

Differences in Mobile Banking trust Amongst Generation Y Consumers of the Major South African Retail Banks

Marko Van Deventer¹

Abstract: Mobile banking is beneficial in terms of saving time and money as well as convenience and efficiency. However, given its cybernetic nature and risks associated with its use, trust issues are created. Therefore, it is important that retail banks ensure that their mobile banking channel is trustworthy. As such, the purpose of this study was to establish whether Generation Y consumers of the major South African retail banks differ in their mobile banking trust. Following a descriptive and single cross-sectional research design, self-administered survey questionnaires were completed by a convenience sample of 334 Generation Y consumers. The data was analysed using descriptive statistics, reliability and validity measures, Pearson's product-moment correlation analysis, collinearity diagnostics and one-way analysis of variance (ANOVA). The findings indicate that there are differences between Generation Y consumers of the major South African retail banks and perceived trust in mobile banking, the integrity of the mobile bank, mobile banking structural assurances as well as the information quality of mobile banking. Understanding the differences in mobile banking trust and its related dimensions amongst Generation Y consumers of the major South African retail banks, retail banks can strategise to allay these consumers' trust concerns, foster greater trust in their mobile channels as well as gain a competitive advantage and maintain consumer loyalty amongst this cohort of consumers.

Keywords: Trust; mobile banking; Generation Y consumers; retail banks; South Africa

JEL Classification: G21

1. Introduction

Globally and in South Africa, retail banks are fiercely competing to gain and maintain market share (Ismail, 2017). This increased competition amongst banks may be attributed to a number of powerful forces that are reshaping the retail banking landscape (Garvey & Nicolacakis, 2017), including changing customer expectations, regulatory requirements, demographics (PwC, 2014) as well as changing consumer behaviour as a result of the digital revolution (Standard Bank, 2015). Another powerful force that is creating an imperative to change is the shift from traditional to digital banking channels (Maduku, 2016) such as mobile banking.

¹ PhD, North-West University, South Africa, Address: PO Box 1174, South Africa, Corresponding author: marko.vandeventer@nwu.ac.za.

Through mobile banking, retail banks and its customers are able to interact using a mobile banking application downloaded onto a mobile device (Moser, 2015). Mobile banking offers retail banking consumers convenience in terms of making payments, checking account balances, purchasing airtime and data (Poromatikul *et al.*, 2019) as well as transferring funds (Fenu & Pau, 2015). In addition, mobile banking assists consumers with their budgeting endeavours (Poromatikul *et al.*, 2019), all of which can be done independently without having to physically visit the retail bank, saving the consumer time and money (Lin, 2011; Fenu & Pau, 2015). While mobile banking has many benefits to offer, its cybernetic nature and perceived risks associated with its use, creates trust issues (Alalwan *et al.*, 2016).

Although the literature comprises several definitions of trust, most of these definitions highlight the concept of vulnerability (Cox *et al.*, 2016). For example, trust is defined as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer *et al.*, 1995:712). Various other authors define trust in a similar fashion (Ho & Weigelt, 2005; Colquitt *et al.*, 2007). Trust in a banking context is a key factor for success, cooperation between the bank and its customers, stability of the bank’s operations and long-term relationship building to ultimately gain and maintain a competitive advantage (Skvarciany & Jureviciene, 2017). Trust in any online environment, including mobile banking plays an important part, primarily because customers have no direct control over the product or service provider’s actions (Muda *et al.*, 2016). A number of mobile banking studies indicate that trust is one of the main drivers of mobile banking adoption (Afshan & Sharif, 2016; Baptista & Oliveira, 2016; Gumussoy, 2016; Malaquias & Hwang, 2016). As such, it is worthwhile for retail banks to investigate and understand the mobile banking trust related factors of trust propensity (Kim *et al.*, 2009), perceived integrity (Kabir, 2013; Robert and Rubert, 2013), structural assurances (Gu *et al.*, 2009; Kim *et al.*, 2009; Zhou 2011) and information and system quality (Zhou, 2011; 2012a; 2012b). Furthermore, of greater importance is understanding the differences in mobile banking trust and its related dimensions amongst Generation Y consumers.

