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Do Generation Y Consumers Differ in their Mobile Banking Utility? Evidence from South Africa

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Abstract: Mobile banking utility such as convenience, usefulness and ease of use as well the time and money saving properties associated with using mobile banking, is important to banking consumers. As such, it is important that retail banks invest the necessary time and resources into their mobile banking channels, not only to ensure adequate mobile banking utility, but also to differentiate its mobile channels from other mobile banking channels in the highly competitive mobile banking market. To this end, the purpose of this study was to investigate mobile banking utility differences amongst Generation Y consumers of the major South African retail banks. A descriptive and single cross-sectional research design informed the methodology followed in this study. Self-administered survey questionnaires were used to collect data from a convenience sample of 334 Generation Y mobile banking consumers. Descriptive statistics, reliability and validity measures, Pearson's product-moment correlation analysis, collinearity diagnostics as well as one-way analysis of variance (ANOVA) were used to analyse the data. The results suggest that there are differences between Generation Y consumers of the major South African retail banks and attitudes towards mobile banking, perceived usefulness, ease of use, compatibility and perceived mobile banking self-efficacy. Retail banks can use the findings of this study to improve its mobile banking utility and in doing so, gain greater market share and improved customer satisfaction and loyalty.

Keywords: Usefulness; ease of use; Generation Y; mobile banking; South Africa

JEL Classification: G21

1. Introduction

Mobile banking is a prominent and innovative financial services delivery channel, particularly in emerging markets such as South Africa where access to banking services is limited (Thusi & Maduku, 2020). Mobile banking is essentially any form

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of banking transaction that is undertaken using a mobile device (Koksal, 2016) and is offered by retail banks in an attempt to modernise and diversify its services in the ever-changing technological environment as well as strengthen its competitiveness and performance (Souiden *et al.,* 2020). Mobile banking offers utility and convenience, such as checking account balances, paying and managing accounts, purchasing investment products as well as funds transfers (Gu *et al.,* 2009), all of which can be done independent of time and place, saving the consumer valuable time and money (Gumussoy *et al.,* 2018). Moreover, mobile banking is a faster way of undertaking banking transactions compared to traditional branch banking (Safeena *et al.,* 2012). Furthermore, mobile banking allow retail banks to satisfy the banking needs and wants of increasingly demanding banking consumers more efficiently (Komulainen & Saraniemi, 2019). In addition, retail banks rely on mobile banking to reduce operational expenses, improve customer banking experience (Thusi & Maduku, 2020) as well as retain and gain new market segments (Souiden *et al.,* 2020) such as Generation Y.

The Generation Y banking market segment, a consumer segment born between 1986 and 2005 (Markert, 2004), is important for a number of reasons. First, this segment make up approximately 31.5 percent of the global population (Bloomberg, 2018) and represents 35 percent of the total South African population of 59 million people (Statistics South Africa, 2020). As such, the size of the Generation Y market segment presents an attractive market opportunity to stimulate mobile banking adoption. Second, Generation Y has large disposable incomes (Bloomberg, 2018) and therefore expect transactions through mobile banking to be easy, quick and self-oriented (Carlin, 2019). Another reason why Generation Y banking consumers represents a lucrative market proposition for retail banks to increase their mobile banking acceptance, is their quick adaption to changes in innovative technology (Purani *et al.,* 2019) as well as their technological astuteness (Au-Yong-Oliveira *et al.,* 2018). However, Generation Y are challenging consumers to retain and attract (Moreno *et al.,* 2017). For example, in their study, JP Morgan (2018) found that nearly 57 percent of Generation Y consumers might switch banks if a better mobile experience is offered by another retail bank. Therefore, it is important that the major South African retail banks differentiate its mobile banking channels in terms of the utility it offers to ensure increased mobile banking market share from Generation Y consumers.

The major retail banks in South Africa includes ABSA, Capitec, First National Bank (FNB), Nedbank and Standard Bank (BusinessTech, 2019). Of these retail banks, FNB has the largest market capitalisation of R230 billion, followed by Standard Bank at R185.7 billion. In terms of network and reach, Standard Bank has the largest branch network with 1,114 retail bank branches and the second largest automated teller machine (ATM) network. ABSA has 9,763 ATMs, representing the widest network by that measure. The leading bank regarding the number of customers is

Capitec (14.5 million), followed by ABSA (9.7 million) and Standard Bank (9.2 million). Although a large consumer base is important, equally important is customer satisfaction. The South African Customer Satisfaction Index (SAcsi) on banking report that Capitec is leading the pack, followed by Nedbank, FNB, ABSA and Standard Bank (BusinessTech, 2020). Concerning mobile banking, consumers perceive FNB's mobile channel to be the best. In addition, consumers perceive FNB as the overall best digital bank. Standard Bank's mobile banking channel is perceived to be the worst, suggesting that its mobile channel is failing to meet consumer expectations (BusinessTech, 2018).

