that affect behavioural intention.

On the other hand, there are studies that investigate antecedents of trust in mobile banking. Khoa (2020) reports that personal data trade-off, which is affected by perceived benefits and costs, determines the level of trust in mobile banking. Malaquias et al. (2017) confirms that trust in mobile banking is affected by utilitarian and hedonic tendency in the

use of mobile devices as well as personal innovativeness and social influence. Masrek et al. (2018), on the other hand, find that perceived information and system quality, as well as perceived credibility (security and privacy) directly affect trust. Rajaobelina et al. (2018) confirm that the cognitive and negative affective dimensions of mobile experience impact trust. Similarly, Sun et al. (2017) report diverse factors that affect trust in mobile banking, including structural assurance, ubiquity, information quality, perceived satisfaction, and perceived ease of use.

The main challenge for online banking managers will be achieving a level of trust for online users through the presence of privacy and security (Chiu, Chiu and Mansumitrchai, 2016). Privacy and security are the main factors affecting trust in the online environment. Existing studies have examined the importance of the role of security and privacy correlated to the online environment, such as online purchasing, mobile shopping, and online and mobile banking (Mahalle et al., 2018; Wang et al., 2003): please see Table 1. Security and privacy are considered as separate constructs in the literature (Merhi, Hone and Tarhini, 2019; Arpaci, Kilicer and Bardakci, 2015). Also, security is defined as "*the degree of belief and trust in a web channel to transmit sensitive information"* (Merhi, Hone and Tarhini ,2019, p. 5). They define privacy concern as "*concerns with regards to individual's right to control the collection and use of personal digital and non-digital information. It is also about the right to prevent the unapproved disclosure of personal information*".

Table 1. Theoretical frameworks used to investigate security, privacy concerns to trust

Theoretical frameworks	**Factors**	**Studies**
The theory of reasoned action (TRA-Privacy) and	Context sensitivity as a moderator and individuals' salient attributes in terms of personality types and	Bansal et al. (2016)

its synthesis with Prospect Theory.	privacy concern are critical factors impacting trust and the willingness to disclose personal information online.	
The Unified Theory of Acceptance and Use of Technology (UTAUT2).	Behavioural intention towards adoption of mobile banking services was influenced by habit (HB), perceived security (PS), perceived privacy (PP) and trust (TR) for both the Lebanese and English consumers.	Merhi, Hone, and Tarhini (2019); Lafraxo et al. (2018); Varma (2018).
Regulatory focus theory (RFT)	The business communication related variables of reputation, communication quality and information sensitivity are mediated by trust and privacy concern to influence the privacy dyad (i.e. promotion- and prevention-focused privacy behaviours).	Lwin, Wirtz, and Stanaland (2016)
Technology acceptance model	The impact of security and privacy concerns, and familiarity with the technology, on users' trust on the Internet of Things (IoT).	Alraja, Farooque, and Khashab (2019); Tiwari, Tiwari, and Gupta, (2021) (2020); Islam and Kundu (2020); Sharma et al. (2020)
TAM theoretical model.	Perceived usefulness, perceived ease of use, privacy, and personalization affect mobile banking adoption.	Albashrawi and Motiwalla (2019); Obaid (2021); Gumussoy, Kaya, and Ozlu (2018); Rehman, Omar, and Zabri (2019).

Privacy concerns have been considered as the important factors in the success of e-commerce and online banking (Bansal, Zahedi and Gefen, 2016). Molla and Licker (2001) mention that privacy is the main concern of users when shopping online because they are not completely educated about their information usage. Security is the other factor related to trust in an online context. Security concerns keep customers away from electronic banking, and this is the top-ranking problem for customers adopting online banking systems (Damghanian, Zarei and Siahsarani 2016).

However, explanations of how persuasive messages, including the privacy and security policies of mobile banking services, change users' trust in these systems, have been limited, and there are no studies about the moderating role of privacy and security concerns in the persuasion process. To better understand the persuasion process and the moderating roles of privacy and security concerns, more studies are required.

2.2 Elaboration Likelihood Model

The ELM is one of the most widely used theoretical frameworks to explain how attitude is affected by persuasive messages. It is one of the most popular persuasive message models (Petty and Cacioppo, 1986). As shown in Figure 1, according to the ELM, there are two different routes of influence of persuasive communications which cause attitude change among individuals, namely the central route and the peripheral route.

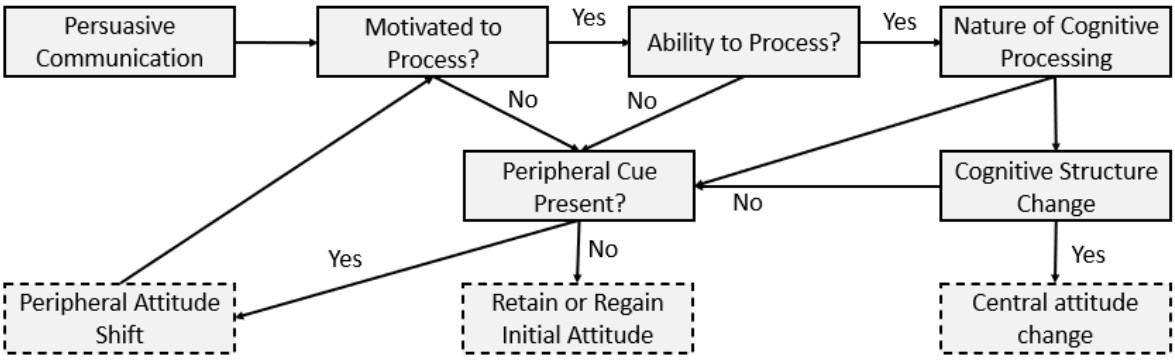

Figure 1 Central and peripheral routes of persuasion (redrawn from Petty & Cacioppo, 1986)

When a person receives a persuasive message, central route persuasion occurs when the person is motivated and able to process the message and to put cognitive efforts into it. The cognitive structure of the person may or may not be changed after the message processing. The merits of the arguments of the message are important for central attitude change. A peripheral route of persuasion is activated when any of the conditions for central route persuasion fails. For example, the person may not be motivated to read the received message; he/she might not have enough time or ability to read it; or the merits of the arguments in the message might be weak. In this case, the features of the message play an important role for the receiver elaborating the message. The perceived credibility of the source, the quality of the way in which the message is presented, or the attractiveness of the message source can attract elaboration from the receiver. A person who depends on the central route needs to think critically about arguments in an informational message before making an informed judgment about the target behaviour (Bhattacherjee and Sanford, 2006). So, attitude change arises from a person's consideration of information that reflects what that person feels are the true merits of a certain position (Petty and Cacioppo,

1984). Peripheral cues are related to information about the message, such as the message source (Bhattacherjee and Sanford, 2006). In contrast to the central route, the peripheral route is related to meta-information about the message, such as the message source (Bhattacherjee and Sanford, 2006). It includes the number of messages, the number of message sources, source likeability, and source credibility. Source credibility is one of the more frequently referenced cues (Kang and Namkung, 2018; Bhattacherjee and Sanford, 2006).