There are several reasons why the Generation Y banking segment is of great significance to a retail bank. The Generation Y cohort, or so-called millennials (Goldgehn, 2004), comprises individuals that were born between 1986 and 2005 (Markert, 2004). In South Africa, this cohort represents almost 36% of the total South African population (Statistics South Africa, 2019). Therefore, the size of the Generation Y cohort makes this cohort a meaningful and potentially high profitable banking segment that retail banks should tap into. Generation Y are educated, digitally savvy, optimistic and self-confident consumers who wield significant financial presence in the market (Hussain & Wong, 2015). As such, Generation Y is a strong indicator of a future mass affluent demographic (Knoll & Pollari, 2016).

Research indicates that the majority of Generation Y banking consumers, many of whom are first-time bankers, are sourcing the latest digital banking channels to meet their banking expectations (KPMG South Africa, 2014), suggesting that this is an attractive banking segment to target in terms of digital banking channels, including mobile banking. A research report published by (Deloitte, 2010) explains that Generation Y banking consumers are comfortable using all things mobile, including the self-service mobile banking channel. Carlin (2019) concurs, stating that Generation Y consumers expect transacting to be easy, fast and self-oriented, independent of time and place.

Although many mobile banking studies have been conducted in South Africa (Brown *et al.*, 2003; Ismail & Masinge, 2012; Maduku & Mpinganjira, 2012; Nel & Raleting, 2012; Nel *et al.*, 2012; Njenga & Ndlovu, 2013), none of these studies considered the differences in mobile banking trust amongst Generation Y consumers of the major South African retail banks. While there is a number of established retail banks serving the various needs of investors, businesses and consumers (Fawthrop, 2019), there are five major South African retail banks that dominates the market, namely First National Bank (FNB), Capitec, Standard Bank, ABSA and Nedbank (BusinessTech, 2019). All of these banks are grounded on the country's sophisticated banking and financial infrastructure and is overseen by the South African Reserve Bank and regulated by the Financial Sector Conduct Authority (Fawthrop, 2019). Of the five banks, Capitec is the largest in terms of the number of customers, and Standard Bank the biggest in terms of income base. According to the 2019 South African Consumer Satisfaction Index, Capitec and FNB banking consumers are most satisfied with the services received from their respective banking institutions (BusinessTech, 2019).

To fill the gap in the literature, the purpose of this study was to establish whether Generation Y consumers of the major South African retail banks differ in their mobile banking trust, trust propensity, perceived integrity of the retail bank, mobile banking structural assurances as well as perceived information and system quality of mobile banking. Understanding the differences in mobile banking trust and its related dimensions amongst Generation Y consumers of the major South African retail banks, retail banks can strategise to allay these consumers' trust concerns, foster greater trust in their mobile channels as well as gain a competitive advantage and maintain consumer loyalty amongst this cohort of consumers.

2. Literature Review

2.1. Mobile Banking Structural Assurances

Structural assurance denotes the perceived effectiveness of the safety features (Zhang *et al.* 2019) such as legal contracts and other technical mechanisms (Lin *et al.*, 2011) in mobile banking. These assurances provide the mobile banking consumer protection against risks such as privacy, information, identity and financial loss (Zhou, 2012a). As such, structural assurances prevent unexpected and unwanted consequences, leaving the consumer feeling safe and secure (Shapiro, 1987; Coetzee & Eloff, 2005; Lin *et al.*, 2011). Having safeguards in place create the perception that obligations will be fulfilled, boosting consumer confidence (Zhang *et al.*, 2019) and building trust in the service provider (Lin *et al.*, 2011). A number of mobile banking studies verify the relationship between structural assurance and trust (Gu *et al.*, 2009; Kim *et al.*, 2009; Zhou 2011; Zhou, 2012; Maroofi *et al.*, 2013; Pamungkas & Kusuma, 2017).

