

https://dspace.org/

Consumer perceptions and readiness to adopt “tap & go” card payments in South Africa

Sekhoto, July Motlalepule

2023

University of the Witwatersrand, Johannesburg

https://hdl.handle.net/10539/40718

Sekhoto, July Motlalepule. (2023). Consumer perceptions and readiness to adopt “tap & go” card payments in South Africa [Master’s dissertation, University of the Witwatersrand, Johannesburg]. WireDSpace.https://hdl.handle.net/10539/40718

Downloaded from a DSpace repository. https://dspace.org/

Consumer perceptions and readiness to adopt “tap & go” card payments in South Africa

July Motlalepule Sekhoto

912109

A research article submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2023

Protocol number: (WBS/BA912109/192)

(Version September 2022)

DECLARATION

I, **July Motlalepule Sekhoto**, declare that this research article is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

July Motlalepule Sekhoto

Signed at **Pretoria**

On the **20th** day of **January** 20**23**

DEDICATION

This piece of work is dedicated to every child who grew up in poverty, not knowing how their future will look like. Waking up every day during those cold winter days, traveling to and from school barefoot several kilometres daily. Remind yourselves that someone out there is smiling, looking up to you every day with the hope that one day you will change their situation at home for the better. Persevere and don't stop until you have reached your desired destination. In no time everything around you will be different, only then you will realise the power of visualising your goals and dreams. Looking back today it sure does feel like a dream which was built from a zero base.

ACKNOWLEDGEMENTS

"*How priceless is your unfailing love, Oh God! People take refuge in the shadow of your wings. They feast on the abundance of your house; you give them drink from your river of delights" – **Psalms 36: 7 – 8 New International Version**.*

This two-year journey wouldn't have been easy without the support and motivation from several key people around me. All the words of encouragement from fellow syndicate members and other MBA candidates at large. Endless calls of encouragement from a group of friends whom I grew up with and clearly understand my academic journey and the story of how it started. I am most thankful to my beautiful wife, family, and kids for all the love, support, and patience throughout this journey, it wasn't easy, but they all stood by my side until the end.

To all Wits Business School lecturers, professors and supporting staff, thank you for your continued support throughout the journey. A big thank you goes to my parents for instilling a sense of "always finishing up what you have started", no matter how rocky the journey was, their constant reminders on how they raised us gave me an urge to see this journey through. All of this wouldn't have been possible if it wasn't for the guidance and continuous support from my supervisor Professor Anthony Stacey, I thank you kindly Sir.

To everyone who took time out of their busy schedule to complete my online survey, thank you kindly. Lastly, to everyone who played a role whether directly or indirectly and I somehow didn't acknowledge their contribution, please accept my sincere apology, and know that I will forever be grateful.

I will always be grateful for all your support. **Thank you.**

SUPPLEMENTARY INFORMATION

Nominated journal:	South African Journal of Entrepreneurship & Small Business Management
Supervisor / Co-author:	Professor Anthony Stacey
Word count †:	10,376 words
Supplementary files:	Data collection instrument (Questionnaire)
	Other Appendices

ABSTRACT

Payment systems and models are said to be critical in a country's economy and should a country's payment systems be problematic then it is likely to affect the stability of the country's economy. There are new trends in the banking industry which are developing continuously and for businesses to be aligned with these trends it is critically important for marketers, bankers, and business owners to invest and educate consumers on the effectiveness and benefits of using tap & go card payment method. This should also include flexibility in terms of which tap & go payment option to use, whether using a physical card or virtual card. The purpose of this study is to determine the extent to which the eight underlying constructs namely: optimism, innovativeness, convenience, discomfort, insecurity, resistance to change, lack of awareness and perceived risk, affects or impact on consumers' perception, experiences, and readiness to adopt and use tap & go card payments. The respondents for this study we random people who own a tap & go enabled bank card within South African borders. The data collection method used was in a form of an online survey/questionnaire.

The result of the study somehow indicates that, out of the eight constructs only innovativeness and resistance to change showed a bit of a significant impact on consumers' readiness to adopt and use tap & go card payments. This proves that all other constructs like optimism, convenience, discomfort, insecurity, lack of awareness and perceived risk are somehow insignificant predictors of consumers' readiness to adopt tap & go card payments. Given the results of this study, marketers, banks, and business owners should consider making consumers aware of different types of tap & go payment systems. Although respondents did not show any level of insecurity or discomfort on adopting and using tap & go card payments, it is still critical for future researchers to pay attention to these two constructs and add information privacy and cyber security as other constructs to determine how comfortable consumers are transacting using cashless methods like tap & go payment method. Several countries are working hard to try and move to cashless society, therefore South African banks, businesses, government, and business owners should join hands in helping South

Africa move to cashless. Currently there is a considerable amount of money that is sitting offline, since most consumers still prefer paying for their purchases using cash. Educating consumers and offering them safe and convenient payment options, will help increase the circulation of cash in the system and this will help stabilise out economy.

Keywords: Cashless purchases/transactions, cashless society, perception, experiences, and readiness to adopt

---

TABLE OF CONTENTS

Section *Page*

(i) **DECLARATION**……ii

(ii) **DEDICATIONS**……...iii

(iii) **ACKNOWLEDGEMENTS**……iv

(iv) **SUPPLEMENTARY INFORMATION**……v

(v) **ABSTRACT**……..vi

1 **INTRODUCTION AND BACKGROUND OF THE STUDY**……1

2 **TAP AND GO CARD PAYMENT**……3

3 **LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**……...4

3.1 Theoretical background……...4

3.2 Conceptual framework & hypotheses development……6

3.2.1 Consumers perception, experiences & readiness to adopt……...6

3.2.2 Optimism……7

3.2.3 Innovativeness……..7

3.2.4 Convenience……..8

3.2.5 Discomfort……..8

3.2.6 Insecurity……9

3.2.7 Resistance to change……...9

3.2.8 Lack of awareness……..10

3.2.9 Perceived risk……..10

4 **METHODOLOGY**……13

4.1 Sampling, data collection, instrument design, & measurements……..13

4.2 Timeframe……..15

5 **RESEARCH RESULTS**……...15

5.1 Demographic profile of the respondents……..…….....15

5.2 Reliability & validity of the constructs…….…….16

5.3 Tap & Go card payment usage……18

5.4 Multiple regression analysis…….……...19

6 **DISCUSSION AND CONCLUSION**……...23

6.1 Managerial implications…….……23

6.2 Limitations & suggestions for future research……..……25

6.3 Conclusion…..……26

7 **LIST OF REFERENCES**…….28

8 **SUPPLEMENTARY FILES**……..……..33

8.1 Data collection instrument (online questionnaire) ……..……..33

1 INTRODUCTION AND BACKGROUND OF THE STUDY

Over a past decade or so, banks and retailers contributed immensely to expanding consumers payment options when purchasing their daily goods and services (Brown, Hentschel, Mettler, and Stix, 2021). One added option was a “tap & go” card payment or Near Field Communication (NFC) payment which is defined as an upcoming technology that uses a Radio Frequency Identification (RFID) to conduct contactless payments at retail outlets, however it is still unclear whether all these inventions or innovations will help eliminate the use of cash which still occupies a big percentage across different countries (Mehrnezhad, Hao, and Shahandashti, 2014). Despite these new developments, minimal research has been conducted in South Africa specifically around consumers perception or experiences and readiness to adopt “tap & go” card payment, which was initially released in South Africa around July 2015 by HKT payment limited (HKT Payment Limited, 2015).