Research studies have tested the effect of the factors related to these two routes on trust and attitude in various contexts (Silic and Ruf, 2018; Zhou, Lu and Wang, 2016; Pee, 2012; Angst and Agarwal, 2009; Bhattacherjee and Sanford, 2006). Bansal and Zahedi (2008) have tested the effect of the central route, represented by privacy policy statements and trust, in multiple contexts. This hypothesis has not been supported in the finance sector. They explain that showing how building trust in a sensitive context requires something more than just the adequacy of the privacy policy statement. So, users cannot rely only on privacy policy statements when using mobile banking services. Other policy statements should also be included in the informational message to play a sufficient role in building trust, such as the security policy of the mobile banking service. Therefore, we include both the privacy and the security policy of the mobile banking service as arguments that are processed using the central route.

Although existing studies have applied ELM and explored its validity in IT contexts (Cyr et al., 2018; Angst and Agarwal, 2009; Zhou, 2012; Bhattacherjee and Sanford, 2006; Ho and Bodoff, 2014), none have used both privacy and security policy as informational messages and none have applied privacy and security concerns as a proxy for motivation.

3. Research model

To find answers to this study's research questions, we develop a research model applying ELM. For the first research question, we derive two persuasive cues based on the central and the peripheral route of persuasion of ELM, as they play an important role in changing message receivers' attitude in the mobile banking promotion context. For the second research question, we derive hypotheses on how the security and privacy concerns of message receivers moderate the relationship between a central route persuasion cue and trust in mobile banking services. We argue that security and privacy concerns play a role only for central route persuasion, as this requires cognitive speculation by the message receiver.

The central route is represented by the argument quality of an informational message. "Argument quality refers to the persuasive strength of arguments embedded in an informational message" (Bhattacherjee and Sanford, 2006, p. 811). In IT acceptance contexts, the arguments may refer to the potential benefits of system acceptance, the quality of the system, and/or the costs of and returns from system acceptance (Bhattacherjee and Sanford, 2006). So, the central route of attitude change is normally defined in ELM research by using argument quality, and argument quality has been shown to have a significant positive effect on attitude (Chang, Yu and Lu, 2015; Bhattacherjee and Sanford, 2006). Zhou, Lu and Wang (2016) propose that the formation of trust in a website can be explicated from the perspective of ELM. They found that customers might be afraid of potential issues regarding the general trustworthiness of Internet stores when they consider completing transactions with unfamiliar Internet stores. If assuring arguments about the potential issues are provided, these arguments are expected to weaken the

influence of the unfavourable thoughts. As a result, trust in the website is likely to increase. Consistent with these rationales, the following hypothesis is proposed:

H1: The argument quality of the message has a positive impact on trust in the mobile banking services.

Source credibility are considered as peripheral cues (Kang and Namkung, 2018; Ayeh, 2015; Bhattacherjee and Sanford, 2006; Sussman and Siegal, 2003). Sussman and Siegal (2003) defined source credibility as "the extent to which the receiver of the information sees a source of information as believable, competent, and trustworthy" (Cited by: Bhattacherjee and Sanford, 2006, p. 11). Existing studies have shown that individuals can be persuaded by a message when the source itself is perceived as credible (Filieri et al., 2015; Sussman and Siegal, 2003). Pee (2012) suggested that source credibility influences users' trust of information on social media because it can generate inferences or expectancies about the probable validity. The main two dimensions of source credibility are trustworthiness and source expertise (Shan, 2016; Ohanian, 1990).

Trustworthiness reflects a person's belief that the service provider will provide information in an honest way (Ohanian, 1991). Mayer, Davis and Schoorman (1995) defined the differences between trust and trustworthiness. They stated that "while perceived trustworthiness is the trustor's perception of how trustworthy the trustee is, trust is the trustor's willingness to engage in a risky behavior"(Cited in Gefen, Karahanna and Straub, 2003, p. 2). Several other studies support the idea that trustworthiness is identified as a significant predictor of consumers' trust in E-commerce and online banking (Yu, Balaji and Khong, 2015; Sekhon et al., 2014; Roy and Shekhar, 2011; Jarvenpaa, Tractinsky and

Saarinen, 1999). Chu and Kamal (2008) suggested that the readers of a blog are likely to trust the comments the blogger makes if the blogger can make valid recommendations.

H2: Trustworthiness positively influences trust in mobile banking services.

Source expertise was defined as the extent to which a source is believed to be capable of providing valid assertions (Giffin, 1967). A person appears credible if he shows good knowledge and experience with the topic (Schmidt et al., 2016; Shrauger and Schoeneman, 1979). People assume that credible sources provide credible information without considering the content of the message (Appelman and Sundar, 2016). By applying the ELM to find out why users sometimes follow wrong information from an expert system, Dijkstra (1999) showed that users hardly read the information. They just trust the expert system. This result concurs with the ELM peripheral route. As a result, we can hypothesize the following:

H3: Source expertise positively influences trust in the mobile banking services.

The following hypotheses concern the moderating role of privacy and security concerns on the relationship between argument quality and trust in mobile banking. The ELM states that elaboration moderates the influence of the central route (Zhou, 2017; Kim et al., 2016; Angst and Agarwal, 2009). The two sources of elaboration are motivation and ability. Bhattacherjee and Sanford (2006) argued that “according to the ELM, the use of the central route is moderated by the user's ability and motivation to elaborate on informational messages” (Cited by Cao et al., 2017, p. 406). So, according to the ELM, people in the high elaboration likelihood state (privacy and security concerns, in our case) are more persuaded by the argument quality of an information message (Bansal and Zahedi, 2008).

Pan and Zinkhan (2006, p. 332) said that “Internet shoppers, especially those who perceive a high risk associated with online transactions, may proactively search for and carefully examine an etailer’s privacy practices alleviating their concerns about the privacy of their information”. Szykman, Bloom and Levy (1997) argued that highly involved people read food notices and labels more carefully than less concerned people. This means, according to the ELM, that highly involved people are influenced through the central route. Then, we can say that users with high privacy and security concerns carefully read the information message and are influenced via the central route. The stronger the concerns, the more persuasive a message needs to be to overcome these concerns (Angst and Agarwal, 2009). These arguments support H4 and H5, below, and Figure 2 shows the research model.

H4: Privacy concerns positively moderate the effect of argument quality on trust in mobile banking.

H5: Security concerns positively moderate the effect of argument quality on trust in mobile banking.

