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An empirical study of perceived usefulness, ease of use, risks and the intention to use mobile marketing by millennials in Botswana

Shukla, Shuchita

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

AN EMPIRICAL STUDY OF PERCEIVED USEFULNESS, EASE OF USE, RISKS AND THE INTENTION TO USE MOBILE MARKETING BY MILLENNIALS IN BOTSWANA

MASTER OF COMMERCE IN MARKETING

RESEARCH PROPOSAL BY

SHUCHITA SHUKLA

(1147183)

SUPERVISED BY

DR. FREDDY MGIBA

ABSTRACT

The use and impact of mobile marketing platforms have significantly increased in the Botswana market over the last few years, especially during the nationwide lockdown resulting from the COVID-19 pandemic. To better understand this, this research applied the technology acceptance model (TAM) and social penetration theory (SPT) to study the impact of perceived usefulness, ease of use and risks on millennials' intention to use mobile marketing in Botswana. The findings of this study showed that (a) perceived pessimism and privacy issues do not have a negative impact on the final intention to use mobile marketing platforms, while (b) perceived usefulness, ease of use, trust, financial issues and invasiveness does have an impact on the user's final intention to use mobile marketing platforms.

The results of this study offer academic and managerial implications that can contribute to businesses engaged in or intending to engage in mobile marketing strategies.

DECLARATION

I,_SHUCHITA SHUKLA_, hereby declare that this research is my own unaided work and is in fulfilment of the requirements for the degree of Master of Commerce in the discipline of Marketing at the University of Witwatersrand (Johannesburg, South Africa). This research has never before been submitted for any degree at the University of Witwatersrand or any other university.

As per the Plagiarism Declaration Form (Wits), I further declare that:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above course is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this in not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signed on this 20th day of April 2023

Shuchita Shukla

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CHAPTER 1

1 INTRODUCTION

Mobile Marketing (M-marketing) is a system built on the distribution of interactive and personalised information by progressing beyond the time-space paradigm once restricted by traditional marketing strategies (Alam et al.,2015; Pantano & Priporas, 2016). The increased use of mobile technologies by businesses worldwide has allowed for the expansion of their operations and access to consumers anytime and anywhere (Singh, 2019). Marketing through a mobile device system has been an industry disruptive technology since its inception (Appiah et al., 2019). As a mobile device is a highly personal and daily companion of its users (Alam et al., 2015), it gives the user a platform that strengthens their relationship with the retailer, consequently influencing their purchases and usage (Chinomona & Sandada, 2013). As a multi-way communication platform between an organisation and its customers, M-marketing provides unique opportunities to target and reach consumers directly on their devices (Narang & Venkatesh, 2019), which benefits both parties involved (Khalufi, 2019).

Hofacker (2018) segments mobile device users and prevalent consumers of M-marketing into three main categories, of which one of the categories is Millennials. Barr (2020) states that the exact start date for Millennial birth years is a matter of debate as many flippantly describe all young individuals as 'Millennials'. Although different authors define Millennials/Generation Y according to different year brackets (i.e.) born between 1982 and 1999 (Howe & Strauss, 2000) or born between 1980 and 2000 (Stein, 2021), some authors state that defining a generation is less important than their shared events and experiences accompanied by social changes (Ng & Johnson, 2015). For this study, however, we have defined Millennials as those born between 1980 to 2000.

Hall (2017) states that Millennials make up more than half of the global workforce, and this percentage is estimated to increase to 75% by 2025, making them a critical consumer base with access to disposable income. For this study, Millennials have not only been selected based on their ability to spend, as they do not necessarily possess more disposable income than the previous generation at the same comparable age but also on their access to mobile technology (Delloite, 2017). As 52.6% of the total population (including Millennials) resides in the capital city (Gaborone) and surrounding developed areas of the South-East district (Statistics Botswana, 2020), the South-East district was selected as the most opportune area to conduct this study in terms of locality.

According to Lesitaokana (2013), by 2011, as a third-world nation, Botswana had successfully developed and structurally implemented its mobile telephony sector, which supported M-marketing. Thus M-marketing in Botswana has been used by government and business organisations (Ifezue, 2014), with the mobile network service provider industry accounting for a lot of marketing, promotions and other commercial communications (Kgosikebatho, 2015). Based on this, this study examines

the impact of perceived usefulness, ease of use & risk considerations on the intention to use the M-marketing platform provided by businesses in Botswana.