2.2. Information and System Quality of Mobile Banking

Information and system quality is likely the most important quality components for the overall success of an information system (DeLone & McLean, 2003). Information quality represents the quality of information output by any system (Lee & Chung, 2009). Moreover, accurate, relevant, up-to-date and sufficient information is referred to as information quality (Zhou, 2013; Chatterjee *et al.*, 2018). Mobile banking consumers often use mobile banking to access information on payments and account balances. Information that is inaccurate, outdated or irrelevant may create a perception in the minds of consumers that their retail bank and its mobile banking channel is incapable of providing quality information, which consequently questions the integrity and benevolence of the retail bank and encourages distrust amongst consumers (Zhou, 2012). System quality refers to the speed of the network (Gu *et al.*, 2009), design and visuals of the system as well as system navigation (Zhou, 2013). As such, it is the overall performance of a system (DeLone & McLean, 2003). In a mobile banking context, system quality signifies the level of difficulty consumers experience navigating the mobile banking system. It can also include the interface design. When mobile banking consumers experience difficulty in navigating the system as a result of an inadequate interface design, then questions are raised whether the retail bank and its mobile banking channel can be trusted (Zhou, 2011). Several mobile banking studies suggests that both information and system quality have an influence on trust (Lee & Chung, 2009; Zhou, 2011; 2012a; 2012b).

2.3. Integrity of Retail Banks

The integrity of a retail bank is determined by its adherence to a generally acceptable set of principles (Kabir, 2013). The integrity of a retail bank is strengthened when the retail bank makes agreements in good-faith, keeps promises made (Lin, 2011), remains committed to its customers (Masrek *et al.*, 2012), upholds ethical standards as well as ensures a safe and secure banking environment (Nor and Pearson, 2008). From a mobile banking perspective, the principles that lay the foundation for integrity includes the protection of consumers' personal information, provision of trustworthy information as well as a safe and secure virtual environment (Lin, 2011). Adhering to these principles will earn a retail bank and its mobile banking channel the reputation of having integrity and help build a trusting relationship. Various studies on mobile banking show that there is an association between the integrity of a retail bank and trust (Kabir, 2013; Robert and Rubert, 2013). Other information systems research also validates the relationship between integrity and trust (Sharif *et al.*, 2005; Nor & Pearson, 2008).

2.4. Trust Propensity

While the definition of propensity to trust is not widely agreed upon and although its definition varies from discipline to discipline (Midha, 2012), trust propensity may be described as an individual difference characteristic or tendency for one individual to trust another individual (Mayer *et al.*, 1995). As such, it is referred to as a personality-based trust (McKnight *et al.*, 2002) that signifies an individual's tendency or willingness to believe that other individuals may be trusted and depended upon (Mayer *et al.*, 1995; Kumar *et al.*, 2012). Individuals that have a higher propensity to trust are less likely to feel exploited and are therefore more willing to trust a person or situation (Alarcon *et al.*, 2018). Therefore, it is important that retail banks understand their consumers' personality traits in consumer-based mobile commerce, such as mobile banking. Consumers that are more willing to trust are more likely to experience feelings of comfort and safety in using mobile banking (Luo *et al.*, 2010), and consequently more likely to develop a positive attitude towards and trust in mobile banking (Zhou, 2011). Although it is important to determine the relationship between trust propensity and trust in mobile banking, it is surprising that only a limited number of mobile banking studies investigated and verified this relationship (Kim *et al.*, 2009; Zhou, 2011; Chiu *et al.*, 2017)

3. Research Methodology

3.1. Sample

The sampled participants consisted of Generation Y consumers aged between 18 and 24 years. These consumers were all registered at a public higher education institution (HEI) in South Africa. To select the participants, the 26 registered South African HEIs were narrowed down to three campuses in the Gauteng region of South Africa using judgement sampling. Thereafter, 150 Generation Y banking consumers per campus were selected, giving a total sample size of 450 consumers. Only participants with a bank account at one of South Africa's major retail banks and that engages in mobile banking were asked to complete the questionnaire. A total number of 334 questionnaires were completed, usable and analysed, giving this study a response rate of 74 percent. In terms of sample description, all specified age groups were included in the sample. In addition, participants that speak South Africa's 11 official spoken languages as well as participants originating from each South African province made up the sample. Of the participants, approximately 58 percent were female and 42 percent male. Compared to the other three race groups, the sample comprised mostly black participants. Moreover, majority of the sample were from a traditional university campus, followed by a comprehensive university campus. In terms of retail bank, the sample comprised more Standard Bank banking consumers, followed by Capitec banking consumers. Statistics related to the sample description is provided in Table 1.