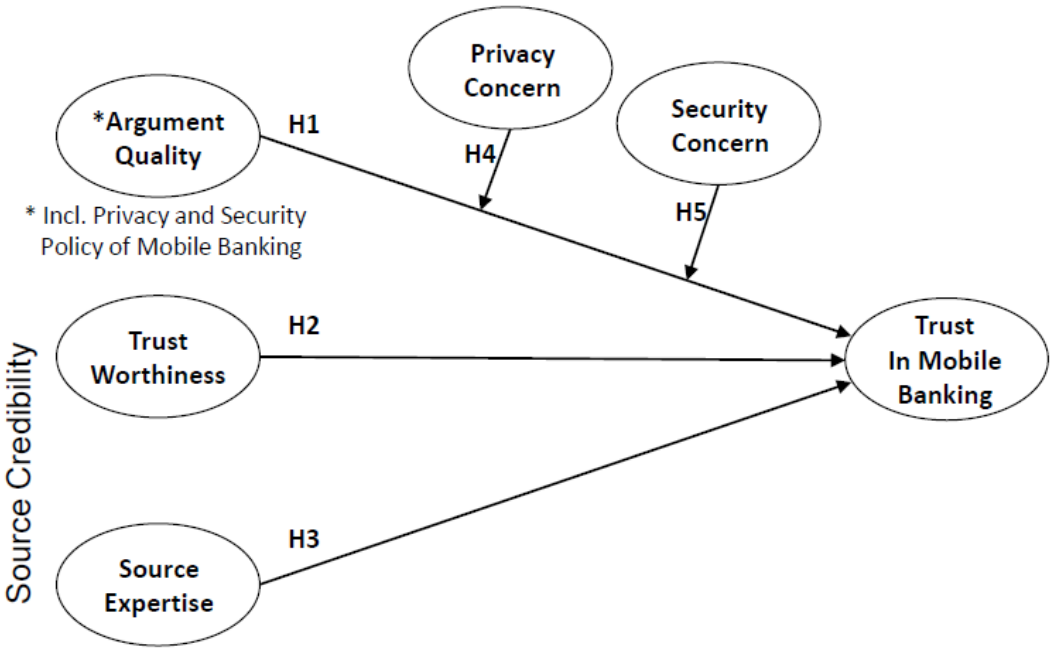

Figure 2. Conceptual research model.

4. Data collection and analysis

The data was obtained by using a survey method with mobile banking users. Appendix A contains the items of our questionnaire and main references. The respondents were users of mobile banking services. Participation was totally voluntary. In this study, the survey questionnaire and the covering letter were presented together. The covering letter included information about the main aim of the study and confirmed the privacy of the data collected. In this study, items were measured using a five-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5). The research model includes six factors, namely Trust, Argument quality, Trustworthiness, Source expertise, Privacy concern and Security concern. Each factor was measured using multiple-item perceptual scales, using pre-validated instruments from prior research wherever possible. Minor modifications were made to fit the context of mobile banking. An initial version of the survey tool was subsequently refined through pre-testing with five academic faculty members in mobile banking. After that, the researcher revised the survey according to the suggestions received from the participants. The instrument was further pilot tested with 38 bank customers. This test resulted in a significant degree of restructuring of the survey instrument as well as establishing the initial face reliability and validity of the measures.

The survey questionnaire consisted of three main parts. In the first part of the questionnaire, the participants were asked to provide demographic data, such as age, gender, education, and occupation. Moreover, the participants were asked to provide background information related to their internet usage. In the second part, the participants were asked to respond to survey

questions measuring their privacy and security concerns. In the third part, participants were asked to watch a video about mobile banking and read a short message about the security and privacy of mobile banking which is provided on the HSBC bank's website (Please see Appendix D). After that, they were asked to respond to several survey questions measuring the different constructs included in the proposed theoretical model.

We distributed the questionnaire to the participants either personally or by electronic mail (using the Survey Monkey questionnaire tool). In sum, we distributed 950 questionnaires and received 380 responses, representing a response rate of 40%. We discarded 22 responses because respondents mentioned that they had never used mobile banking services before (8), responses used the same answers on all the survey items (5), respondents did not fill in the questionnaire and left it completely blank (4), and respondents answered only some questions (5). As a result, we used 358 responses in the analysis. The respondent characteristics (gender, age, education, occupation, and internet use) are presented in Appendix B.

Structural equation modelling (SEM) was used to test the research model proposed in this study via IBM SPSS AMOS 26. The model testing was undertaken in three stages. First, confirmatory factor analysis (CFA) was conducted to validate the hypothesised factor structure and model fit. A full measurement model of the six latent variables was examined. Second, a structural equation model was tested to verify the causal effects of argument quality, source expertise and trustworthiness on trust in mobile banking. Lastly, to test the moderating effects of privacy and security concerns on the relationship between argument quality and trust in mobile banking services, latent interaction effects were estimated. One of the major benefits of testing for

moderating effects in SEM is improved statistical power compared to regression analysis (Steinmetz, Davidov and Schmidt, 2011). This is because measurement error can be controlled in SEM, while regression outcomes are sensitive to measurement error, which lowers statistical power (Kenny and Judd, 1984). Several SEM approaches to evaluate latent interactions have been proposed. Examples are the constrained approach (Jöreskog and Yang, 1996; Algina and Moulder, 2001), the unconstrained approach (Marsh, Wen and Hau, 2004), the orthogonalising approach (Little, Bovaird and Widaman, 2006), and the double-mean centring approach (Lin et al., 2010). These approaches are based on the product-indicator approach, which is one of the most adopted strategies. Lin et al. (2010) compared these approaches and identified that the double-mean centring approach produced more benefits than the others. For example, it is robust to non-normal data. Further, the process is simpler than other approaches, and thus can be applied with ease. In addition, it can be performed in most commercial SEM software (Lin et al., 2010). Therefore, in this study, the double-mean centring approach was employed.

Confirmatory factor analysis was performed to investigate the full measurement model by assessing the constructs' validity. It was evaluated by investigating convergent validity, along with the construct reliability and discriminant validity of the model. Convergent validity is achieved when all factor loadings are greater than 0.5, but ideally 0.7, and statistically significant. Moreover, the average variance extracted (AVE) for each latent variable should be higher than 0.5 (Fornell and Larcker, 1981). In addition, the construct reliability (CR) of each latent construct is required to be above 0.7 (Nunnally and Bernstein, 1994). Discriminant validity is met if the square root of the AVE for each of the constructs is higher than any of correlations of the constructs (Fornell and Larcker, 1981). All the factor loadings of the measurement model were

above 0.5, showing statistical significance (see Appendix C). The AVE and CR values for each latent variable were higher than the threshold levels. The calculated square root of the AVE for all the latent constructs were greater than all other inter-construct correlations of the constructs. Therefore, the convergent and discriminant validity was statistically verified. The results are presented in Table 2.