1.1 Problem Statement

Various countries have carried out several studies on M-marketing. In the USA, Narang & Venkatesh (2019) studied the next era of M-marketing and its impact and found that businesses would benefit by implementing a more personalised marketing strategy based on understanding the customers' perspectives. They further found that privacy risks were of great concern to the user and that offering optional services which controlled M-marketing communications improved the user's satisfaction and willingness to use the technology. Persaud & Azhar (2012) carried out similar research in Canada, investigating users' willingness to accept marketing through their smartphones. They found that full-time employed users did not find M-marketing useful for their shopping patterns; however, they did find it useful in terms of shopping efficiency as it reduced search time for products and services. Another study by Jayawardhena et al. (2007) involving participants from Finland, Germany and the UK looked at customers' willingness to participate in M-marketing based on trust, perceived control, and positive experience. A study in Jordan focused on customers' acceptance of M-marketing, which uncovered trust and risk factors as predictors of Jordanian customers' intention to use M-marketing (Eneizan et al., 2019). In India, studies were conducted on awareness, attitude, and perception of mobile marketing among youngsters (Girija, 2016; Bafna et al., 2019) and understanding the orientation of Millennials toward mobile advertising applications (Bhave et al., 2013). They found that users' intentions were subject to trust issues and their perception of the product shown on the platform.

Countries with geographic and economic conditions similar to Botswana's have also conducted similar studies. For example, in South Africa, researchers found that a consumer's negative or pessimistic perception towards mobile marketing can impact its acceptance and that trust and privacy concerns were the most influencing factors affecting consumers' willingness to use M-marketing (Donga et al., 2018). Akpojivi & Bevan-Dye (2015) studied mobile advertising privacy perception amongst South African Millennial students. Their study found that the user's desire to control mobile advertising was directly impacted by their knowledge of information privacy; however, a user's intention and attitude towards mobile advertising were not impacted by the usefulness of the adverts.

To the best of the author's knowledge, very little research has been carried out in Botswana regarding this specific area of research using the technology acceptance model and social penetration theory as grounding theories. A similar study was conducted by Ifezue (2014) in the capital city, Gaborone, regarding the public's attitude toward mobile advertising within Botswana. However, the research focused primarily on low-income and young participants aged 18 to 24. His study's limited scope left out critical research areas, including identifying the considerations of

intention to use by Millennials who have better access to a mobile device and a positive relationship with technology (Deloitte, 2019).

Despite the improvement in technological infrastructure, Botswana is yet to match the policy, investment, innovation and quality of technologically advanced nations (Dunn, 2021). Botswana lags in terms of technology acceptance, usage and best business implementation practices, as seen in the example reflecting the active use of the internet by the entire population of Botswana limited at 9% even in 2020 (Mudongo, 2020) despite its introduction in 1997 (Mutula, 2002). As such, regarding M-marketing technology, there is still a gap in knowledge in Botswana as other nations' studies cannot be directly applied to the Botswana context. Furthermore, Botswana has limited credible research institutions set up for studying the field of marketing and commerce, including the Botswana Institute for Technology Research and Innovation (BITRI, 2012), the Institute for Development Management (The Commonwealth of Nations, 2020) and the University of Botswana (The University of Botswana, 2020). Therefore, unlike nations with rich research resources, conducting this research in Botswana and testing the findings from other countries proves valuable as the studies mentioned above have provided great insight to business and academia in better understanding and the intention to use M-marketing.

1.2 Purpose

The purpose of this research is to examine the impact of perceived usefulness, ease of use & risk considerations on the intention to use M-marketing by Millennials in the South-East district of Botswana. The study provides insight to marketing managers and business development managers about the Millennial customer's user perceptions towards M-marketing. This information allows organisations to re-evaluate existing marketing strategies and make necessary amends to ensure optimal ROI value. Finally, the research explores the synchrony between the customer's needs and wants and management's ability to fulfil them.