According to a report done by Deloitte in 2019, over 80% of the South African population possess a bank account, however; despite this number most purchases are still being paid for by cash (Mastercard, 2022). According to Brown (2021) 59% of people prefer to transact using contactless methods of payment and this was after the inception of Covid-19 pandemic. These numbers have since dropped after the lockdown, which shows that the more banks and retailers drive awareness around “tap & go”, the more likely people will know about it and start adopting and using it (Moneyweb, 2021). Since not much research has been conducted in South Africa around the “Tap and Go” card payment, not much is known on what caused this drop in adoption and usage of it.

Though, the actual “tap & go” card payments gained some popularity during the lockdown, a lot still need to be done to increase awareness and educate the consumers on the use and safety of these cashless transactions which may help increase adoption and usage (TechCentral, 2018). In an African continent, several countries have engaged into cashless methods of payments other than “tap & go” card payments, a country like Kenya which was amongst the initial founders of M-pesa which paved a way for more cashless services (Hughes and

Lonie, 2007; Twomey, 2013). The findings from conducting this study may go as far as helping these African countries successfully adopt “tap & go” card payments, buy suggesting what needs to be improved to increase adoption and usage of the “tap & go” card payments.

This study is aimed at assessing the consumers’ perception, experiences, and readiness to adopt “tap & go” card payments. The research question associated with this study is, what are the factors that motivate or demotivate consumers from adopting and using “tap and go” card payment in South Africa? The study will focus on four different types of customers or users, those who have used “tap and go” card payments but stopped along the way, those that are intending to use “tap and go” card payments, those that are using tap & go card payments, and lastly; those that have never used it and are not willing to try.

According to Humbani and Wiese (2017) determining answers to the research question will be critical for service providers, retailers, and banks, as they cannot fully recover their financial investments, unless consumers start adopting and using “tap & go” card payments, especially those that have invested in such innovations. This study is aimed at addressing three specific objectives, firstly to assess and understand what factors would motivate consumers to adopt and use “tap & go” card payments in South Africa. Secondly, to determine what factors would demotivate consumers from adopting and using “tap and go” card payments in South Africa. Lastly, to determine what factors would push consumers away from trying and not wishing to ever use “tap and go” card payments in South Africa.

South Africa has got around 60 million people, and according to a report conducted by Deloitte back in 2019, 80% of them do own a bank account (Statistics SA, 2022).

The study’s contribution is in theory and in practice. Firstly, the theory employed to investigate the enablers and inhibitors of consumers’ readiness to adopt mobile or any form of cashless payment is linked to a less-applied Technology

Readiness Index (TRI), which measures consumers readiness to embrace new technologies (Parasuraman, 2000). Secondly, determining all the factors that influence the adoption and usage of “tap & go” card payments, will help marketers gain a competitive edge over competitors in the market and help contribute towards a cashless society based on convenience and speed (Kim *et al.*, 2010).

This paper will be structured as follows: the next section will briefly describe or introduce the “tap & go” card payment system and its background, followed by a thorough literature review which will dive deeper into similar studies that were done or will be done soon, theoretical background, and hypotheses development. Later, the research methodology will be discussed followed by the timeframe table, subsequently the research results section will follow, then the discussion and conclusion part. Later the managerial implications and limitations for future research will close the study.

2 TAP AND GO CARD PAYMENT

The “tap & go” card payment which was initially founded in the United States of America in 2005 and is defined as a payment transaction that does not need a physical or direct contact between a consumers payment card and the point-of-sale terminal or speed point as it is commonly known in South Africa (Smart Card Alliance, 2016). According to Smart Card Alliance (2016) the consumer can hold a payment card approximately 1.27 centimetres away from the point-of-sale terminal or speed point and the payment account information will immediately transmit wirelessly using a Radio Frequency (RF), which is said to be cryptographically secured by generating a unique code for each transaction. According to Businesstech (2012) Standard Bank became the first bank to roll out the “tap & go” feature on their debit and Visa cards in South Africa, then other banks like FNB, ABSA and Nedbank followed suit. The next part will focus on

literature review on the similar topic or other related topics from different authors, they hypotheses will be developed based on the literature that was discovered.

3 LITERATURE REVIEW & HYPOTHESES DEVELOPMENT

Although the world's population has been granted access to several different cashless payment options, the use of cash is said to be still accounting for around 85% of all the transactions globally (Mastercard, 2014). Recently, Covid-19 pandemic is also said to have helped accelerate the move towards cashless transactions, however; within a short period of time cash payments were on top of the list and occupying a considerable share yet again (Brown, Hentschel, Mettler, and Stix, 2021). Mastercard (2014) stated that the use of cash can become a burden on national economies which represents up to 1.5% of the GDP and this may again be an indicator of several economic issues that such countries face. This is particularly a problem considering that the world is moving towards a cashless society to ensure that cash circulates faster in the system without worrying about a huge amount of cash sitting offline (Mastercard, 2014). Hence it is important to conduct this study to help the Banks, retailers, consumers and even some of our government institutions assess South Africans' perception, and readiness to adopt "tap & go" card payments as well as the experiences of all different types of users. The next section will focus on several findings or studies conducted by different authors on the same topic.

3.1 Theoretical background

Several information technology related theories are relevant to support and motivate the significance of this study, which include but are not limited to technology-acceptance model (TAM) (Davis, 1989), innovation diffusion theory (IDT) (Rogers, 1995), theory of planned behaviour (TPB) (Ajzen, 1991) and technology readiness index (TRI) (Parasuraman, 2000). In assessing which model will best suit this study, the technology readiness index (TRI) came out first, based on the following reasons: Firstly, technology readiness index (TRI)

relates to “people’s propensity to embrace and use new technological innovations for the purpose of accomplishing their daily goals whether at home, school, or work (Parasuraman & Colby, 2014). Technology readiness index is confirmed to be a state of mind, that incorporates a consumer’s mental enablers which are optimism and innovativeness, and consumers mental inhibitors which are discomfort, and insecurity which are amongst the independent variables in this study (Parasuraman, 2000; Parasuraman and Colby, 2014). Secondly, the TRI also consider individual differences when explaining consumers’ intention to adopt a new technology, as compared to other theories such as Technology Acceptance Models which are said to be system specific only which will not help in this study (Parasuraman, 2000).

Lastly, the Technology Readiness Index separately differentiates between the set of inhibitors and the set of enablers which combined can determine consumer’s willingness to adopt, use, or embrace new technology and that can in turn determine whether a consumer will adopt, and use “tap & go” card payments or not (Elliot, Hall & Meng, 2013; Shambare, 2013). The Technology Readiness Index provides the researcher an opportunity to predict the consumer’s attitude towards adopting “tap & go” card payments with its enablers and inhibitors and this will in turn allow a researcher to determine factors that will make a consumer more comfortable adopting a “tap & go” card payment or transaction (Liljander, Gummerus & Van Riel, 2006). Technology readiness index consists of four constructs namely: optimism and innovativeness which serves as enablers, whereas discomfort and insecurity serves as inhibitors of Technology Readiness Index, all of which are relevant to conducting this study to assess the relationship with the dependent variable or construct (Humbani & Wiese, 2017). Though for the purpose of this study several extra independent variables were added to allow the study some flexibility.