While there are several published South African mobile banking studies (Njenga & Mpinganjira, 2012; Nyoka, 2018; Thusi & Maduku, 2020; Chigori *et al.,* 2020), none of these studies investigated whether Generation Y consumers of the major South African retail banks differed in their mobile banking utility. To address this gap in the literature, the purpose of this study was to investigate mobile banking utility differences amongst Generation Y consumers of the major South African retail banks. Retail banks in South Africa can embrace the results of this study to understand better the mobile banking utility needs of its consumers. Through better understanding the utility needs of Generation Y consumers, retail banks can offer a differentiated mobile banking experience to stimulate ultimately mobile banking penetration amongst this consumer segment.

2. Literature Review

2.1. Attitude towards Mobile Banking

Attitude is an individual's feeling about something and can be either positive or negative (Shanmugam *et al.,* 2014). Moreover, attitude influences interest and intention to use something (Davis, 1989). Furthermore, an individuals' attitude towards something is developed over time and can change (Schiffman *et al.,* 2010). Attitude towards using a certain technology, such as mobile banking is influenced by an individual's belief that using the technology will deliver specific outcomes (Ajzen, 1991). For example, if mobile banking consumers believe that their mobile banking channel offers the expected utility, then they would develop a positive attitude towards using the channel. Davis (1989) concurs, indicating that perceived usefulness and ease of use positively influences attitudes towards using a particular technology. As such, it is important that retail banks take note of its consumers' attitudes towards its mobile banking channel, as this will enable them to understand better the mobile banking utility needs of its consumers.

2.2. Perceived Usefulness

The usefulness of a technological innovation refers to the performance effectiveness and advantages offered by the innovation (Surendran, 2012). Davis (1989) believes that usefulness positively influences an individual's intention to use a particular innovation or system. In a mobile banking context, Changchit *et al.* (2020) describe usefulness as the extent to which mobile banking users find the mobile channel helpful in satisfying their banking needs. Malaquias and Silva (2020) explain that perceived usefulness could positively influence the use of mobile banking, since mobile banking users perform financial transactions through mobile banking functionalities. In addition, a number of studies verify that usefulness positively influences attitudes towards mobile banking (Changchit *et al.,* 2020; Rehman & Shaikh, 2020; Van Deventer *et al.,* 2017).

2.3. Perceived Ease of Use

Ease of use refers to the degree to which a technological innovation or system is effortless (Davis, 1989) or without serious difficulties (Owusu *et al.,* 2020). The less complicated an innovation is, the more likely it is that a user of that particular innovation will display a positive attitude towards using it (Nor & Pearson, 2008). Several mobile banking studies confirm the relationship between ease of use and attitudes (Rehman & Shaikh, 2020; Van Deventer *et al.,* 2017; Wessels & Drennan, 2010). In addition, ease of use has a positive influence on behavioural intention to use mobile banking (Kumar *et al.,* 2020; Malaquias & Silva, 2020; Owusu *et al.,* 2020; Venkatesh *et al.,* 2003). This is because the easier the mobile banking functionalities are, the more likely it is to be adopted amongst consumers. As such, it is essential that retail banks consider its mobile channel's ease of use during its development (Koksal, 2016; Siyal *et al.,* 2019).

2.4. Perceived Compatibility

Compatibility is described as the extent to which a technological innovation such as mobile banking is consistent with an individual's values, past experiences and needs (Püschel *et al.,* 2010). There is a strong relationship between compatibility and the ease of use and usefulness of mobile banking (Gumussoy *et al.,* 2018) as well as between compatibility and the adoption of mobile banking (Al-Jabri & Sohail, 2012; Koenig-Lewis *et al* ., 2010). The reason for this relationship is that when mobile banking users find the mobile channel compatible with their lifestyle, they are more likely to adopt it. Conversely, when mobile banking is incompatible with consumers' lifestyle, consumers have to spend time learning how to operate the channel, which is not only time consuming, but also negatively affects the usefulness of the channel (Gumussoy *et al.,* 2018). As such, for mobile banking consumers to perceive the

mobile channel as useful and easy to use, it is important that retail banks ensure that its mobile channel is compatible with its consumers' lifestyle and banking needs.