From an academic perspective, this research addresses the knowledge gaps as prior studies in Botswana have not examined this topic through the lens of the technology acceptance model and the social penetration theory. Therefore, this research shall contribute to the pool of knowledge of this field of study, enhance institution-wide credibility, and provide a foundation for future related research. As Botswana is a developing country (The World Bank, 2021), the value added by this research is impactful, as research conducted in universities in lower-income countries plays a crucial role in developing effective academic systems within a country's education system (Macgregor, 2014). Consequently, such research enables academia to connect with the global knowledge society and match sophisticated knowledge economies (Altbach, 2013; Macgregor, 2014).

1.3 Research Objectives

1.3.1 Primary Objectives

I. Determine if Batswana Millennials' perceived pessimism issues do negatively impact the ease of use perception of M-marketing.
II. Determine if Batswana Millennials' perceived trust issues do negatively impact the usefulness perception of M-marketing.
III. Determine if Batswana Millennials' perceived privacy issues do negatively impact the usefulness perception of M-marketing.
IV. Determine if Batswana Millennials' perceived financial issues do negatively impact the usefulness perception of M-marketing.
V. Determine if Batswana Millennials' perceived invasiveness on their personal devices does negatively impacts the usefulness perception of M-marketing.
VI. Determine if Batswana Millennials' perceived ease of use does positively impacts the intention to use M-marketing.
VII. Determine if Batswana Millennials' perceived usefulness does positively impacts the intention to use M-marketing.

1.3.2 Secondary Objectives

I. Review the literature on the impact of perceived usefulness, ease of use and risks on the intention to use mobile marketing.

1.4 Brief Literature Review

This section covers the grounding theories used for this research and a brief empirical literature review of the study area.

1.4.1 The Grounding Theories

1.4.1.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is used for this study as it is considered one of the most well-known and appropriate models related to technology acceptance and use (Lai & Zainal, 2015), given that it explains and predicts user perception of information technology very well (Al-Adwan & Smedly, 2013). Fred Davis (1989) initially drafted TAM on five pillar components; perceived ease of use (PEU) which represents the extent to which a user feels that the usage of the service would be effort-free, perceived usefulness (PU) which represents the extent to which an individual feels that the usage of the system would lead to improved performance, attitude toward using (ATU), behavioural intention to use (BI), and behaviour system use (BSU). Although the first draft of the

TAM initially stood on five pillar components, PEU and PU are the primary beliefs leading to user acceptance of information technology, whilst ATU directly foretells the BI of the users (Alzubi et al., 2018). Davis proposed that technology usage is affected by the system's perceived usefulness and perceived ease of use; however, external factors also influence the intention and actual usage of technology through their shaping effects on perceived usefulness and perceived ease of use (Lai, 2017).

Alzubi, Al-Dubai & Farea (2018) conducted a study using TAM to assist with comprehending and predicting Jordanian citizens' behaviour towards M-marketing and related technologies. Their research concerning TAM, PU and PEU factors enabled them to provide practical recommendations to businesses by encouraging them to pursue modern marketing mediums and abandoning traditional ones. For this study, the constructs of TAM used are perceived usefulness (PU) and perceived ease of use (PEU).

1.4.1.2 Social Penetration Theory (SPT)

According to Carpenter & Greene (2015), the Social Penetration Theory (SPT) developed by Altman & Taylor in 1973 describes the foundational bonding from a shallow (width) relationship to a more intimate (depth) relationship. SPT allows the researcher to determine the perceived rewards and cost variables affecting the user-technology relationship (Masur, 2018). SPT draws from associations with rewards (the positive exchange) and costs (the negative experiences or the withdrawal of pleasant experiences) and concludes that a positive relationship is established when the rewards weigh more than the costs (Carpenter & Greene, 2015). However, if there is a perception shift due to increased costs, the theory suggests that the relationship will either stagnate or decline as the costs outweigh the rewards (Pennington, 2015; Masur, 2018). SPT has been successfully used in prior studies to understand the interpersonal cost implications of superficial exchanges across communication technologies, namely mobile phone, text messaging, and e-mail (Carpenter & Greene, 2015), for studies on social networks in the USA (Pennington, 2015) and for studies on blogging conducted in Taiwan (Tang & Wang, 2012). Using the SPT theory, this study focuses primarily on the perceived costs of M-marketing, such as trust issues, pessimistic attitudes, invasiveness, financial issues and privacy risks.