Table 1. Sample Description

	%		%		%
Age		Language		Province	
18	6.9	Afrikaans	9.3	Eastern Cape	2.1
19	14.1	English	7.5	Free State	10.8
20	25.7	IsiNdebele	0.3	Gauteng	57.2
21	24.9	IsiXhosa	6.9	KwaZulu-Natal	2.7
22	14.4	IsiZulu	14.7	Limpopo	11.4
23	8.7	Sepedi	8.4	Mpumalanga	6.3
24	5.4	Sesotho	26.3	Northern Cape	0.6
Gender		Setswana	13.2	North-West	7.2
Female	58.1	SiSwati	3.9	Western Cape	1.8
Male	41.9	Tshivenda	4.5	Campus	
Race		Xitsonga	4.8	Traditional	37.2
Black	84.1	Retail bank		Comprehensive	33.2
Coloured	2.4	ABSA	19.2	Technology	29.6
Indian/Asian	2.7	Capitec	19.7		
White	10.8	FNB	16.5		
		Nedbank	19.2		
		Standard Bank	25.4		

3.2. Research Instrument

Self-administered survey questionnaires were designed and distributed to gather the study's data. The questionnaire consisted of a cover letter and three sections. The purpose of the cover letter was to outline the purpose of the study and to highlight that participation in the study was voluntary and that the responses would be reported in aggregate. The first section of the questionnaire collected demographical data of the participants. Banking background information was covered in section two of the questionnaire and included, amongst others, questions relating to bank account ownership, retail banking institution, and mobile banking usage. The questionnaire's third section included the scaled items related to trust in mobile banking. To measure mobile banking trust amongst Generation Y consumers, six possible antecedents of trust were identified, namely trust in mobile banking, trust propensity, integrity of the mobile bank, mobile banking structural assurances, information and system quality of mobile banking. The internet banking adoption scale of Nor and Pearson (2008) were adapted to measure mobile banking trust, integrity of the mobile bank and mobile banking structural assurances, whereas the Zhou (2011) initial trust in mobile banking scale was used to measure the remaining antecedents. Each antecedent included three scaled items, resulting in 18 possible scaled responses and was measured on a six-point Likert-type scale that ranged from strongly disagree (1) to strongly agree (6).

3.3. Research Design

A descriptive and single cross-sectional research design was followed to achieve the study's objectives.

3.4. Data Collection Procedure

Prior to distributing the questionnaires, the three university campuses were contacted to ask for permission to distribute the questionnaires at their campus. Thereafter, three trained fieldworkers distributed the questionnaires at each campus to those Generation Y consumers who willingly agreed to participate in the study using the mall-intercept survey technique.

3.5. Ethical Considerations

Before the data collection commenced, the proposed questionnaire was sent to North-West University's Ethics committee for ethical clearance and approval and was subsequently approved. Moreover, no sensitive questions that could harm the participants were asked. As such, all ethical standards of academic research were adhered to. In addition, the cover letter assured the participants' right to privacy and highlighted that their identity will remain anonymous.

4. Data Analysis

IBM SPSS Statistics, Version 25 was the statistical software used for the statistical analysis. Statistical analysis included descriptive statistics, reliability and validity measures, Pearson's product-moment correlation analysis, collinearity diagnostics and one-way analysis of variance (ANOVA).

5. Results

5.1. Descriptive Statistics, Reliability Measures and Correlation Matrix

As part of the descriptive statistics, the mean (\bar{X}) and standard deviation (SD) values were calculated for each antecedent of trust in mobile banking. The internal consistency reliability of the scale was assessed calculating the Cronbach's alpha coefficient (α) for each antecedent. To determine the relationship between the antecedents, Pearson's product-moment correlation coefficients were calculated. A summary of these results are outlined in Table 2.

Table 2. Mean, Standard Deviation, Cronbach's Alpha and Correlation Matrix

Antecedent	\bar{X}	SD	α	(1)	(2)	(3)	(4)	(5)
Mobile banking trust (1)	4.2	1.2	0.8					
	8	6	9					
Trust propensity (2)	3.0	1.2	0.7	0.28				
	0	2	9	*				
Perceived integrity (3)	3.9	1.1	0.8	0.47	0.33			
	5	0	8	*	*			
Perceived structural assurance (4)	4.2	1.1	0.8	0.64	0.20	0.43		
	7	5	8	*	*	*		
Perceived information quality (5)	4.6	0.9	0.8	0.54	0.16	0.38	0.67	
	3	9	9	*	*	*	*	
Perceived system quality (6)	4.6	0.9	0.7	0.51	0.20	0.41	0.58	0.67
	1	1	3	*	*	*	*	*