2.5. Perceived Self-Efficacy

Self-efficacy is individuals' belief that they have the ability, skill and knowledge to undertake an activity (Luarn & Lin, 2005). Self-efficacy is also defined as "an individual's determination in his or her ability to independently act a purposeful behaviour" (Foroughi *et al.,* 2019:1017). From a mobile banking point of view, self-efficacy is believed to have a positive influence on consumers' intention to use mobile banking (Gumussoy *et al.,* 2018; Kumar *et al.,* 2020; Singh & Srivastava, 2018). This is because, in general, consumers with a high level of self-efficacy are more motivated to use mobile banking (Changchit *et al.,* 2020). In addition, there is a relationship between self-efficacy and the ease of use of mobile banking (Lee *et al.,* 2009; Singh & Srivastava, 2018). Changchit *et al.* (2020) concur, explaining that consumers with a high level of self-competency find mobile banking easy to use.

2.6. Perceived Behavioural Control

Behavioural control relates to an individual's belief that a specific behaviour can be performed without difficulty and that a positive outcome will be achieved when performing the behaviour (Ajzen, 1991). Two factors influence this belief, namely self-efficacy and facilitating conditions, the latter referring to access to infrastructure and technical support for technology users (Venkatesh *et al.,* 2012). Facilitating conditions enhances the ease of use and usefulness of mobile banking (Thusi & Maduku, 2020) and is an important predictor of behavioural intention to use mobile banking (Alalwan *et al.,* 2017; Kwateng *et al.,* 2018). In addition, mobile banking users that are self-competent and have the resources necessary to bank via mobile channels will likely have a positive attitude towards using mobile banking (Saibaba & Murthy, 2013; Van Deventer *et al.,* 2017).

3. Research Methodology

3.1. Sample

The sample comprised Generation Y consumers between the ages of 18 and 24 years enrolled at a South African public higher education institution (HEI). Of the 26 registered South African HEIs, three HEI campuses were selected using judgement sampling. The university campuses consisted of one traditional university, one comprehensive university and one university of technology campus. On each campus, 150 Generation Y banking consumers were conveniently chosen to

participate in the study. Of the 450 participants, only 334 participants made use of mobile banking, giving this study a response rate of 74 percent. A description of the sample participants is summarised in Table 1.

Table 1. Description of Sample Participants

	%		%		%
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	**Banking institution**		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

To gather the necessary data, a self-reporting survey questionnaire was designed. The questionnaire included a cover letter outlining the aim of the study and provided a guarantee of the anonymity of the sample participants. Following the cover letter, the questionnaire included a section requesting demographic information, a section on mobile banking usage and a section containing adapted scaled-response items from the Nor and Pearson (2008) internet banking adoption study. Attitudes towards mobile banking, perceived usefulness, perceived ease of use, perceived compatibility, perceived self-efficacy as well as perceived behavioural control were all measured using three items. These 18 scaled items were measured on a six-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (6).

3.3. Research Design

A descriptive research design, using the single cross-sectional research method informed the methodology applied in this study.

3.4. Data Collection Procedure

The data was collected at the three selected HEI campuses using the mall-intercept survey approach, whereby fieldworkers distributed the questionnaires to those participants willing to take part in the study.

4. Data Analysis

To analyse the data, IBM's Statistical Package for Social Sciences (SPSS), Version 26 was used. Descriptive statistics, internal-consistency reliability, nomological validity, Pearson's product-moment correlation analysis, collinearity diagnostics and one-way analysis of variance (ANOVA) was included as part of the data analysis.

5. Results

5.1. Descriptive Statistics, Reliability Measures and Correlation Matrix

Descriptive statistics were calculated to evaluate Generation Y banking consumers' attitudes towards mobile banking, perceived usefulness, ease of use, compatibility, self-efficacy and perceived behavioural control concerning mobile banking. The means ($\bar{X}$) and standard deviations (SD) for the six constructs are reported in Table 2. To test the internal-consistency reliability of the scale, the Cronbach's alpha coefficient (α) was calculated for each construct, where values of 0.70 and above suggest acceptable reliability (Malhotra, 2010). To assess the relationship between the constructs, as well as nomological validity of the constructs, a correlation matrix of Pearson's product-moment correlation coefficients was calculated. Nomological validity is concluded when each pair of constructs has a statistically significant relationship with one another in a theoretically correct direction (Hair *et al.,* 2010). These results are summarised in Table 2.