1.4.2 The Rationale for the Selection and Use of TAM & SPT For This Research

Integrating theories help to mitigate the limitations of using a single theory and broadens the perspective as neither TAM nor SPT adequately addresses all the variables of interest as individual theories (Goldkuhl & Cronholm, 2010). The proposed conceptual framework developed by combining the two theories provides new insight into the applicability of these theories in a fast, technologically changing world experiencing the fourth industrial revolution.

1.5 Construct Development

1.5.1 M-marketing and Its Use

M-marketing serves as an effective marketing channel to capture media coverage and promote a relevant, interactive process through the user's experience with their mobile smartphones and tablets (Florido-Benítez & del Alcázar, 2016). M-marketing opens new avenues for businesses, resulting in increased sales, driving offline sales by incorporating location-based search strategies and building customer loyalty (Amirkhanpour et al., 2014). M-marketing establishes strong consumer relationships by engaging them with specific personalised advertisements and content (Hymavathi, 2015).

In terms of its use, according to Strom et al. (2014), M-marketing provides unique shopping experiences by offering opportunities to streamline and tailor-make the purchasing process and other post-purchase experiences that may reach new levels of the user's perceived values. Given the increased options it presents, M-marketing makes the users' life more convenient (He et al., 2021). Other usefulness and ease of convenience factors of M-marketing include; interactivity (two-way communication), ubiquity (the ability of users to receive information and perform transactions when desired), personalisation (a means of self-expression), and localisation (mobile marketers can provide the right location-specific products or services via location tracking) (Smutkupt et al., 2010).

1.5.2 M-marketing and Its Risks

Park & Yoo (2014) stated that businesses should take note of the negative impact of excessive marketing, as consumers are likely to think that they feel infringed upon when exposed to too much marketing, thus impacting their usage and purchase decisions. Users react negatively towards M-marketing when subjected to extensive advertising and consequently have less intention to use the platform (Al-alak & Alnawas, 2010). However, the authors argue that such risks are not dire and can be addressed by amending the M-marketing strategies implemented by businesses. Privacy concerns are manageable if service providers obtain consumers' permission before using their personal details; however, some customers are still hesitant to participate as they believe that mobile devices are for personal use and marketed products are invasive/ undesirable (Al-alak & Alnawas, 2010).

1.5.3 Mobile Devices Use and M-marketing in Botswana

A study by the International Data Corporation (2017) estimated the global smartphone market at 1.07 billion a year, highlighting that the massive consumption of mobile media has allowed for an expanded opportunity through which brands can develop and maintain lasting relationships with consumers (Robayo et al., 2017). With a specific focus on Botswana, subscription to mobile phone networks has become rapidly popular as the number of subscriptions in 2018 was 3.38 million, a significant jump from 2.38 million at the start of the decade in 2010 (O'Dea, 2020).

More businesses in Botswana are engaging in M-marketing as commercial messages sent via mobiles relate most to products and services, followed by entertainment and sports-related advertisement (Ifezue, 2014). However, despite its increasing popularity in Botswana, M-marketing has not gone without criticism as entities (mobile network service providers particularly) have received backlash from users accusing their M-marketing strategy of being often ill-timed and being highly enticing, which may translate into irresponsible financial behaviour. (Kgosikebatho, 2015).

1.5.4 M-marketing and Millennials in Botswana

According to Hofacker (2018), Millennials are young, tech-savvy consumers whose loyalty towards a particular brand is difficult to establish without an online network presence, as they are the largest consumers of M-marketing, including social media marketing. A survey by Delloite (2019) found that Millennials and Generation Z accounted for more than half of the world's workforce, thus making them the primary target consumers of mobile shopping and marketing.

Similarly, the customer base in Botswana that businesses focus on is Millennials, as they are a socially networked generation considered to be "the hottest market to target" group of consumers (Mosinyi, 2019). Reviewing how businesses interact with Millennials in the luxury market, Mosinyi (2019) reported that the incorporation of technology in the Millennial market is a crucial investment for this technologically driven generation, showing that businesses recognise how intertwined technological resources are in the daily lives of the key consumer base in Botswana.