Model fit was examined by comparing relevant model fit statistics to threshold levels of model fit indices recommended in the literature. The normed χ^2 values of below 3, and comparative fit index (CFI) and Tucker-Lewis Index (TLI) values above 0.9 (Hair, 2010; Hooper, Coughlan and Mullen, 2008) indicate good model fit. Moreover, root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) values of below 0.08 (Browne and Cudeck, 1992; Hu and Bentler, 1999; Hair, 2010) represent a close fit to the data. All the relevant model fit indices demonstrate that the measurement model, comprised of the latent variables and their indicators, fits the data adequately.

Table 2. Descriptive statistics and results of the confirmatory factor analysis

	M	SD	α	CR	AVE	1	2	3	4	5	6
1. AQ	3.657	0.917	0.903	0.897	0.686	0.828					
2. TW	3.363	0.820	0.870	0.874	0.698	-0.152*	0.836				
3. SE	3.596	0.910	0.801	0.900	0.751	-0.131*	0.792***	0.866			
4. TR	3.678	0.830	0.856	0.866	0.572	0.233***	0.465***	0.384***	0.756		
5. PC	3.893	0.992	0.751	0.939	0.587	0.609***	-0.138*	-0.130*	-0.092	0.766	
6. SC	3.309	1.184	0.801	0.922	0.749	0.656***	-0.338***	-0.289***	0.062	0.409***	0.865

Model fit indices (χ^2 = 760.307; df = 382; χ^2/df = 2.011; CFI = 0.954; TLI = 0.947; RMSEA = 0.054; SRMR = 0.057)

Notes: N = 354; M, mean; SD, standard deviation; α, Cronbach's alpha; CR, composite reliability; AVE, average variance extracted. Values in bold on the diagonal are the square root of the average variance extracted; entries below the diagonal are inter-construct correlations.

To test the effects of argument quality, trustworthiness and source expertise on trust in a mobile banking service, a structural model was specified and tested. The model fit statistics support a good fit based on comparison with the recommended indices described earlier in this section (χ^2 = 188.314; df = 82; χ^2/df = 2.297; CFI = 0.969; TLI = 0.961; RMSEA = 0.061; SRMR = 0.048).

The relationship between argument quality and trust in mobile banking service was statistically significant ($p < 0.001$) and the coefficient was 0.317. So, the higher the argument quality scores, the higher the trust scores. The result of this hypothesis test in in line with previous studies' results (e.g., Kim and Benbasat, 2003; Mun et al., 2013; Pee, 2012; Greiner and Wang, 2010; Yang et al., 2006).

Similarly, the relationship between trustworthiness and trust in mobile banking service was statistically significant ($p < 0.001$) and the coefficient was 0.471. Therefore, the higher the

trustworthiness score, the higher the trust score. These results are in agreement with previous studies' results, and clarify that trustworthiness plays a crucial role in trust formation (e.g. Roy et al., 2012; Chu and Kamal, 2008).

In contrast, the relationship between source expertise (SE) and trust (TR) in mobile banking services was not significant. These findings are in accordance with the findings of prior studies: for example, many studies have suggested that managers must ensure their trustworthiness, even more so than expertise, in an online setting (Reichelt et al., 2014; Brown et al., 2007; Lee et al., 2006; Lee and Park, 2009).

Therefore, H1 and H2 are supported and H3 is rejected. The results are shown in Table 3.

Table 3. Summary of hypothesis testing results.

IV	Direction	DV	Direct effect		Moderation effect			
					Privacy Concerns		Security Concerns	
Argument Quality	→	Trust	0.317	$p < 0.000$	0.163	$P = 0.035$	0.287	$P < 0.000$
Trustworthiness	→		0.471	$p < 0.000$	-	-	-	-
Source Expertise	→		0.051	$p = 0.603$	-	-	-	-

Notes: IV, independent variable; DV, dependent variable

Moderating effects of privacy concerns (PC) and security concerns (SC) on the relationship between argument quality (AQ) and trust in mobile banking service were examined by testing the latent interaction effects. The process was guided by Lin et al.'s (2010) double-mean centring approach. First, interaction factors were identified as follows: AQ × PC and AQ × SC. Since the

predictor (AQ) and moderators (PC and SC) are latent variables, product terms were defined by multiplying the indicators of the predictor (AQ) and the moderators (PC and SC) (Kenny and Judd, 1984) as follows. For the interaction factor AQ × PC, 44 product terms were created (AQ1 × PC1, . . ., AQ4 × PC11). For the interaction factor AQ × SC, 16 product terms were generated (AQ1 × SC1, . . ., AQ4 × SC4). The indicators of AC, PC and SC were all mean centred before generating the product terms. Then, the mean centred AQ × PC and the mean centred AQ × SC were re-centred. The rest of the latent constructs (SE, TW and Trust) were included in the model without mean-centring. Product terms that had a common element were correlated before estimating the latent interaction effects. Adequate model fit indices were obtained (χ^2 = 9225.891; df = 3548; χ^2/df = 2.600; CFI = .867; TLI = .850; RMSEA = 067; SRMR = 0.062), as they were within or close to the threshold values suggested earlier in this section. The model testing results show there is a positive significant interaction effect between argument quality and privacy concerns on trust in mobile banking services ($p < 0.035$) and between argument quality and security concerns on trust in mobile banking services ($p < 0.001$). Therefore, H4 and H5 are supported.

This finding is in line with those of previous studies, such as Slyke et al. (2006), who argued that vendors can decrease privacy concerns and increase trust in a website by adopting different strategies, such as privacy-related mechanisms. Also, Bansal et al. (2008, 2015) highlight that privacy concern is a significant moderator of the relationship between argument quality and trust in some contexts, while Huang et al. (2011) argued that users will be more likely to follow the security procedures if they have security concerns. In the same way, Angst and Agarwal (2009)

argued that “The stronger the concern, the more persuasive a message needs to be in order to overcome the associated apprehension” (p. 349).

Figures 3 and 4 visualise the moderating effects of privacy concerns and security concerns on the relationship between argument quality and trust in mobile banking services. The final revised model is stated in Figure 5.

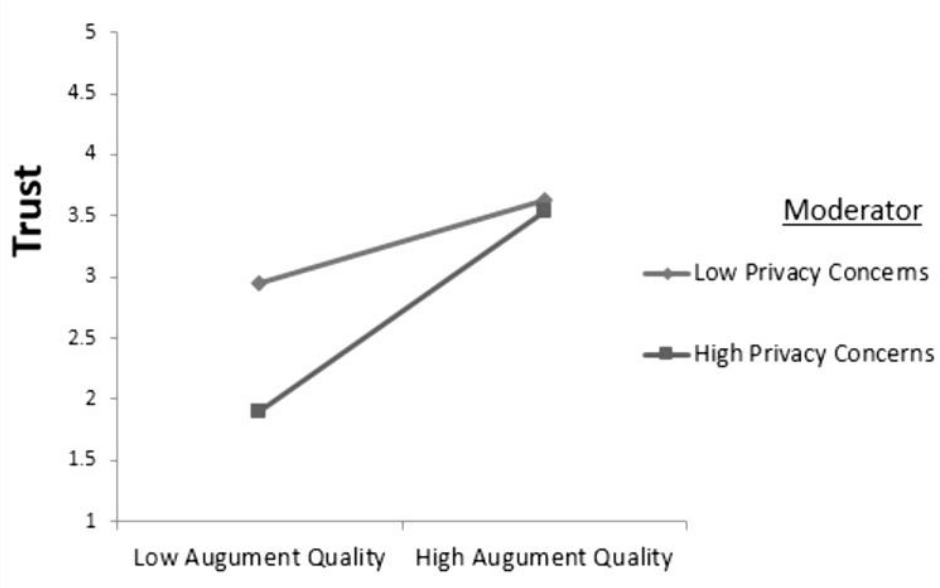

Figure 3. Plot of the moderating effect of privacy concerns.