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

Construct	X̄	SD	α	(1)	(2)	(3)	(4)	(5)
Attitude towards mobile banking (1)	4.92	0.91	0.83					
Perceived usefulness (2)	4.98	0.93	0.93	0.49*				
Perceived ease of use (3)	4.70	1.07	0.86	0.33*	0.33*			
Perceived compatibility (4)	4.74	1.02	0.88	0.53*	0.69*	0.44*		
Perceived self-efficacy (5)	4.54	1.11	0.78	0.49*	0.48*	0.46*	0.49*	
Perceived behavioural control (6)	4.71	1.14	0.84	0.53*	0.40*	0.37*	0.48*	0.52*

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

As shown in Table 2, the means of the responses recorded on the six-point Likert-type scale were all above 3.5, inferring that Generation Y banking consumers perceive mobile banking favourably. The highest mean values were returned for perceived usefulness ($\bar{X}$ = 4.98) and attitudes towards mobile banking ($\bar{X}$ = 4.92), suggesting that Generation Y banking consumers have a positive attitude towards using mobile banking and view mobile banking as being convenient, quick and efficient. Although still in the agreement continuum of the scale, the lowest mean was calculated on perceived self-efficacy ($\bar{X}$ = 4.54). The Cronbach's alpha values for each construct exceeded 0.70, which is indicative of internal-consistency reliability. In terms of the correlation analysis, the correlation coefficients between each of the pairs of constructs were in the correct direction and statistically significant ($p \leq 0.05$), thereby indicating nomological validity. There were no multicollinearity issues worth noting, given that none of the correlation coefficients were above 0.90.

5.2. ANOVA

One-way ANOVA was run to assess whether Generation Y consumers of the major South African retail banks differ in their utility in mobile banking. Table 3 reports on the ANOVA results.

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

Construct		Sum of squares	df	Mean square	F	Sig.
Attitude towards mobile banking	Between Groups	9.660	4	2.415	3.009	0.018*
	Within Groups	264.074	329	0.803		
	Total	273.734	333			
Perceived usefulness	Between Groups	13.495	4	3.374	4.004	0.003*
	Within Groups	277.242	329	0.843		
	Total	290.738	333			
Perceived ease of use	Between Groups	20.915	4	5.229	4.782	0.001*
	Within Groups	359.716	329	1.093		
	Total	380.631	333			
Perceived compatibility	Between Groups	25.352	4	6.338	6.449	0.000*
	Within Groups	323.356	329	0.983		
	Total	348.708	333			
Perceived self-efficacy	Between Groups	27.932	4	6.983	6.005	0.000*
	Within Groups	382.564	329	1.163		
	Total	410.496	333			
Perceived behavioural control	Between Groups	4.636	4	1.159	0.884	0.474
	Within Groups	431.407	329	1.311		
	Total	436.043	333			

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

The results highlighted in Table 3 indicate that there was no statistically significant difference noted between Generation Y consumers of the major South African retail banks and perceived behavioural control. However, a statistically significant ($p \leq 0.05$) difference was found between Generation Y consumers of the major South African retail banks and attitudes towards mobile banking, perceived usefulness, ease of use, compatibility and perceived self-efficacy. A *post hoc* comparison test, namely the Tukey HSD test outlined exactly where the retail banking consumers differed. This test revealed that Capitec banking consumers have a more favourable attitude towards mobile banking ($\bar{X} = 5.23$, SD = 0.79) than Nedbank consumers ($\bar{X} = 4.72$, SD = 1.03). In terms of perceived usefulness, Capitec banking consumers perceive mobile banking as being more useful ($\bar{X} = 5.22$, SD = 0.87) than Standard Bank consumers ($\bar{X} = 4.79$, SD = 0.90). Likewise, FNB consumers think that mobile banking is more useful ($\bar{X} = 5.27$, SD = 0.71) than Nedbank ($\bar{X} = 4.80$, SD = 1.06) and Standard Bank consumers. The results also indicate that both Capitec ($\bar{X} = 5.01$, SD = 1.08) and FNB consumers ($\bar{X} = 5.01$, SD = 0.89) view mobile banking as being more easy to use compared to both ABSA ($\bar{X} = 4.47$, SD = 1.24) and Nedbank banking consumers ($\bar{X} = 4.39$, SD = 1.15). With regards to perceived compatibility, both Capitec consumers ($\bar{X} = 5.08$, SD = 0.92) and FNB consumers ($\bar{X} = 5.08$, SD = 0.80) indicated that mobile banking is more compatible with their lifestyle compared

to Nedbank consumers ($\bar{X} = 4.33$, SD = 1.28). Concerning the perceived self-efficacy of mobile banking, Capitec consumers believe that they are more capable of using mobile banking ($\bar{X} = 4.88$, SD = 1.13) than both Nedbank ($\bar{X} = 4.27$, SD = 1.22) and Standard Bank consumers ($\bar{X} = 4.33$, SD = 1.03). Lastly, FNB consumers also believe that they are more capable of using mobile banking ($\bar{X} = 4.96$, SD = 0.86) compared to ABSA ($\bar{X} = 4.39$, SD = 1.09), Nedbank and Standard Bank consumers.