1.5.5 Hypothesis Development

Under this subsection, the relationship between each variable is discussed and reviewed.

Relationship between perceived pessimism issues and the ease of use perception of M-marketing.

According to Kumar and Mukharjee (2013), individuals who do not have an overall pessimistic tendency towards technology will not have a pessimistic attitude towards new technology. Unlike pessimistic users, optimistic users of technology are not easily intimidated by engaging in technology and are more likely to embrace mobile shopping in their daily lives as they perceive M-marketing and M-shopping to be easy to use (Kumar & Mukharjee, 2013). Therefore, based on the above discussion, this study hypothesizes that:

H1: *Batswana Millennials' perceived pessimism issues negatively impact the ease of use perception of M-marketing.*

Relationship between perceived trust issues and the usefulness perception of M-marketing &
Relationship between perceived privacy issue and the usefulness perception of M-marketing.

Consumers with high trust and expectations in the desired task will perceive the technology as useful (Lee et al., 2018). Many consumers regard M-marketing as an imposition on the consumer's privacy and are very hesitant to participate in M-marketing as they firmly believe that mobile devices are for private use, not for marketing products (Al-Adwan & Smedly, 2013). Huan et al. (2013) found in a study conducted in China that a smartphone is perceived as a personal gadget, and users found advertising messages from unfamiliar sources undesirable. They further found that users are concerned about possible viruses impacting their smartphones and sensitive data security. In Botswana, M-marketing is viewed with distrust by users, who see it as a waste of the users' time and money (Kgosikebatho, 2015). Therefore, based on the above discussion, this study hypothesizes that:

H2: *Batswana Millennials' perceived trust issues negatively impact the usefulness perception of M-marketing.*

H3: *Batswana Millennials' perceived privacy issues negatively impact the usefulness perception of M-marketing.*

Relationship between perceived financial issues and the usefulness perception of M-marketing.

Despite M-marketing technology being in existence for some time now, there are still significant financial risks surrounding the technology, especially regarding the handling of personal and financial information of the user (Oscar et al., 2017). Fear of losing financial assets prevents users from using innovative financial services, including mobile devices (Chauhan, 2015). Other financial risk-related concerns include highly charged enticements/ promotions, which may result in irresponsible financial behaviour by the user. Therefore, based on the above discussion, this study hypothesizes that:

H4: *Batswana Millennials' perceived financial issues negatively impact the usefulness perception of M-marketing.*

Relationship between perceived invasiveness and usefulness perception of M-marketing.

Suher & Ispir (2011) suggest that as all mobile devices are considered more personal than a physical mailbox or email inbox, undesired messages significantly affect users negatively. They further emphasise that M-marketing is invasive by nature compared to other marketing channels and that strong consideration must be made in receiving consent from the users to make the M-marketing experience more pleasant. Park & Yoo (2014) stated that businesses should take note of the negative impact of excessive marketing, as consumers are likely to feel infringed upon when exposed to too much marketing, consequently impacting their usage decisions. Therefore, based on the above discussion, this study hypothesizes that:

H5: *Batswana Millennials' perceived invasiveness on their personal devices negatively impacts the usefulness perception of M-marketing.*

Relationship between perceived ease of use and the intention to use M-marketing.

The perception that technology is accessible and easy to use goes hand in hand with its usefulness, which in turn impacts the intention to use M-marketing (Florido-Benítez et al., 2017). This notion was also supported by Kurkovsky & Harihar (2006), who found that when customers used a specific M-marketing technology (called "SMMART") that they found easy to use, they were willing and ready to embrace SMMART in their daily purchases and shopping activities. Therefore, based on the above discussion, this study hypothesizes that:

H6: *Batswana Millennials' perceived ease of use positively impacts the intention to use M-marketing.*

Relationship between perceived usefulness and the intention to use M-marketing.

The importance and usefulness of advertising in M-marketing are convergent points that are also identified as very influential factors for user engagement (Silva et al., 2019). Strom et al. (2014) highlighted that M-Marketing is deemed useful by users as it aids in searching and receiving information about retailers, time-sensitive promotions, product prices, payment services, advertising, routes to closest stores and usage instructions. Nicolaas (2016) found that M-marketing has become the most accepted and satisfying communication channel with potential users, given its benefits and usefulness.