3.2 Conceptual framework and Hypotheses development

3.2.1 Consumers' perception, experiences, and readiness to adopt.

Generally, consumers perception can be defined as the process that involves selecting, organizing, and interpreting sensations, which is often used by companies as a marketing concept that includes a consumer's impression and awareness about a company's product or service (Madichie, 2012). It is further stated that consumers' perception is a three-step process that involves "Exposure" to the innovation, in the context of this study, consumers will be exposed to the "tap & go" card payments, then move to "Attention" stage where the "tap & go" card payment innovation will start being noticed by many and gaining their attention, lastly, the "Interpretation" stage where companies will feed consumers information on the innovation to help them make a decision (Madichie, 2012).

While readiness to adopt in the context of this study, can be defined as an extent or degree in which conditions and infrastructure is available for consumers to use the "tap & go" card payments in South Africa (Mastercard, 2014). While consumer's adoption is defined as individual's decision whether to add an innovation or not to his or her daily life, in the context of this study, it means whether a customer decides to use "tap & go" card payments or not in their daily transactions (Straub, 2009). According to Schmitt and Zarantonello (2013) there are several definitions of the term experience, however for the sake of this study it refers to ongoing perceptions, feelings, and direct observations by consumers. Another definition involves the past where consumers have acquired knowledge and accumulated expert know how on the performance of the product or service to be able to make future recommendations to others (Schmitt & Zarantonello, 2013). It is noted that not much literature on consumers' perception, experiences, and readiness to adopt "tap & go" card payments exist in the South African context, hence this study will be significant in bridging this gap.

3.2.2 Optimism

Optimism can simply be defined as people's perceived positive view on technological innovations like "tap & go" and their belief that it offers them increased control, flexibility, and efficiency in their everyday transactions (Parasuraman and Colby, 2014). Therefore, Humbani and Wiese (2017) further argued that optimistic people will potentially focus more on positive things than on negative ones and with this mind-set they are likely to confront any technological innovation with an open mind and willingness to give it a try. A considerable number of previous studies also argued that optimism yields more positive attitudes in general, which are believed to have enough influence in bringing out positive attitudes towards new technological innovations (Lin *et al.,* 2007; Walczuch *et al*., 2007).

Therefore, in the context of the above information from different authors confirming that optimistic people are more likely to influence the adoption process positively, the following hypothesis has been formulated:

H_1: There is a positive relationship between consumers perceived level of optimism regarding "tap & go" card payments and their readiness to adopt?

3.2.3 Innovativeness

In the context of this study, innovativeness can be explained as an individual's personal urge to try out any new information systems or new technological innovation (Chang *et al.,* 2005). Other studies include the one done by Yi, Fiedler, and Park (2006) which states that the domain specific personal innovativeness is deemed to predict the adoption of IT related innovations well. Another study which focuses on mobile payments, is the study conducted by Humbani and Wiese (2017) which is quoted because it still talks about cashless payments, further argued that, since mobile payment is regarded as an innovative technology within the mobile market, it proves that consumers' personal innovativeness could influence the overall intended use of mobile

payment services. Based on these authors findings and reports stated above, the following hypothesis is formulated:

H2: There is a correlation between consumers' personal innovativeness regarding "tap and go" card payments and their readiness to adopt?

3.2.4 Convenience

Mastercard (2014) mentioned convenience as one of the benefits to consumers for using "tap & go" card payments, and they defined convenience as a speed and peace of mind that consumers gain from using a product or service. While this term was first introduced by Copeland (1923) which is a long time ago, but their definition is still relevant, and it was defined as the degree in which little or no cognitive effort is required in deciding when it comes to time-buying or time-saving efforts. Several studies were done using the concept of perceived convenience in conventional shopping by Farquhar and Rowley (2009) and some within the context of online shopping by Jiang, Yang, and Jun (2013) which may not be directly related to cashless payments, but few referrals can be made and drawn from these studies. It has been argued again that for a product or service to be deemed convenient, it must save time and reduce cognitive, emotional, and physical burdens for the end-users (Chang & Polonsky, 2012). Based on the above studies and reports, the following hypothesis was formulated:

H3: There is a positive association between consumers' perceived level of convenience regarding "tap and go" card payments and their readiness to adopt?

3.2.5 Discomfort

People with the discomfort personality trait always feel uneasy and overwhelm by new technological innovations, and generally has a perceived lack of control over technology (Parasuraman & Colby, 2014). It is also argued that people with

this personality trait always feel nervous and uncomfortable when it comes to trying new technologies because they have a feeling that it takes over their daily lives and therefore end up questioning the overall performance (Ali *et al*., 2020). Therefore, based on the above reports, the following hypothesis was formulated:

H4: There is a relationship between consumers' feeling of discomfort towards "tap and go" card payments and their readiness to adopt?

3.2.6 Insecurity

Insecurity is simply defined as people's lack of trust over technology which is believed to be because of scepticism about its ability to work properly without any errors and even concerns that people have about its potential harmfulness (Parasuraman & Colby, 2014). Though there is no literature on insecurity based on "tap & go" card payments, Humbani & Wiese (2017) argued that insecurity was one of the major barriers that block the adoption of mobile payments which falls under cashless payments, as people consider security threats in mobile devices to be more affecting than those in personal computers (Humbani & Wiese, 2017). In South Africa where consumers are experiencing increasing cases of hacking and fraud, people are more fearful of losing their personal data to fraudsters; therefore, insecurity is more likely to influence the adoption of cashless payments like "tap & go" card payments negatively (Jia, 2018). Therefore, considering all the above information, the following hypothesis is formulated:

H5: There is a correlation between consumers' feeling of insecurity towards "tap and go" card payments and their readiness to adopt?

3.2.7 Resistance to change

Resistance to change is frequently associated as one of the flaws preventing people from adopting digital payments, and it is simply defined as unwillingness

to change or adapt to a new way of doing things or adapting to new methods of payment (Agarwal & Khatri, 2021). It is noted that there is not much literature on resistance to change when it comes to adopting “tap & go” card payments, however based on the above statement, the following hypothesis is formulated:

H6: There is an association between consumers’ resistance to change and their readiness to adopt?

3.2.8 Lack of awareness

It is noted that there aren’t many studies done on consumers’ lack of awareness when it comes to adopting new technologies, however whenever there is a slow uptake with a new product line or service line, new technological innovation, companies, and researchers always use “lack of consumer awareness” as their first line of argument (Dickinson & Shaver, 1982). In recent studies done by Mastercard on cashless payment inventions, lack of consumer awareness is one of the factors influencing the adoption and usage of these new payment methods like “tap & go” card payments (Mastercard, 2022). From several studies done on lack of consumer awareness across different industries, it is evident that driving consumer knowledge or awareness is key in increasing adoption and usage even within technological space (Anong & Kunovskaya, 2013). Based on the above reports, the following hypothesis has been formulated:

H7: There is a correlation between consumers’ lack of awareness or knowledge regarding “tap and go” card payments and their readiness to adopt?