Note: * Statistically significant at $p \leq 0.05$ (2-tailed)

As seen in Table 2, majority of the mean values were above 3.5. These values, on a six-point Likert-type scale, suggests that Generation Y consumers perceive their retail bank's mobile banking as trustworthy ($\bar{X} = 4.28$) and are they are generally willing to rely on others ($\bar{X} = 3.00$). Furthermore, Generation Y consumers perceive their retail bank as having the necessary integrity ($\bar{X} = 3.95$) and structural assurances ($\bar{X} = 4.27$). In addition, the mean values indicate that Generation Y consumers perceive their retail bank's mobile banking as having adequate information ($\bar{X} = 4.63$) and system quality ($\bar{X} = 4.61$). In terms of the internal consistency reliability, each antecedent's Cronbach's alpha suggests acceptable

internal consistency reliability ($\alpha \geq 0.70$) (Hair *et al.*, 2010). To determine the relationships between the antecedents, correlation analysis was undertaken. The correlation matrix in Table 2 indicates that there is a statistically positive relationship between each pair of antecedents. These relationships suggest the nomological validity of the measurement theory (Hair *et al.*, 2010). With regards to the strongest relationship recorded, the relationship between perceived structural assurance and information quality ($r = 0.672$, $p < 0.05$), as well as between perceived information quality and system quality ($r = 0.672$, $p < 0.05$) was the strongest. Because none of the correlation coefficients were above 0.90, the possibility of multicollinearity can be eliminated.

5.2. ANOVA

To establish whether Generation Y consumers of the major South African retail banks differ in their mobile banking trust, one-way ANOVA was performed on the data set. The ANOVA results are presented in Table 3.

Table 3. Differences in Generation Y consumers' Trust in Mobile Banking

ANOVA		Sum of squares	df	Mean square	F	Sig.
Antecedent Mobile banking trust	Between Groups	28.047	4	7.012	4.602	0.001*
	Within Groups	501.265	329	1.524		
	Total	529.312	333			
Trust propensity	Between Groups	3.566	4	0.892	.601	0.662
	Within Groups	488.100	329	1.484		
	Total	491.666	333			
Perceived integrity	Between Groups	12.494	4	3.124	2.612	0.035*
	Within Groups	393.418	329	1.196		
	Total	405.913	333			
Perceived structural assurance	Between Groups	25.185	4	6.296	4.969	0.001*
	Within Groups	416.921	329	1.267		
	Total	442.106	333			
Perceived information quality	Between Groups	14.483	4	3.621	3.884	0.004*
	Within Groups	306.728	329	0.932		
	Total	321.211	333			
Perceived system quality	Between Groups	5.809	4	1.452	1.770	0.135
	Within Groups	270.023	329	0.821		
	Total	275.832	333			

Note: * Statistically significant at $p \leq 0.05$ (2-tailed)

The evidence in Table 3 shows that, while no statistically significant difference was found between Generation Y consumers of the major South African retail banks and trust propensity, as well as no difference between these consumers and perceived system quality of mobile banking, a statistically significant ($p \leq 0.05$) difference was noted between the different retail banking consumers and mobile banking trust, perceived integrity of the retail bank, mobile banking structural assurances as well as perceived information quality of mobile banking. Using *post hoc* comparison tests, the Tukey HSD highlighted specifically where the retail banking consumers differed. The Tukey HSD revealed that Capitec banking consumers have greater trust in mobile banking ($\bar{X} = 4.75$, $SD = 1.14$) than Standard Bank ($\bar{X} = 4.14$, $SD = 1.19$) and Nedbank consumers ($\bar{X} = 3.90$, $SD = 1.38$). Furthermore, the results indicate that FNB banking consumers perceive their bank as having a greater degree of integrity ($\bar{X} = 4.21$, $SD = 1.01$) compared to Nedbank consumers ($\bar{X} = 3.74$, $SD = 1.16$). In terms of differences in mobile banking structural assurances, the results suggest that Capitec consumers have greater trust in their retail bank's structural assurances ($\bar{X} = 4.76$, $SD = 0.90$) than Standard Bank ($\bar{X} = 4.09$, $SD = 1.17$) and Nedbank consumers ($\bar{X} = 3.95$, $SD = 1.36$). Lastly, the Tukey HSD outlined that both Capitec ($\bar{X} = 4.85$, $SD = 0.86$) and FNB consumers ($\bar{X} = 4.84$, $SD = 0.80$) show great trust in the information quality of mobile banking compared to Nedbank consumers ($\bar{X} = 4.31$, $SD = 1.13$).