6. Discussion

The aim of this study was to investigate mobile banking utility differences amongst Generation Y consumers of the major South African retail banks, namely ABSA, Capitec, FNB, Nedbank and Standard Bank. The mobile banking utility constructs included attitudes towards mobile banking, perceived usefulness, ease of use, compatibility, self-efficacy and perceived behavioural control concerning mobile banking. The results indicate that while Generation Y mobile banking consumers of the major South African retail banks did not differ in terms of their perceived behavioural control concerning mobile banking, they differed in terms of their attitudes towards mobile banking, perceived usefulness, and ease of use, as well as their perceived compatibility and self-efficacy of mobile banking. The results show that Capitec mobile banking consumers in particular have a more positive attitude towards their mobile banking channel than Nedbank consumers. Furthermore, Capitec consumers believe that their bank's mobile banking is more useful than the mobile banking consumers of Standard Bank. Similarly, FNB mobile banking consumers think that their retail bank's mobile channel is more of use compared to those consumers who make use of Nedbank's mobile banking. Moreover, both Capitec and FNB consumers perceive their mobile banking channels as being more easy to use than the mobile channels used by both ABSA and Nedbank consumers. The mobile banking channels used by both Capitec and FNB consumers are also more compatible with their lifestyles compared to consumers who make use of Nedbank's mobile channel. Lastly, the results show that Capitec consumers believe that they are more capable of using their bank's mobile banking channel compared to mobile banking consumers of both Nedbank and Standard Bank. Likewise, FNB consumers believe that they are more capable of using mobile banking compared to ABSA, Nedbank and Standard Bank mobile banking consumers. Retail banks worldwide can use the results of this study to improve mobile banking utility and better comprehend the perceived utility in mobile banking amongst Generation Y consumers.

Given the results of this study, it is important that retail banks, specifically Nedbank pay attention to the utility aspects of their mobile channels to ultimately gain a competitive advantage and increase the number of mobile banking users. To this end, retail banks are advised to positively influence its consumers' attitudes towards using

their mobile banking channels. This can be done through offering new mobile banking functionalities that are safe and easy to use as well as convenient. For example, it is recommended that retail banks introduce virtual bankcards that are accessed via mobile banking and used for online shopping across platforms or for recurring payments. Virtual cards can also combat fraud associated with a physical bankcard. Other mobile banking functionalities could include online trading, personal budgeting, renewing car licences and well as tools and tips on how to save and improve health. To facilitate the ease of use of all the services offered through mobile banking, retail banks are encourage to include short tutorials showing consumers step-by-step how each service works. In addition, mobile banking should be compatible with the lifestyles of Generation Y consumers. As such, mobile banking should be a quick and hassle-free one-stop "shop" that will satisfy all banking needs. It is also recommended that retail banks confer with their consumers on a regular basis to better understand their mobile banking utility needs.

7. Limitations and Future Research

This study used the non-probability convenience sampling method, which limits the objective assessment of the findings. Furthermore, the participants of this study was selected from HEI campuses located in the Gauteng province of South Africa. Therefore, future research could be undertaken that includes Generation Y mobile banking consumers from universities across the nine South African provinces. 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. Other future research possibilities include longitudinal studies as well as comparative studies.

8. Conclusion

Mobile banking utility such as saving time and money as well as convenience and ease of use is important to banking consumers. Because the mobile banking market is highly competitive, it is important that retail banks offer sufficient mobile banking utility and differentiate its mobile banking channels. Therefore, the purpose of this study was to investigate mobile banking utility differences amongst Generation Y consumers of the major South African retail banks. The study found that although Generation Y mobile banking consumers of the major South African retail banks did not differ much in terms of their perceived behavioural control concerning mobile banking, they differed in terms of their attitudes towards mobile banking, perceived usefulness, and ease of use, as well as their perceived compatibility and self-efficacy of mobile banking. Retail banks can use the results of this study to understand better the mobile banking utility needs of Generation Y consumers and in doing so,

differentiate its mobile banking channels to gain a competitive advantage and greater market share.

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