3.2.9 Perceived Risk

Perceived risk also appeared to be one of the biggest flaws when it comes to adopting new technologies, and it can simply be defined as the individual’s subjective expectation or perceived failure or a loss in using a risky or an unfamiliar technological innovation (Pham & Ho, 2015). In the context of

cashless payments, not much literature is available especially for South Africa, however; several studies relating to mobile payment service does exist and are worth mentioning since they also fall under cashless transactions. These studies include but not limited to risk being regarded as one of the inhibitors that prevent people from adopting any form of mobile payments (Mallat, 2007; Pham & Ho, 2015; Yang et al., 2012). Some of the studies relating to risk were done by Mallat (2007) who unearthed some of the concerns being privacy of information and protection from some of the participants in the study. Therefore, based on the above findings and reports perceived risk is considered as one of the inhibitors of the adoption process and the following hypothesis was formulated to investigate that:

H8: There is a relationship between consumers' perceived level of risk regarding "tap and go" card payments and their readiness to adopt?

Figure 1 below is a conceptual framework which was motivated by the Technology readiness Index by Parasuraman (2000) as well as some of the gaps which this study may investigate and help to resolve. This is to test whether a correlation, association or relationship exists between a set of independent variables on the left and the dependent variable on the right. On the left it shows four types of tap & go users which include: those that are currently still using tap & card payment, those users who are intending to adopt and use tap & go card payment, users who once used tap & go card payments but stopped for one reason or the other and lastly; users who have never used tap & go card payments. In the middle it contains all independent variables which include Optimism, innovativeness, convenience, discomfort, insecurity, resistance to change, lack of awareness and resistance to change. On the far side is one dependent variable which is consumers' perception, experiences, and readiness to adopt tap & go card payments.

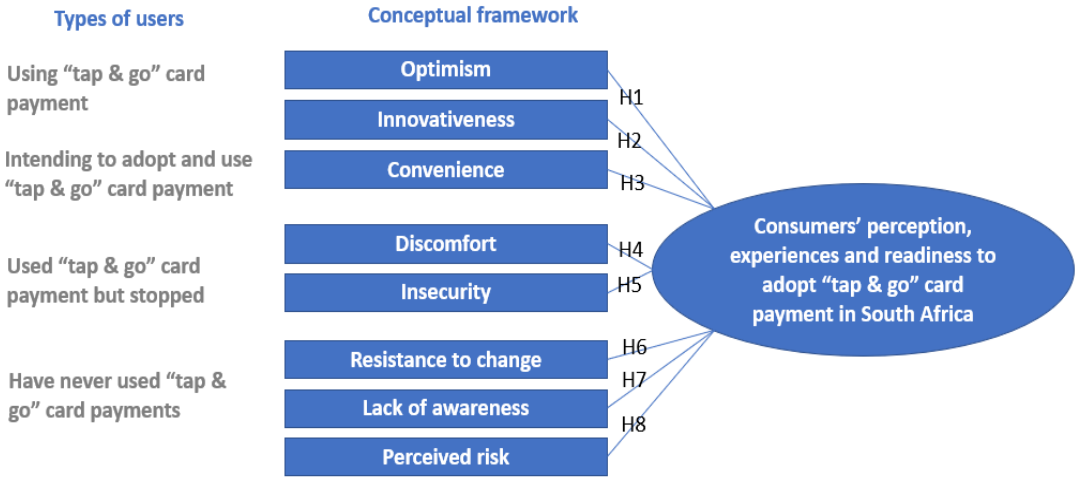


Fig 1: Conceptual framework

Looking at different studies from different countries across the globe, it is evident that researchers are hard at work trying to help governments, banks and retailers come up with solutions on how to move their respective countries to cashless society. Though in South Africa not much has been done in terms of research on what influences adoption and usage on new cashless payments. The main purpose of this study is to assess if there is any association, relationship, or correlation between a set of independent variables and one dependent variable. The results of this study can help banks, retailers, government departments and consumers learn more about the benefits of using "tap & go" card payments which will in turn help South Africa reduce the use of cash for all transactions.

The following section will critically discuss the methodology, taking into considerations sampling and data collection, instrument design, and measurements. This section will also briefly touch on ethical considerations and some of the potential privacy and anonymity issues that may arise when collecting data.

4 METHODOLOGY

4.1 Sampling, data collection, Instrument design, and measurements

To assess and investigate the correlation or relationship between a set of independent constructs or variables with the dependent construct/variable, a multiple regression analysis was used, which is defined as a statistical technique that is used to analyse the relationship between a dependent variable and few independent variables (Osborne & Waters, 2002).

To collect data, an online self-administered questionnaire was used amongst a convenience sample of 150 respondents. This online questionnaire was distributed via an online survey tool called “Qualtrics”, targeting anyone who owns a bank account, a tap & go enabled bank card, and reside in South Africa. A link directing respondents to the Qualtrics questionnaire was distributed via different social media platforms like WhatsApp groups, Facebook, LinkedIn, Instagram, twitter, and via email messaging to attract a large following or participation from relevant respondents. To help eradicate ethical issues, the first page of the questionnaire gave respondents an option to opt in or opt out of the survey and explain that should the respondent feel uncomfortable to continue during the process of completing the questionnaire, they can opt out immediately. All ethical requirements and policies were fully adhered to, and this was made clear to the respondents. To align with the Protection of Personal Information Act “POPIA”, it was clearly stated on the first page of the questionnaire that respondent’s information or answers will be kept confidential, and that the information obtained will only be used for the purpose of analysing the data.

The data collection instrument (questionnaire) was pre-tested by selecting 15 respondents (10% of the overall target) to ensure that there was no biasness in the data collection process when the questionnaire was distributed to the entire population. All errors identified were rectified before sending out the final

questionnaire to the larger group. This was to ensure that unfamiliar concepts were clearly defined, the language was clear and easy to understand, and that all questions were easy to understand and answer.

The self-administered online questionnaire consisted of three sections which were structured as follow: The first section introduced the respondents to the survey and explained the significance of conducting the study and included a screening question relating to a tap & go enabled bank card ownership. This was to ensure that correct respondents were targeted for the survey to avoid the biasness and reduce the number of unwanted responses. While the second section contained statements that measured consumers' perception, experiences, and readiness to adopt "tap & go" card payments. Since there was no sampling frame for this study, nonprobability convenience sampling was used to collect data. A 7-point Likert type response format was used with scale points ranging from 1 (strongly disagree) to 7 (strongly agree) only for data collection purposes. Lastly, section C measured the demographic profile of the respondents which included age and gender which may be needed for recommendations for future research. Lastly, after the collection of data (primary/secondary) SPSS was used to analyse it.

After cleaning the data, algorithmic parameter estimation and scaling was used to group all the numeric responses into manageable responses before feeding the data set into SPSS for analysis. According to Stacey (2005) there has been a debate relating to the reliability and validity of ordinal response scales which dates as back as 1920's, hence a decision was taken to use algorithmic parameter estimation and re-scaling to avoid any possible data errors. There are several benefits which can be derived from using this method, like the fact that even small sample sizes and missing values does not have a chance to compromise the underlying assumptions and has demonstrated to be reliable and valid (Stacey, 2005). Then lastly all the individual items were categorically grouped into Nine variables which was then named according to the initial construct names and then later saved into SPSS.