6. Discussion

The purpose of this study was to determine whether retail banking consumers of the major South African retail banks, namely ABSA, Capitec, FNB, Nedbank and Standard Bank differed in their mobile banking trust. The mobile banking trust antecedents included trust in mobile banking, trust propensity, perceived integrity of the retail bank, mobile banking structural assurances, information and system quality of mobile banking. The findings suggest that although Generation Y retail banking consumers did not differ in terms of trust propensity and perceived system quality of mobile banking, they differed in terms of perceived trust in mobile banking, perceived integrity of the retail bank, perceived mobile banking structural assurances and perceived information quality of mobile banking. More specifically, the results infer that Capitec banking consumers trust their retail bank's mobile banking more compared to Standard Bank and Nedbank consumers. Moreover, FNB banking consumers believe that their bank has a higher degree of integrity in consumer dealings than Nedbank consumers. Furthermore, Capitec consumers perceive their retail bank's mobile banking structural assurances as more trustworthy than Standard Bank and Nedbank consumers. In addition, consumers of both Capitec and FNB

have greater trust in the information quality of their retail bank's mobile banking compared to Nedbank consumers. Retail banks across the globe can use the findings of this study to better understand the antecedents of trust in mobile banking amongst Generation Y consumers, and in doing so, foster greater trust in its mobile banking. The Generation Y banking cohort is emerging as an important consumer segment to engage. Building and maintaining long-term relationships and trust with consumers of this segment would require retail banks to relook many of its strategies, largely along the dimensions of banking distribution channels and marketing.

Based on the results of this study, it is important that retail banks in South Africa, in particular Nedbank, think of ways to help build trust in mobile banking amongst Generation Y consumers. To this end, retail banks are encouraged to keep mobile channels as simple as possible, up-to-date and secure. Although user experience of mobile banking is important, retail banks should also build trust in terms of perceived fairness, care and concern that has an emotional impact and connection. This is also likely to help bolster the retail bank's reputation of having integrity. Through offering trustworthy mobile banking, retail banks are in an ideal position to grow positive word-of-mouth. Positive word-of-mouth is a reliable and compelling way to attract new mobile banking consumers as well as persuade consumers to switch retail banks. This is also likely to stimulate business growth. To reduce uncertainties and perceived risks such as cybercrime related to using mobile banking, and ultimately earn consumers' trust in the retail bank's mobile channel, retail banks are advised to offer proper structural assurances, including biometric solutions, improved encryption that protect the consumer from information and financial loss as well as third party certifications. In addition, any information requested by mobile banking consumers should be relevant and accurate. Incomplete or incorrect information may harm the trust building process in mobile banking. As such, it is important that retail banks survey its consumers on a regular basis to determine their mobile banking information quality requirements.

7. Limitations and Future Research

The objective assessment of this study's findings was limited given the non-probability convenience sampling method used. Moreover, this study was limited to three university campuses in one particular region of South Africa. As such, the opportunity exists to duplicate this study on a larger scale by including more Generation Y consumers across several university campuses situated in various provinces of South Africa. In addition, longitudinal and comparative studies could be considered for future research.

8. Conclusion

Mobile banking is beneficial in terms of saving time and money as well as convenience and efficiency. However, given its cybernetic nature and risks associated with its use, trust issues are created. Therefore, it is important that retail banks ensure that their mobile banking channel is trustworthy. As such, the purpose of this study was to establish whether Generation Y consumers of the major South African retail banks differ in their mobile banking trust. The study found differences between Generation Y consumers of the major South African retail banks and perceived trust in mobile banking, integrity of the mobile bank, mobile banking structural assurances as well as the information quality of mobile banking. Through better understanding how consumers of these major retail banks differ in their mobile banking trust, all South African retail banks can strategise to allay Generation Y consumers' trust concerns, foster greater trust in their mobile channels as well as gain a competitive advantage and maintain consumer loyalty amongst this cohort.

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