H7: *Batswana Millennials' perceived usefulness positively impacts the intention to use M-marketing.*

1.6 Summary Of Hypotheses

H1: Batswana Millennials' perceived pessimism issues negatively impact the ease of use perception of M-marketing.

H2: Batswana Millennials' perceived trust issues negatively impact the usefulness perception of M-marketing.

H3: Batswana Millennials' perceived privacy issues negatively impact the usefulness perception of M-marketing.

H4: Batswana Millennials' perceived financial issues negatively impact the usefulness perception of M-marketing.

H5: Batswana Millennials' perceived invasiveness on their personal devices negatively impacts the usefulness perception of M-marketing.

H6: Batswana Millennials' perceived ease of use positively impacts the intention to use M-marketing.

H7: Batswana Millennials' perceived usefulness positively impacts the intention to use M-marketing.

1.7 Proposed Conceptual Model

Based on the literature review of the research, the proposed conceptual model for this framework model is as below:

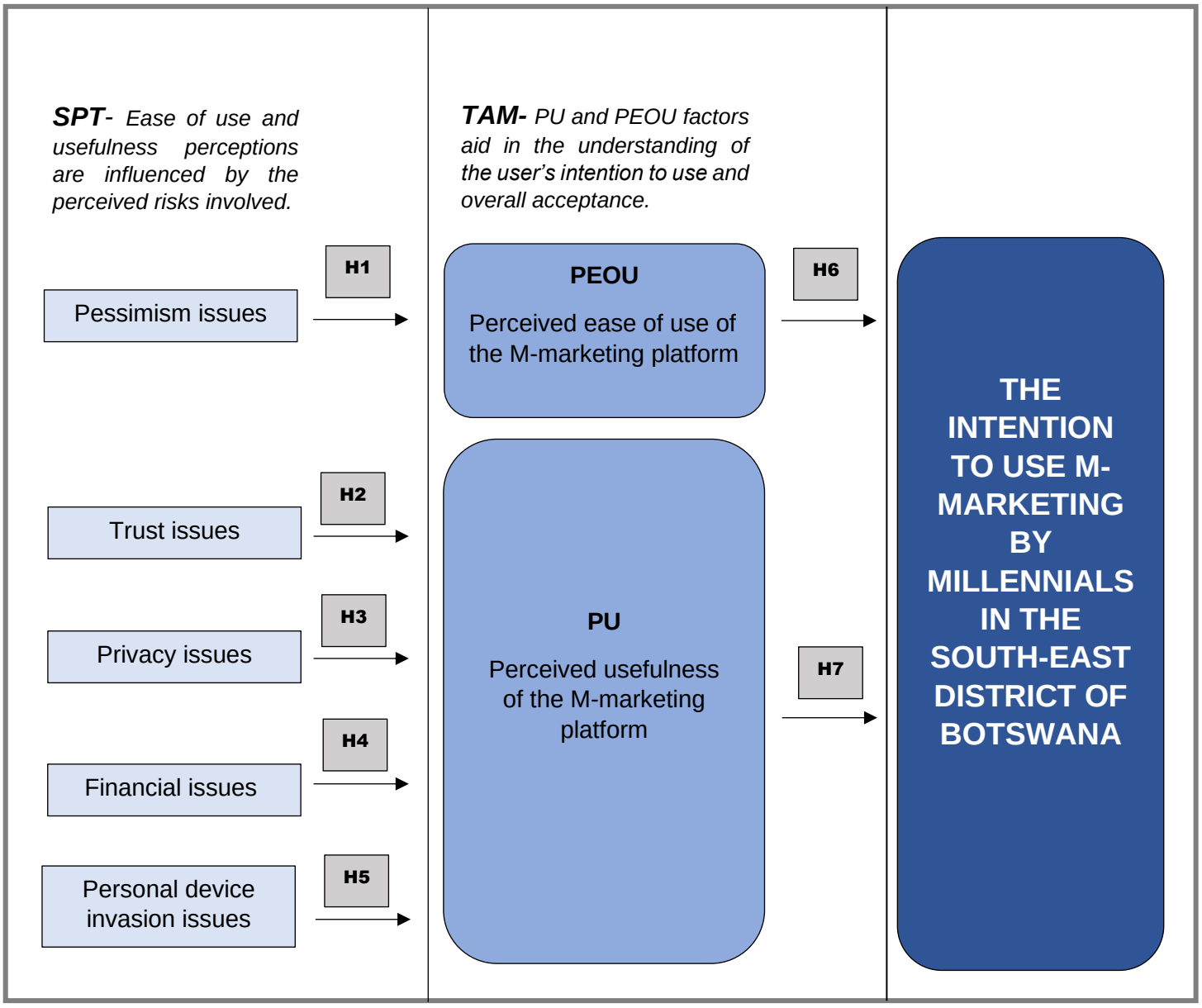


Figure 1 Proposed Framework Model

1.8 Research Methodology

1.8.1 Research Philosophy & Design

According to Poucher et al. (2020), research philosophy is a set of beliefs that guide a study's design, each offering a unique understanding of scientific research. The most accepted philosophical research paradigms in research are; critical theory, interpretivism and positivism (Ryan, 2018). This study follows a positivist philosophical research paradigm (further discussed in Chapter 3 of this study). With this approach, the researcher is an independent observer testing hypotheses using a large sample size (Easterby-Smith et al., 2008). Two schools of thought around research methodology exist; qualitative and quantitative (Dudovskiy, 2022), as discussed below.

1.8.2 Qualitative Research

This type of methodology is a sequence of interpretive techniques that decode concepts and aims to demonstrate information that enables a higher level of understanding of the various dimensions of the specific problem (Maanen, 1983; Basias & Pollalis, 2018). Qualitative research aligns with meanings, values, attitudes, and beliefs corresponding to a deeper space of relationships that may be reduced to the operationalization of variables (Maxwell, 2012; Queirós et al., 2017). Qualitative research cannot be quantified as its focus surrounds the various dynamics of reality (Queirós et al., 2017). Basias & Pollalis (2018) found that the benefits of the qualitative research methodology