4.2 Timeframe

The following table represent the research project timelines or series of activities with the timelines until the 28th of February 2023 which is the final submission date.

Due date	Actions	Responsible person
19 June 2022'	ARP Research proposal due date	July Sekhoto
20 June 2022 - 08 July 2022	Ethics application	July Sekhoto
22 July 2022'	Receive ethics letter	Ethics committee
01 August 2022 - 10 August 2022	Data collection preparation	July Sekhoto
11 August 2022 - 11 November 2022	Data collection period	July Sekhoto
12 November 2022 - 20 November 2022	Cleaning data	July Sekhoto
21 November 2022 - 10 December 2022	Analysing data using SPSS	July Sekhoto
11 December 2022 - 31 January 2023	Research report writing	July Sekhoto
01 February 2023 - 27 February 2023	Proof reading and editing	July Sekhoto
28 February 2023'	Final report submission	July Sekhoto

5 **RESEARCH RESULTS**

5.1 Demographic profile of the respondents

Table 1 below shows a summary of the total number of respondents who answered both the gender and age group questions, i.e., 128 respondents answered the question on gender whereas 130 respondents answered the question on age group.

Table 1: Statistics

		Gender	**Age group**
N	Valid	128	130

Table 1.1 below represents the frequencies of the respondents which shows that most of the participants were females which occupied 51.56%, while male participants occupied 48.44%. Furthermore, most of the respondents were

between the ages of 30 – 39 which constituted 41,4%, while the least were below 20 years which constituted only 1.0%.

Table 1.1: Frequency table

Gender			
		Frequency	Percentage
Valid	Female	66	51.56
	Male	62	48.44
Age group			
		Frequency	Percentage
Valid	<20	2	1.0
	20 - 29	13	6.8
	30 - 39	79	41.4
	40 - 49	33	17.3
	>50	3	1.6

5.2 Reliability and validity of the constructs

Table 2: Constructs reliability and validity

Construct	**Items**	**Factor loadings**	**Cronbach's Alpha**	**Mean scores**
Optimism			.912	.378
	Opt_1	.779		
	Opt_2	.846		
	Opt_3	.797		
	Opt_4	.761		
Innovativeness			.780	-.062
	Inn_1	.586		
	Inn_2	.536		

	Inn_3	.698		
Convenience			.880	.559
	Conv_1	.705		
	Conv_2	.762		
	Conv_3	.791		
	Conv_4	.800		
Insecurity	Ins_1	.449	.696	-.208
	Ins_2	.735		
	Ins_3	.809		
	Ins_4	.431		
Discomfort	Dis_1	.658	.740	-.190
	Dis_2	.786		
	Dis_3	.654		
Perceived risk	PR_1	.481	.687	-.018
	PR_2	.581		
	PR_3	.742		
	PR_4	.491		
Resistance to change	RC_1	.714	.823	-.377
	RC_2	.721		
	RC_3	.708		
	RC_4	.768		
Lack of awareness	LA_1	.718	.612	-.512
	LA_2	.507		
	LA_3	.672		
	LA_4	.428		
Readiness to adopt	RA_1	.765	.942	.483
	RA_2	.812		
	RA_3	.751		
	RA_4	.704		

Information on table 2 below represents the results of a confirmatory factor analysis. The convergent validity of the study was evaluated based on the significance of the factor loadings of each item tested on the study (Humbani & Wiese, 2017). Though some of the items below displayed factor loadings that are below 0.5 which is the cut-off point, these items were not eliminated based on the construct's overall Cronbach's Alpha values which are all above 0.6 which is said to be an acceptable number. Internal consistency is usually measured by

assessing the Cronbach's Alpha values in which values greater that 0.6 are acceptable and values greater than 0.7 are good (Pallant, 2010). A considerable number of researchers often agree that the Cronbach's Alpha values underestimate the internal consistency, then composite reliability (CR) is often used (Nunnally, 1978). Furthermore, results in table 2 below also indicate that all constructs had good internal consistency reliability when looking at their Cronbach's Alpha figures which are all above 0.6 which is confirmed to be a good figure (Hair, Anderson, Tatham & Black 1998).

5.3 Tap & go card payment usage.

Table 3: Tap & go user frequencies.

		Frequency	**Percent**	**Mean**
Valid	Intend to use tap & go	28	14.7	.573
	Am using tap & go	68	35.6	.533
	Stopped using tap & go	22	11.5	-.222
	Never used tap & go	21	11.0	-1.903

Since this is an exploratory study rather than a conclusive one, above information is also critical in demonstrating how the respondents were structured across four different types of users. Information presented on table 3 above shows that most respondents (35.6%) are using tap & go card payment method, followed by 14.7% of users who are intending to use tap & go card payment method, then 11.5% of the respondents have used the tap & go card payment model but stopped for various reasons. Lastly, 11% of the respondents indicated that they have never used tap & go card payment method and would not even recommend it to anyone else. The focus point on table 2 above is to determine if there is a difference between the users who are using tap & go card payment model and those who used it but stopped. This can be achieved by comparing the mean scores for these two different categories of users to see if there is a significant difference. Table 3 above confirms that there is a significant difference between

the respondents who are using tap & go card payments with a mean score of .533 and respondents who used tap & go card payments but stopped with a mean score of -.222.

5.4 Multiple regression analysis

A standard multiple regression analysis was used to test the relationship between eight independent variables, which comprises of convenience, innovativeness, optimism, discomfort, insecurity, resistance to change, lack of awareness, and perceived risk and a single dependent variable, which is readiness to adopt. Frey, 2018 and Pallant, 2010 highlighted that before conducting a multiple regression analysis, it is always advised to first check that the assumptions for performing multiple regression were met and the following assumptions were taken into consideration:

- According to Pallant, (2010), for multiple regression analysis to be performed, the equation to be used when calculating the sample size should be 50+8m (where m is the number of independent variables). For this study there are eight independent variables; therefore, the required sample size for the analysis is 114, which is calculated as 50+8x8. Therefore, this study attracted 139 valid responses, which is way above the off point, which is 82, there we can continue with multiple regression analysis.
- It is also stated that multicollinearity can be ruled out if all paired independent variables do not show any coefficient correlation of more than 0.9 and for this study, all independent variables realised coefficient correlations less than 0.9 indicating that the assumption of multicollinearity was not violated, therefore we can continue with multiple regression analysis.
- There were no outliers in the data, which can be identified by examining the Mahalanobis distance and determining the critical chi-squared value for the four independent variables. Outliers can also be determined manually on SPSS by creating new variables and determining if their figures are not greater than negative/positive 3.29, if they are then you do have outliers in your dataset. If all

items are less than 3.29 then there are no outliers (Pallant, 2010). For this study no outliers were identified, therefore we can continue with multiple regression analysis.

- The points in the Normal P-P Plot lie fairly on a straight diagonal line from bottom left to top right, and this implies that no major deviations from normality were identified (Pallant, 2010).