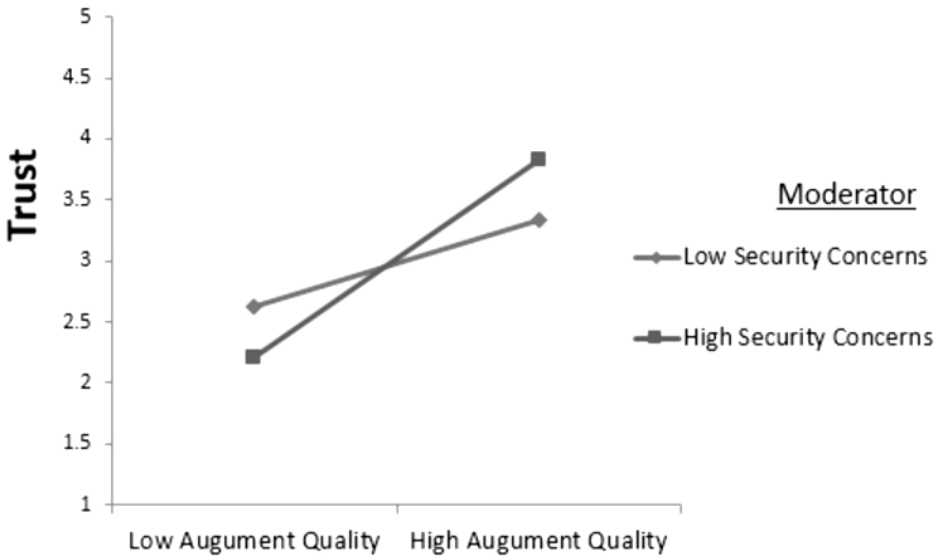

Figure 4. Plot of the moderating effect of security concerns.

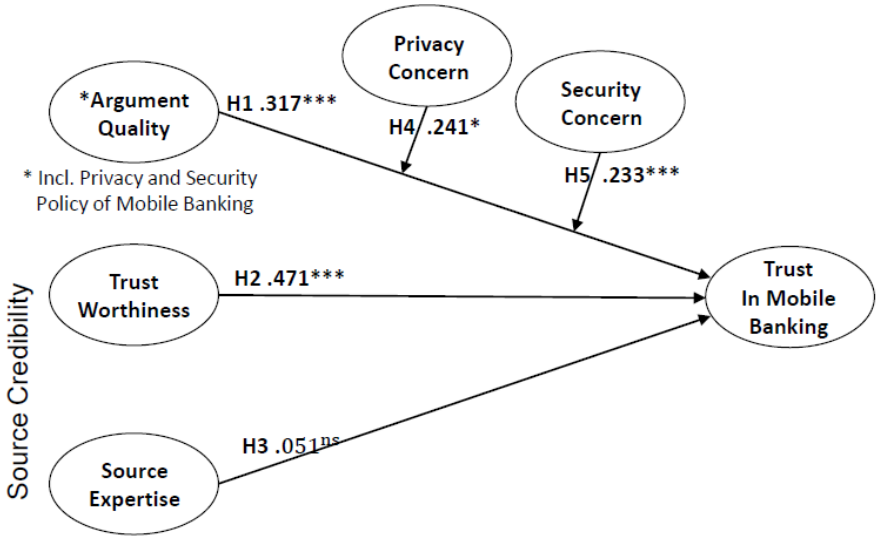

Figure 5. Results for the theoretical research model.

Moreover, gender and age differences in trust in mobile banking services were examined. In addition to that, the group differences in moderating effects of security and privacy concerns were further investigated. For the analyses, data were split into male and female categories (N of males = 133, N of females = 221). Furthermore, the age of the respondents was split into two groups as below and above the age of 30 years (N = 170 and N = 184 respectively) to achieve more balanced number of participants in each group.

In terms of gender, argument quality was positively associated with trust in both genders (males: 0.201, $p < 0.05$; females: 0.386, $p < 0.001$). Trustworthiness also demonstrated a positive association with trust in mobile banking services (males: 0.727, $p < 0.001$; females: 0.320, $p < 0.05$). The impact was stronger in males than in females. The effect of source expertise on trust in mobile banking services was not significant in both genders. The moderating effect of security concerns was significant in both genders (males: 0.350, $p < 0.01$ .018; females: 0.230, $p < 0.01$). However, the moderating effect of privacy concerns was significant only in females (males: 0.032 ns; females: 0.214, $p < 0.05$).

With regards to age, argument quality had a significant effect on trust in mobile banking services in both age groups (younger: 0.260, $p < 0.01$; older: 0.390, $p < 0.001$). Trustworthiness also had a significant impact on trust in mobile banking services in both age groups (younger: 0.454, $p < 0.01$; older: 0.512, $p < 0.01$). Both argument quality and trustworthiness affected trust in mobile banking services more strongly in older age group. The effect of source expertise on trust in mobile banking services was not significant in both age groups. Moderating effect of security concerns was significant in younger and older age groups (younger: 0.257, $p < 0.05$; older: 0.287, $p < 0.001$). However, moderating effect of privacy concerns was not significant in neither group.

5. Discussion

In this paper, we addressed two research questions about the association of persuasive cues of mobile banking promotion messages with consumers' trust. Based on the ELM, argument quality was tested as a central route persuasion cue to increase trust in mobile banking. On the other hand, trustworthiness and source expertise were derived as peripheral routes of persuasion cues and their relationships with trust were tested. Argument quality and trustworthiness were confirmed to be significant factors to increase consumers' trust, while source expertise was not. Furthermore, security and privacy concern were found to moderate the positive relationship between argument quality and trust.

Moreover, gender and age differences in trust in mobile banking services were examined. In addition to that, the group differences in moderating effects of security and privacy concerns were further investigated.

In terms of gender, argument quality was positively associated with trust in both genders Trustworthiness also demonstrated a positive association with trust in mobile banking services. However, the impact was stronger in males than in females. The effect of source expertise on trust in mobile banking services was not significant in both genders. The moderating effect of security concerns was significant in both genders. However, the moderating effect of privacy concerns was significant only in females.