are that it facilitates the understanding of the nature and complexity of the concept being studied, allowing for new areas and depths of research. Choy (2014) further found that qualitative research was also very good at allowing for a homogeneous exploration and was excellent for understanding behaviours; however, it did not allow for objectively verifiable results and was often very time-consuming.

1.8.3 Quantitative Research

Structured procedures and formal instruments are used for quantitative data collection, done both objectively and systematically (Queirós et al., 2017). Basias & Pollalis (2018) found that given that quantitative research results are numerical, they are considered fact-based and measurable, thus allowing for the processing of large volumes of data and the development of quantitative valuation indicators. Choy (2014) found that quantitative research methodology allows for a quick time frame for data collection; however, it does not allow for an understanding of an individual’s deep beliefs, nor does it provide depth of data through broad and open-ended inquiry. As this is an empirical study that aims to test the hypotheses in an observable manner, based on the benefits offered by this research methodology, the researcher used the quantitative research methodology.

The actual data collection for this study was done while Botswana was experiencing COVID-19-related lockdowns and restrictions. Given the severity of the COVID-19 pandemic, researchers were advised to refrain from face-to-face interviews or any default data collection that required proximity to the respondent until the pandemic was under control and even for a period after that (African Population and Health Research Center, 2021). Therefore, the quantitative research method using online data collection was the best fit for the study.

1.9 Sample Design

1.9.1 Target Population

The target population for this study are the Millennials in the South-East district of Botswana who engage or have engaged in mobile commerce or marketing. The total population of the South-East district of Botswana is 276,319 people (Places in the World- Botswana, 2021), while the Millennial population of the South-East District is still unknown. Millennials have not only been selected as the target population based on their ability to spend but also based on their access to mobile technology as they actively assess purchase decisions on digital platforms (Delloite, 2017), thus demonstrating the clear implication of brand investment in Millennials via M-marketing (Delloite, 2019).