Taking all the above information into consideration, none of the assumptions for performing multiple regressions were violated; thus, the multiple regressions analysis can be performed. The information on the tables below illustrates the amount of variance that the independent variables explain the dependent variable with.

The ANOVA table illustrate whether the regression model is significant ($p<0.005$) (Pallant, 2010; Petzer, Mostert, Kruger & Kuhn, 2014). The coefficient tables indicate which of the independent variables included in the model would best predict the dependent variable and whether they are significant (Pallant, 2010). This is shown through the standardised beta coefficients and its associated significant values.

Table 4: Standardised coefficients

Model	**Beta**	**t**	**P-value**
Constant		2.31	0.023
Optimism	.176	1.814	.072
Innovativeness	.305	3.447	<.001
Convenience	.139	1.457	.148
Discomfort	.043	.611	.542
Insecurity	-.017	-.228	.820
Resistance to change	-.305	-.3.197	.002
Lack of awareness	.018	.256	.798
Perceived risk	-.045	-.493	.623

Results in table 4 above indicates that innovativeness and resistance to change are the only two independent variables that came out as significant contributors

in predicting consumers' readiness to adopt tap & go card payment model with P-Values <.005, however both their Beta values are low which is somehow concerning.

Table 5: Multiple regression model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.753	.567	.540	.637

Information on table 5 shows that an overall correlation coefficient (R Square value) of .567 of the regression model and this indicates that all eight independent variables for this study which comprises of: optimism, innovativeness, convenience, discomfort, insecurity, resistance to change, lack of awareness and perceived risk explained 56.7% of the consumers' readiness to adopt tap & go card payment model.

Table 6: ANOVA values

Model	Sum of squares	Df	Mean square	F-value	P-value
1 Regression	69.110	8	8.639	21.282	<.001
Residual	52.770	130	.406		
Total	121.881	138			

Information on table 6 above present the results of the ANOVA test which was conducted with the aim of testing the significant fit of the regression model (Pallant, 2010), that shows the significant p-value of less than 0.005 which indicates that at least one regression weight is not 0 and that further indicates that the regression model is indeed significant. The results indicate a p-value of less than 0.005, to indicate that the model is significant for the overall data. The

ANOVA table shows that the regression model is significant because the p-value is lower than 0.005 (Pallant, 2010).

Based on the results of the Beta value, significance value and the P value as shown in table 6, the hypotheses for the study can finally be summarised as indicated in table 7 below.

Table 7: Hypothesis testing

Alternative hypotheses	**Beta**	**P-value**	**Result**
H1: There is a positive relationship between consumers perceived level of optimism regarding “tap & go” card payments and their readiness to adopt?	.176	.072	H1: Not supported
H2: There is a correlation between consumers’ personal innovativeness regarding “tap and go” card payments and their readiness to adopt?	.305	<.001	H2: Supported
H3: There is a positive association between consumers’ perceived level of convenience regarding “tap and go” card payments and their readiness to adopt?	.139	.148	H3: Not supported
H4: There is a relationship between consumers’ feeling of discomfort towards “tap and go” card payments and their readiness to adopt?	.043	.542	H4: Not supported
H5: There is a correlation between consumers’ feeling of insecurity towards “tap and go” card payments and their readiness to adopt?	-.017	.820	H5: Not supported

H6: There is an association between consumers' resistance to change and their readiness to adopt?	-.305	.002	H6: Supported
H7: There is a correlation between consumers' lack of awareness or knowledge regarding "tap and go" card payments and their readiness to adopt?	.018	.798	H7: Not supported
H8: There is a relationship between consumers' perceived level of risk regarding "tap and go" card payments and their readiness to adopt?	-.045	.623	H8: Not supported

6 DISCUSSION AND CONCLUSION

6.1 Managerial implications

Several issues are evident when it comes to consumers' perception, experiences, and readiness to adopt tap & go card payments, however only few issues came out top of the list. Educating consumers on the effectiveness and benefits of using tap & go card payments seems to remain a major challenge, especially since consumers are faced with several different cashless payment services or options to choose from. Consumers resistance to change and awareness around the use of tap & go card payments also appears to be amongst the contributing factors in the slow uptake when it comes to the adoption and usage of tap & go card payments. The purpose of this study was to determine the extent in which the eight underlying constructs namely: optimism, innovativeness, convenience, discomfort, insecurity, resistance to change, lack of awareness and perceived risk, affects consumers' readiness to adopt tap & go card payments.

Table 8: Summary of Hypotheses testing

Construct	**Beta**	**T**	**P-value**	**Hypotheses testing**
Constant		2.31	0.023	
Optimism	.176	1.814	.072	H1: Not supported
Innovativeness	.305	3.447	<.001	H2: Supported
Convenience	.139	1.457	.148	H3: Not supported
Discomfort	.043	.611	.542	H4: Not supported
Insecurity	-.017	-.228	.820	H5: Not supported
Resistance to change	-.305	-.3.197	.002	H6: Supported
Lack of awareness	.018	.256	.798	H7: Not supported
Perceived risk	-.045	-.493	.623	H8: Not supported

The results of the study as shown above indicates that, out of the eight constructs only innovativeness and resistance to change shows some level of significance when it comes to consumers' readiness to adopt tap & go card payments. This somehow indicates that all businesses that are interested in using tap and go card payments, should firstly invest heavily in educating consumers on the importance and benefits of using tap & go card payments. Once they have educated consumers on the benefits, they should start investing in upgrading the infrastructure to avoid service failures, payment errors or merely to ensure speed when a customer makes a payment using their tap & go enabled card. According to Subawa, Dewi and Gama (2021) other important factors which businesses should pay more attention on include consumers perceived usefulness, how easy it is to use the cashless transaction, and the level of security around using the cashless method of transacting.

Though all other constructs proved to be insignificant predictors of consumers' readiness to adopt tap & go card payments, it is in their best interest as business owners to still address all issues which may increase all these factors and make them significant. The issue of security on consumers' information being accessed by fraudsters should also be taken into consideration by these businesses. Addressing the issue of security will help decrease consumers' level of insecurity and discomfort on using tap & go card payments. All businesses concerned should consider partnering with different banks to try and increase adoption of tap & go card payments. This partnership between the banks and different businesses should also discuss and address all issues relating to cybercrime and security, by educating consumers on the dos and don'ts when it comes to cashless payments or transactions.

6.2 Limitations and suggestions for future research

There are several limitations in this study which can be pointed out; all of which can also provide a great platform to conduct future research. Some of the limitations in this study include but not limited to the following: the sample size of the study was minimal and the study itself attracted a minimal number of respondents which on its own is a limitation. The sample size is also not fully representative of all provinces in South Africa and alone can render the data biased. Future studies can focus on exploring other factors which may cause consumers to either start using tap & go card payments or stop using it, like what benefits are they seeing, how long did they use it for before stopping etc. This study was conducted in South Africa generally and this may appear to be too broad, therefore future studies can narrow the focus to only one province e.g., Gauteng.