With regards to age, both argument quality and trustworthiness had a significant effect on trust in mobile banking services in both age groups. However, the effect was more strongly in older

age group. The effect of source expertise on trust in mobile banking services was not significant in both age groups. Moderating effect of security concerns was significant in younger and older age groups. However, moderating effect of privacy concerns was not significant in neither group. The findings of the paper have the following theoretical implications. Firstly, while most studies on mobile banking services focus on adoption factors, this study identifies persuasive features of promotion messages from mobile banking to change users' attitude toward the service. Most mobile banking adoption studies take technology acceptance perspectives and apply the UTAUT, the TAM and the IDM to identify product- and consumer-related factors in the use of mobile banking services. Trust has been widely recognized as one of the belief factors for favourable attitudes towards the use of mobile banking services. However, there are limited studies on how consumers' trust in mobile banking can be improved. This study takes a different approach from existing studies by focusing on the persuasion process to improve consumers' trust in mobile banking services. Based on a solid theoretical framework for persuasion, this study confirms that persuasive cues (argument quality and trustworthiness of source) of promotion messages have a positive association with trust. The results indicate that argument quality has positive and significant effects on trust. So, drawing from the ELM, providing users with informative messages about the privacy and security policies of the mobile banking service can significantly increase their trust level. This result suggests that using the central route in fostering users' trust in mobile banking services is apparently an effective persuasion route for most users. Prior studies also confirm this relationship (see Zhou, Lu and Wang, 2016; Kim and Benbasat, 2003; Pee, 2012), but this study, unlike the studies, confirms the relationship in the context of the promotion message. Bansal and Zahedi (2008) tested the relationship between

argument quality (privacy policy statement) and trust, but this relationship was not supported in the finance sector. Therefore, building trust in a sensitive context requires something more than just the adequacy of the privacy policy statement. Accordingly, to ensure a significant relationship between argument quality and trust, researchers should not include only the privacy policy in the informational message to play a sufficient role in building trust. Mobile banking managers aiming to persuade potential users should consider all the privacy and security features that persuade users rather than only privacy policy features. We also investigated the effect of the ELM peripheral route represented by trustworthiness and source expertise on trust on mobile banking. Trustworthiness had a positive and significant effect on trust. Trustworthiness plays a crucial role in trust formation in other electronic commerce transactions (Roy and Shekhar, 2011; Chu and Kamal, 2008; Jarvenpaa, Tractinsky and Saarinen, 1999). The findings in this paper indicate that mobile banking managers need to format promotion messages in such a way that receivers feel that the message is trustworthy. On the other hand, the relationship between source expertise and trust turns out not to be significant in the mobile banking context. The result might be since the communication messages are coming from banks which the users are already aware of therefore, there is not much variance in the users' perceived source expertise. The literature indicates that trustworthiness has a stronger impact than source expertise in online settings (Reichelt, Sievert and Jacob, 2014; Lee and Chung, 2009).

Secondly, this study also confirms the moderating effect of the security and privacy concerns of mobile banking consumers. This has an implication for ELM, as the impact of the central route of persuasion is moderated by the message receivers' concerns on the topic of the argument.

According to the ELM, users with high motivation (here, privacy and security concerns) will follow the argument of the informational message, which presents the central route of the ELM. This finding is in line with those from previous studies, such as Slyke et al. (2006), who argued that vendors can decrease privacy concerns and increase trust in a website by adopting different strategies, such as privacy-related mechanisms. Also, Bansal and Gefen (2015) highlighted that privacy concern is a significant moderator of the relationship between argument quality and trust in other contexts. Huang et al. (2011) argued that users will be more likely to follow the security procedures if they have security concerns. In the same way, Angst and Agarwal (2009, 349) argued that "the stronger the concern, the more persuasive a message needs to be in order to overcome the associated apprehension". The findings of this study extend their findings, as security concerns, as well as privacy concerns, play a moderating role in the mobile banking context. Their study context was the healthcare system, for which privacy concern is more important, while mobile banking consumers are also concerned with security due to the financial transactions involved in mobile banking. The implication of the finding is that there are different types of concern that moderate central cues and attitude in different transaction contexts. The application of ELM in other domains requires further study on the main issues of the domains and related concerns by consumers.

From a practical standpoint, the results of this study illustrate that mobile banking managers need to use personalized communication strategies with banking users to increase their trust in mobile banking services. First, the argument quality of a message (including information about the privacy and security policy of the mobile banking service) can be used as an important cue for building trust in the service, especially for users who have high levels of privacy and security

concerns. In this study, the findings recommend that including privacy and security policy in an information message will positively affect trust in this service. So, users need to receive an argument that includes the privacy and security policy of the mobile banking service for this argument to affect trust in this service. The effect of this argument is higher for users who have privacy and security concerns. To increase the effect of this argument, mobile banking managers should apply different techniques to inform and educate users about the strength of the privacy and security policy of the mobile banking service. Users who are informed and educated about the privacy and security policy of this service will perceive that using the mobile banking service is secure and thus will trust and use it.

Secondly, mobile banking managers can use peripheral cues to increase the trust of banking users who have relatively low or medium levels of privacy and security concerns. While central cues are more concerned with the quality of arguments about the security and privacy features of mobile banking services, peripheral cues can include the use of multimedia and celebrities in the communication messages. This will attract more attention from users and lead to more elaboration to read the message contents.

Based on the findings, the promotion messages need to be changed according to the users' level of privacy and security concerns. So, for users who have privacy and security concerns, the argument quality of the message should include information about the privacy and security policy of the mobile banking service. This message can be used as an important cue for building trust in the service. To increase the effect of this message, mobile banking managers should apply different techniques to inform and educate users about the strength of their service's privacy

and security policy. At the same time, for users who do not have security and privacy concerns, the promotion messages can highlight the convenience and value created by using mobile banking services, rather than technical issues for security and privacy.

This study has limitations which need to be addressed in future studies. Firstly, for the central and peripheral routes, this study used only three factors, which are argument quality, source expertise and trustworthiness. Other cues may be included as either peripheral or central cues. Moreover, this study tested the moderating role of privacy and security concerns between argument quality and trust. Other investigations may be needed to test the effect of these moderators between trustworthiness and trust, and between source expertise and trust. Also, this study tested the effect of privacy and security concerns as moderators, without dividing the data into different groups with different levels of privacy and security concerns. Dividing the data into different groups and finding the difference between these groups is necessary in further research. This study did not expand the model to include intention to use and actual usage. Therefore, additional research is needed to expand the current research model. Future studies could also consider the General Data Protection Regulation (GDPR), which directly affects how banks handle privacy statements.