The study only focused on the actual or physical card being tapped on the speed point and ignored other new forms of paying using a tap & go system. Recently there has been an increase in the use of virtual cards on the phones via banking Apps and mostly by generation Y consumers, which are consumers born between

the year 1980 and 2000 (Devaney, 2015, Harrison, 2017, and Pike, 2014). Therefore, future studies could also look at all these new forms of tap & go payment systems including virtual banking cards with a tap & go enabled facility to broaden the sample as well as the type of users. Maduku (2012) indicated that, to reduce respondents' unwillingness to provide answers relating to their banking or purchase transactions maybe for fear of fraudsters and scammers, maybe future studies can investigate the possibility of approaching banks and directly involving them to endorse and support such studies. In this way respondents won't feel like they are forced to interact with strangers on their banking matters or any form of mobile or cashless transactions.

Other authors went as far as comparing the differences in the perception of gender on other methods of cashless transactions, this as well can be explored as a suggestion for future studies to determine if differences in gender perceptions on the use of tap & go card payments does exist or not (Subawa, Dewi, and Gama, 2021). Since going cashless is seen as one of the priorities that even government is forced to deal with in trying to ensure that a country has stability in its economy, partnering with specific government departments may serve as a suggestion for future studies which authors can consider.

The fact that the study did not focus on determining factors that could help maintain consistency amongst the group of consumers who are currently using tap & go card payments could also be a limitation. However, this is a limitation which poses an opportunity for future studies where authors can focus on single groups of users to see what can be done to ensure continuous usage on the current users that are still using tap & go card payments. Secondly, focus on a group of users who used tap & go card payments but stopped, to determine the causes. Thirdly, authors can focus on a group of consumers who have never used tap & go card payments and are not willing to start. Lastly, another research can focus on a group of users who are intending to start using tap & go card payments to determine what can be done to help them adopt quicker or to fast track their adoption process.

6.3 Conclusion

Cashless payments or transactions are proving to be efficient in recent years and can provide consumers with several benefits depending on how and why they use them (Subawa, Dewi, and Gama, 2021). Consumers tend to differ when it comes to why they need a certain product or service and how they go about researching and making a final decision. Though this study doesn't seem to have fully achieved its intended purpose, it paved a way for future researchers to gain an understanding of where to start and focus on. South African businesses, entrepreneurs, government etc., should come together and collaborate in ensuring that South Africa succeed in moving towards a cashless society.

7 LIST OF REFERENCES

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179–211.

Agarwal, M., & Khatri, M. (2021). Moving Towards Cashless Society – Literature Review. *International Journal of Modern Agriculture*, 10(2), 4419–4428.

Anong, S. T., & Kunovskaya, I. (2013). M-finance and consumer redress for the unbanked in South Africa. *International Journal of Consumer Studies*, 37(4), 453–464.

Brown, M., Hentschel, N., Mettler, H., & Stix, H. (2021). Financial Innovation, Payment choice and cash demand – causal evidence from the staggered introduction of contactless debit cards. *School of Finance*, 01(1), 01–39.

Businesstech. (2012). *Home page*. Available from:

https://businesstech.co.za/news/banking/28021/standard-bank-intros-tapand-go/ (Accessed: 18 October 2022).

Chang, I. C., Li, Y. C., Hung, W. F., & Hwang, H. G. (2005). An empirical study on the impact of quality antecedents on taxpayers' acceptance of internet tax filing systems. *Government Information Quarterly*, 22(3), 389–410.

Chang, E. & Polonsky, M. (2012). The influence of multiple types of service convenience on behavioural intentions: The mediating role of consumer satisfaction in a Taiwanese leisure setting. *International journal of Hospitality Management*, 31(1), 107–118.

Davis, F. D. (1989). Perceived usefulness, perceived ease-of-use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.

DeVaney, S.A. (2015). Understanding the millennial generation. *Journal of Financial Service Professionals*. 69(6), 11-14.

Dickinson, V. H., & Shaver, J. P. (1982). A Test of Consumer Awareness for Adults. *Journal of Consumer Affairs*, 16(2), 241–260.

Elliott, K., Meng, G., & Hall, M. (2012). The Influence of Technology Readiness on the Evaluation of Self-Service Technology Attributes and Resulting attitude Towards Technology Usage. *Services Marketing Quarterly*, 33(4), 311–329.

Filona, & Misdiyono. (2019). Factors affecting the adoption of electronic money using Technology Acceptance Model and theory of planned behaviour. *Journal of Business Economics*, 24(1), 100-113.

Frey, B. (2018). *The Sage Encyclopaedia of Educational Research, Measurement, and Evaluation*, (4). SAGE Publications, Inc, Thousand Oaks, CA.

Hair, F. H., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th ed.). Upper Saddle River, NJ: Pearson-Prentice Hall.

Hao, F., Mehrnezhad, M. & Shahandashti, S.F. (2014). *Tap-tap and pay (TTP): Preventing-Man-In-The-Middle attacks in NFC Payment using mobile sensors.* Computing science.

Harrison, B. (2017). Millennials and money: five steps for helping younger employees. Benefits Magazine, 54(11), 40

HKT. (2015). *Home page*. Available from: https://www.hkt.com/at-theoffice/products-and-solutions/merchant-payment-solutions?locale=en-US (Accessed: 02 November 2022).

Hughes, N. and Lonie, S. (2007). '*M-PESA: Mobile Money for the "Unbanked" Turning Cell phones into 24-Hour Tellers in Kenya', Innovations: Technology, Governance, Globalization*, 2(1–2), 63–81.

Humbani, M., & Wiese, M. (2017). A cashless society for all: determining consumers' readiness to adopt mobile payment services. *Journal of African Business*, 19(3), 409-429.

Jia, L. (2018). *Scammers are now using face QR codes to hack customers, here's how to protect yourself*. Available from: http://www.worldofbuzz.com/scammers-now-using-fake-qr-codes-hack-customers-heres-protect (Accessed: 02 July 2022).

Jiang, L., Yang, Z., & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*, 24(2), 191–214.

Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in human behaviour*, 26(3), 310–322.

Lin, C.H., Shih, H.Y., & Sher, P. J. (2007). Integrating technology readiness into technology acceptance: The TRAM model. *Psychology & Marketing*, 24(7), 641–657.

Madichie, N.O. (2012). Consumer perception, Consumer Behaviour: Text and Case. Tata McGraw Hill, 154–175.

Maduku, D.K. (2012). *Understanding retail bank customers' attitude towards and usage of cell phone and internet banking services in Gauteng, South Africa.* (Master of Commerce Dissertation).

Mallat, N. (2007). Exploring consumer adoption of mobile payments – A qualitative study. *The Journal of Strategic Information Systems*, 16, 413–432.

Mastercard. (2022). *Home page*. Available from: https://www.mastercard.co.za/en-za/personal/get-started.html (Accessed: 10 August 2022).

Mastercard. (2014). *Home page.* Available from: https://www.mastercard.co.za/en-za/personal/get-started.html (Accessed: 10 August 2022).

Moneyweb. (2021). *Home page*. Available from: https://www.moneyweb.co.za/moneyweb-podcasts/moneywebnow/advances-in-payment-types-for-things-in-store/ (Accessed: 10 August 2022).

Osborne, J.W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research & Evaluation*, 2(8), 01–05.