6. Conclusion

In this paper, we applied the ELM as the theoretical base to explain the effect of persuasive messages on trust in mobile banking services and the roles of privacy and security concerns as moderators. We introduced argument quality, trustworthiness and source expertise with central and peripheral cues and proposed five hypotheses. Specifically, we explained the

Persuasive cues of trust in mobile banking services and how privacy and security concerns moderate the relationship between pervasive cues and trust. To answer these research questions, we extended the ELM as the theoretical base by which to understand how the persuasion message, including the privacy and security policy of mobile banking service, can alleviate privacy and security concerns and increase trust in this system.

Using 358 questionnaires collected from mobile banking users in the UK, we used SEM to test the hypotheses proposed in this study via the AMOS statistical package. Both argument quality and trustworthiness had positive effects on trust in mobile banking services. The relationship between source expertise and trust was not significant. So, mobile banking managers can employ both the central route, represented by argument quality, and the peripheral route, represented by trustworthiness, to persuade users to trust this service. Both privacy and security concerns have significant positive moderating effects between argument quality and trust in mobile banking services.

This study makes several theoretical contributions. First, it has developed a comprehensive theoretical framework based on the ELM in a new context, namely mobile banking systems, to understand the effect of an informational message on trust in mobile banking and the moderating roles of privacy and security concerns between argument quality and trust. To the best of our knowledge, the theoretical model for this study has been tested theoretically and empirically for the first time. This study supports the use of the ELM. Secondly, the model developed in this research study can be employed to explain how persuasive messages can

affect trust in other online contexts, such as e-commerce and m-commerce. Thirdly, while previous studies on online trust formation have tested the effect of argument and source credibility (Pee, 2012; Kim and Benbasat, 2009), their comprehensive effects have been tested separately. Consequently, the overall impact of the results has been limited to date (Mun et al., 2013). When evaluating information online, researchers should examine the effect of these factors together. Fourthly, to the best to our knowledge, this is the first time that security concerns have been included as a moderator. Our findings show that security concern is a strong moderator in addition to privacy concerns. Previous studies (e.g., Bansal et al., 2015; Angst and Agarwal, 2009) used only privacy concerns as a moderator. Fifth, to the best of our knowledge, this is the first study to include both privacy and security policies of mobile banking services in the informational message (argument quality). Thus, this study has measured argument quality, which includes the privacy and security policies of the mobile banking service. Other studies have used different cues to form an informational message, such as Bansal et al. (2008), who used perceived adequacy of a privacy policy statement; however, their hypothesis is not supported in a finance context. They explain this result by showing that building trust in sensitive contexts requires something more than just the adequacy of the privacy policy statement.

Besides these theoretical contributions, this study provides several practical implications for banks. First, the results of this study illustrate that mobile banking managers need to use personalized communication strategies to increase banking users' trust in mobile banking services. The argument quality of a message (including information about the privacy and security policy of the mobile banking service) can be used as an important cue for building trust in the mobile banking service, especially for users who have high levels of privacy and security

concerns. So, to increase the effect of this argument, mobile banking managers should apply different techniques to inform and educate users about the strength of the mobile banking service's privacy and security policy. Secondly, to have a persuasive message, the trustworthiness of the source should be established, as in this way, the managers of mobile banking services would be able to increase trust in their service. Thirdly, it is useful for managers to explain the factors that affect trust in this system. Managers need to provide more details about this service in a sufficient way. For example, persuasive messages with a strong argument can play a sufficient role in the trust process. Managers of mobile banking services could run informational sessions to inform users about the privacy and security policies of this service. This may help to alleviate their privacy and security concerns and increase trust in the system. Therefore, the providers of mobile banking services should carefully consider users' concerns and try their best to alleviate them. All these actions should increase the level of trust in this service.

This study also has limitations, and therefore provides future research opportunities. We included only argument quality, trustworthiness, and source expertise as the central and peripheral route factors for trust in the mobile banking context. The model can be applied to other online services in future research, in which case other factors can be considered for both route factors. For example, Cialdini (2000) proposes six types of peripheral cues that can trigger the peripheral route of persuasion, namely reciprocity, commitment and consistency, social proof, authority, liking and scarcity. Future studies can investigate how those cues are applied by mobile banking managers and how trust is affected by the persuasion strategies. Also, we investigated the moderation effect of security and privacy concerns for the positive relationship

between a central cue (argument quality) and attitude (trust) in this study. As discussed earlier, different moderators are expected to play a role and future studies can identify those moderators in different transaction contexts.

Also, future studies could be beneficial in other areas. For example, the context of this study is mobile banking services, but future studies may apply this framework to other online contexts, such as m-commerce and e-commerce. For central and peripheral routes, this study used only three factors, namely argument quality, source expertise and trustworthiness. Future studies may expand the research model by including other cues as either peripheral or central cues. This study tested the effect of privacy and security concerns as moderators without dividing the data into different groups with different levels of privacy and security concerns. Future studies may divide the data into different groups to find the differences between these groups. Moreover, future studies may test the current research model in other cultures to provide evidence about the strength of this model across different cultural settings. Finally, the GDPR provides guidelines for the collection and processing of personal information from individuals who live in the EU and the UK. Users of mobile banking services are asked to agree on the collection and use of their data during their visits to the web sites. This can alleviate their privacy concerns, and it would be interesting to investigate how the introduction of GDPR affects trust in mobile banking services.

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7. References

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Appendix A. Questionnaire and main references

Measures	Items	Sources of Measurement Items
Argument quality	-The information provided on the HSBC website about the mobile banking application was informative. -The information about the mobile banking application provided on the HSBC website was helpful. -The information about the mobile banking application provided on the HSBC website was valuable. -The information about the mobile banking application provided on the HSBC website was persuasive.	Bhattacherjee and Sanford (2006)
Security concerns	- The mobile banking application will implement security measures to protect my personal Information. - The mobile banking application will ensure that my transactional information is protected from being altered or destroyed accidentally during a transmission on the mobile. - I will feel secure about the mobile banking application system. - I will feel safe in making transactions through the mobile banking application.	Kim, Ferrin and Rao (2008)
Trust	- HSBC mobile banking keeps its promises - HSBC mobile banking services meet my needs. - HSBC mobile banking is trustworthy. - I think HSBC mobile banking is concerned with the present and future interests of users. - Overall, I trust HSBC mobile banking.	Lee and Chung (2009)
Source expertise	- The HSBC knowledgeable about mobile banking application. - HSBC seems to have a good sense about mobile banking application. - HSBC seems to have experience with mobile banking application.	Cheung, Lee and Rabjohn (2008); Reichelt, Sievert and Jacob (2014)

Trustworthiness	- HSBC is trustworthy on the information about mobile banking application on their website. - HSBC is benevolent about its recommendation of the mobile banking application. - HSBC is competent in the mobile banking application. - HSBC seems to be sincere about mobile banking.	Cheung, Lee and Rabjohn (2008); Reichelt, Sievert and Jacob (2014)
Privacy concerns	- It usually bothers me when mobile banking apps ask me for personal information. - When mobile banking apps ask me for personal information, I sometimes think twice before providing it. - I'm concerned that mobile banking apps are collecting too much personal information about me. - All the personal information in mobile database should be double-checked for accuracy—no matter how much this costs. - Mobile banking apps should take more steps to make sure that the personal information in their files is accurate. - Mobile banking apps should have better procedures to correct errors in personal information. - Mobile banking apps should devote more time and effort to preventing unauthorized access to personal information. - Mobile databases that contain personal information should be protected from unauthorized access no matter how much it costs. - Mobile banking apps should take more steps to make sure that unauthorized people cannot access personal information in their computers. - Mobile banking apps should not use personal information for any purpose unless it has been authorized by the individuals who provided the information.	Angst and Agarwal (2009); Malhotra, Kim and Agarwal (2004)

	- When people give personal information to mobile banking apps for some reason, the apps should never use the information for any other reason. - Mobile banking apps should never sell the personal information in their computer databases to other companies. - Mobile banking apps should never share personal information with other companies unless it has been authorized by the individuals who provided the information.	

Appendix B. Demographic Characteristics of the Main Survey Respondents

Demographic Characteristics of the Main Survey Respondents (n=358)			
Variable	**Category**	**Frequency**	**%**
Gender	Male	223	62.3
	Female	135	37.7
Age	20 or under	36	10.1
	21-30	152	42.5
	31-40	134	37.4
	41-50	33	9.2
	51-60	3	0.8
Marital status	Single	217	60.6
	Married	141	39.4
Education	Less than high school	4	1.1
	High school	98	27.4
	Diploma	42	11.7
	Bachelor	72	20.1
	Post-graduate	142	39.7
Occupation	Employed	67	18.7
	Self-employed	29	8.1
	Non-employed	34	9.5
	Professional	10	2.8
	Academics	14	3.9
	Students	204	57.0
Internet Experience	<1 Year	17	4.7
	1-2 years	70	19.6
	3-4 years	90	25.1
	5-6 years	111	31.0
	6> years	70	19.6
Using Mobile Banking	Only when I need it and cannot use online banking.	157	43.85
	Less than once a month.	87	24.30
	Once a month	63	17.60
	Two or three times a week.	19	5.31
	Once a week	20	5.59
	Daily	12	3.09

Appendix C. Factor Loadings of Confirmatory Factor Analysis

Construct	Indicator	Standardised loading	Sig.
Argument Quality	AQ1	0.874	<.001
	AQ2	0.907	<.001
	AQ3	0.768	<.001
	AQ4	0.754	<.001
Source Expertise	SE1	0.839	<.001
	SE2	0.862	<.001
	SE3	0.897	<.001
Trustworthiness	TW2	0.791	<.001
	TW3	0.854	<.001
	TW4	0.860	<.001
Trust	TR1	0.644	<.001
	TR2	0.742	<.001
	TR3	0.866	<.001
	TR4	0.547	<.001
	TR5	0.919	<.001
Privacy Concerns	PC2	0.568	<.001
	PC4	0.694	<.001
	PC5	0.702	<.001
	PC6	0.667	<.001
	PC7	0.793	<.001
	PC8	0.864	<.001
	PC9	0.798	<.001
	PC10	0.821	<.001
	PC11	0.854	<.001
	PC12	0.820	<.001
	PC13	0.793	<.001
Security Concerns	SC1	0.769	<.001
	SC2	0.803	<.001
	SC3	0.934	<.001
	SC4	0.941	<.001

Appendix D. HSBC Privacy, security and Data Protection Statement

When it comes to banking digitally, either on your computer or mobile phone, one of the first things you may be concerned about is security.

There's a range of things that banks do to make sure your money is safe. Understanding what checks are in place can help give you peace of mind.

Here are a few features that make digital banking with HSBC secure.

Secure log on

A Digital Secure Key, or physical Secure Key, is used as part of the 2-factor authentication process.

It generates a temporary security code you need to access mobile and online banking services. For mobile banking, you can also use fingerprint or face recognition to log on quickly and securely, depending on what device you have.

Block and unblock your card

If you're worried you've lost your card or something suspicious is happening with it, you can put a temporary block on it. You can do this at anytime from anywhere through online banking or on the HSBC UK Mobile Banking app. Then if the card turns up, you can unblock the card instantly.

You can also report your card as lost or stolen, meaning you can stop your card from being used in seconds and order a replacement straight away.

Security 24/7

We have teams around the world monitoring accounts and looking at trends in online fraud. This means we can spot any potential threats early and act quickly to prevent any fraudulent transactions.

Confirmation of Payee

We've introduced a name checking service called Confirmation of Payee (CoP). It aims to protect against Authorised Push Payment scams and reduce the number of payments which are made by mistake.

When you make a one-off payment, set up a new regular payment or amend an existing payment, it lets you check you're paying the right person or business. That way, you can see if the name matches who they say they are.

Refunds for non-authorised transactions

In the unlikely event there are payments from your current or savings accounts that you didn't authorise, the amount of the unauthorised transaction and any resulting charges and interest will be refunded, as long as you've kept your security details safe.

HSBC: Our Privacy Notice

This Privacy Notice applies to personal information held by members of the HSBC Group. It explains what information we'll collect about you and how we'll use it. It will also explain who we'll share your information with and when, plus what we'll do to make sure it stays safe and secure. It continues to apply even if your agreement for banking, insurance or other products and services with us ends. It should also be read alongside your banking or insurance terms and conditions. This Privacy Notice covers any personal products or services you have with us. This includes savings, loans, credit cards, mortgages, investments and insurance.
So, we'll only collect information about you as allowed by regulations and law.
The information we collect will depend on the type of product you hold. **It may include:**

• personal details, for example, names, gender, date and place of birth.
• contact details, for example, address, email address, and telephone numbers.
• information about your identity for example, photo ID, passport information, National Insurance number, National ID card and nationality.
• market research, for example, information and opinions given.
• user login and subscription data, for example, login details for phone, online banking and mobile banking apps.
• other information about you that you give us when you fill forms in or by communicating with us, whether face-to-face, by phone, email, online, or otherwise.

How we'll use your information:
We'll only use your information if we have **your permission,** or we have another legal reason for using it.
These reasons include:
• if we need to pursue our legitimate interests.
• to enter into or carry out an agreement we have with you.
• where we're required to by law; • where we believe it's in the public interest for us to do so for example, to help prevent or detect crime.
• to establish, utilise or defend our legal rights.
• for insurance purposes.
The reasons we use your information include to:
• provide you with our products and services;

• carry out your wishes, for example, make a payment you request or a change to your insurance policy;
• carry out credit checks;
• manage our relationship with you;
• prevent or detect crime including fraud and financial crime;
• manage risk, ensure security and business continuity;
• provide online services such as Online Banking and mobile apps.

Please watch the following video:

HSBC secure key mobile: How to activate your secure access on your smartphone

https://www.youtube.com/watch?v=Lh2EnKsEAMY