Pallant, J. (2010). *SPSS Survival Manual: a step-by-step guide to data analysis using the SPSS Program* (4th ed.). Crow's Nest, NSW: Allen & Unwin.

Parasuraman, A. (2000). Technology readiness index (TRI): a multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research*, 2(4), 307–320.

Parasuraman, A., & Colby, C. L. (2014). An updated and streamlined technology readiness index: TR 2.0. *Journal of Service Research*, 18(1), 59–74.

Petzer, D.J., Mostert, P.G., Kruger, L., & Kühn, S.W. (2014). The influence of the dimensions of brand romance on brand loyalty among cell phone users. *South African Journal of Economic and Management Science*, 17(4), 457-470.

Pham, T. T. T., & Ho, J. C. (2015). The effects of product-related, personal-related factors and attractiveness of alternatives on consumer adoption of NFC based mobile payments. *Technology in Society*, 43, 01–16.

Rogers, E. M. (1995). Diffusion of innovations (4th ed.). New York, NY: Free Press.
Schierz, P. G., Schilke, O., & Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, 9, 209–216.

Schmitt, B., and Zarantonello, L., (2013). CONSUMER EXPERIENCE AND EXPERIENTIAL MARKETING: A CRITICAL REVIEW. Review of Marketing research, 10, 25-61.

Smart Card Alliance. (2016). Contactless EMV Payments: Benefits for Consumers, Merchants, and Issuers. *Payments Council White Paper*. Available from: http://www.smartcardalliance.org/pages/publicationscontactless-payment-security-qa (Accessed: 03 August 2022).

Stacey, A. G. (2005). Reliability and Validity of the Item Means and Standard Deviations of Ordinal Level Response Data. *Management Dynamics*, 14(3), 02-25.

Statistics South Africa, (2022). *Home page*. Available from:

https://www.statssa.gov.za (Accessed: 20 August 2022).

Straub, E. T. (2009). Understanding technology adoption: Theory and future directions for informal learning. *Review of Educational Research*, 79(2), 625–649.

Subawa, N.S., Dewi, N.K.A., & Gama, A.W.O. (2021). Differences of gender perception in adopting cashless transaction using Technology Acceptance Model. *Journal of Asian Finance, Economics and Business,* 08(2), 617–624.

TechCentral. (2018). *Home page*. Available from: https://techcentral.co.za/tapand-go-yes-or-no/200238/ (Accessed: 13 August 2022).

Walczuch, R., Lemmink, J., & Streukens, S. (2007). The effect of service employees' technology readiness on technology acceptance. *Information & Management*, 44, 206–215.

Yang, S., Lu, Y., Gupta, S., Cao, Y., & Zhang, R. (2012). Mobile payment services adoption across time: An empirical study of the effects of behavioural beliefs, social influences, and personal traits. *Computers in Human Behaviour*, 28, 129–142.

8 SUPPLEMENTARY FILES

8.1 Data collection instrument (Online Questionnaire)

Dear Participant,

My name is July Motlalepule Sekhoto, and I am completing my Master of Business Administration (MBA) at Wits Business School in Johannesburg, South Africa. In my journey, I am required to complete a research project or article, for which I have chosen the banking industry or sector. I am conducting research on “Consumer perceptions and readiness to adopt “Tap & Go” card payments in South Africa” under the supervision of Professor Anthony Stacey. I humbly request your assistance in enabling me to complete my task by taking part in this survey. Attached is a questionnaire which should take less than ten minutes to complete. You are not required to provide your name, so all your responses will be anonymous and guaranteed confidentiality.

The first part of the survey consists of screening questions, please tick the appropriate options. The second part of the survey comprises of one question which will help us determine categories of different respondents. The third section of the survey comprises of multiple questions which ask you to rate an extent in which you agree or disagree with each statement by ticking the appropriate box. The last section comprises of demographic information. Your participation is entirely voluntary and involves no risk, penalty, or loss of benefits whether you participate or not. You may withdraw from the survey at any stage. Submission of the questionnaire will be taken as your consent to participate. I thank you in advance.

Please feel free to contact me should you have any queries in this regard at 912109@students.wits.ac.za or my supervisor Prof. Anthony Stacey at anthony.stacey@wits.ac.za.

Regards
JM Sekhoto

I agree to participate in this research project. The research has been explained to me and I understand what my participation will involve.

- ☐ Yes
- ☐ No

Do you own a "Tap and Go" enabled bank card?

- ☐ Yes
- ☐ No

With which option do you associate yourself with from below options?

- ☐ I am intending to adopt and use Tap & Go card payments
- ☐ I have used Tap & Go card payment but stopped
- ☐ I have never used Tap & Go card payments
- ☐ I am using Tap & Go card payments

Please indicate the extent to which you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Tap & Go card payment technology contributes to a better quality of life.	☐						
Tap & Go card payment technology gives me more freedom of flexibility.							

Tap & Go card payment technology gives people more control over their daily transactions.							
Tap & Go card payment technology makes me more productive in my personal life.							
Other people come to me for advice on Tap & Go card payment technologies.							
In general, I was amongst the first in my circle of friends to adopt Tap & Go card payment technology when it was introduced.							
I keep up with the latest Tap & Go card payment technological developments in my areas of interest.							
Using Tap & Go card payment saves time and money.							
Using Tap & Go card payment helped reduce human touch especially during Covid-19.							
Not having to always key in my pin saves me time.							

Tap & Go card payment makes shopping easier and fun.							
People are too dependent on Tap & Go card payment technology when transacting.							
Too much Tap & Go card transactions distracts people to a point that is harmful.							
Tap & Go card payment technology lowers the quality of relationships by reducing personal interaction							
I do not feel confident doing business with a place that can only transact using Tap & Go card payment technology.							
Technical support lines are not helpful because they don't explain things in terms I understand.							
Sometimes, I think that mobile technology systems are not designed for use by ordinary people.							
There is no such thing as a manual for a high-tech							

product or service that's written in plain language.							
Tap & Go card payments exposes one to a risk of losing personal information.							
Tap & Go card payments can be used by fraudsters using other people's cards without using a pin.							
I am not comfortable paying without using a pin for a fear of losing my money.							
I believe in paying for all my items using cash for safety purposes.							
I still prefer using the old methods of paying and keying in my pin.							
The traditional methods of paying are the safest.							
Due to the high level of internet crimes, I prefer paying in cash.							
To avoid bank charges, I prefer using cash for all my instore payments.							
I don't know much about Tap & Go card payments.							

I do know about the Tap & Go card payments, but I don't see any benefits.							
I have never used Tap & Go card payments due to lack of knowledge							
If I could get more information on Tap & Go card payments, then I will start using it.							
I intend to use Tap & Go card payment again soon.							
I believe my interest towards Tap & Go card payment will increase in the future.							
I intend to use Tap & Go card payment as much as possible.							
I recommend others to use Tap & Go card payments as often as possible.							

What is your Gender?

- ☐ Male
- ☐ Female
- ☐ Other

Please select your age group below:

- ☐ Below 19 years
- ☐ 20 – 29 years
- ☐ 30 – 39 years
- ☐ 40 – 49 years
- ☐ Over 50 years

We thank you for your time spent taking this survey. Your response has been recorded.