1.9.2 Sampling Method

Etikan & Bala (2017) refer to random sampling as a technique which permits every item from the total universe to have an equal opportunity to be present in the sample. Sharma (2017) identifies the advantages of simple random sampling as a method that allows for a fair selection, adequately represents the population and allows for reasonable generalizations from the results of the sample back to its population. For these reasons, simple random sampling was used for this research.

1.9.3 Sample Frame

The sample for the data collection will comprise of;

I. Individuals born between 1980 and 2000.
II. Individuals that have used or are using their mobile devices for commerce or purchases.
III. Individuals residing in the South-East district of Botswana.

1.9.4 Sample Size

The total population of the South-East district of Botswana is 276,319 people (Places in the World-Botswana, 2021), while the Millennial population of the South-East district is still unknown. However, Millennials in the whole of Botswana are estimated at 618,871 people and the total Botswana population of 2,374,698 people (Statistics Botswana, 2020)*. Given that Millennials are 26% of the population ratio, the same rationale applied to the South-East district gives an estimated 71,840 Millennials for this specific district.

Structural Equation Modelling (SEM) studies require a large sample size (Kline, 2016). As such, for SEM models to be safely evaluated, the sample should be a minimum of 200 participants to offer adequate statistical power (Kyriazos, 2018). Therefore, this study should have a minimum of 200 respondents.
Although a sample size of 300 participants was initially considered, only 263 participants responded.

1.10 Data Collection Method

1.10.1 The Research Instrument

Due to the global pandemic, face-to-face interviews or data collection requiring close proximity to the respondent were the least preferred instrument as they presented risks and constraints (African Population and Health Research Center, 2021). Alternative types of interviews for data collection, such as over-the-phone interviews, could have been used as well; however, they would have proven to be a very timely and cost-ineffective data collection method for this research (Farooq, 2015). As such, a five-point Likert-scales questionnaire was the superior choice, especially since during the data collection period, direct personal access to the respondent was restricted (Kabir, 2016). The questionnaires were web-based and self-administered.

Subject and expert opinions were referred to when designing and developing the instrument to ensure it effectively collected data relating to the study's objectives. Furthermore, the questions used were literature-based, allowing for an academic and knowledge-based foundation. The questionnaire method allowed for an objective empirical understanding of the topic and hypotheses. Survey questionnaires provide numerical data, the extent of agreement and disagreement, and measures to test the hypotheses whilst maintaining a low-cost data collection method (Queirós et al., 2017). Questionnaires further limit or even eliminate the risk of the researcher leading the question towards the desired outcome from the respondent while granting the respondent a flexible schedule to answer the survey on their own time (Kabir, 2016).

**Projections for 2022 are not available as the census/survey is done at a 5-10 year interval*

This data collection method in previous studies has proven to be very effective. A previous study by Eneizan et al. (2019) used a questionnaire to acquire accurate responses from Jordanian M-marketing users to study user trust and risk matters. Another study by Al-alak & Alnawas (2010) used questionnaires as well for acquiring the data to test a positive relationship between perceived usefulness and intention to participate in M-marketing.

1.10.2 Administering the Questionnaire

During the data collection period for this study, Botswana was experiencing extreme social distancing and had set up interstate borders that required special movement permits granted only to essential workers (The Botswana COVID-19 Task Force, 2020). These restricted direct face-to-face contact, panel set-up data collection or any social contact that put either party at risk. As such, the self-administered questionnaires were used, and their link was disseminated via online platforms such as emails and relevant online groups. Persaud & Azhar (2012) similarly collected data through self-administered web-based surveys containing questions about respondents' intention to participate in M-marketing. All data were collected in the South-East district of Botswana. In line with the statistics that most of the Millennial population in Botswana are in cities and urban villages/towns (Statistics Botswana, 2015; Statistics Botswana, 2020), Gaborone and surrounding urban villages such as Lobatse, Ramotswa, Otse and Tlokweng were targeted (The Botswana Information Directory, 2021).

1.10.3 Limitations of Data Collection

The researcher tried to minimize sample-based biases through the methodology and sample selection. Although simple random sampling is typically not biased, a selection bias may occur if the target sample is not inclusive enough of the entire target population (Bhandari, 2020). The proper representation must be certified when conducting random sampling; otherwise, there may be a sampling bias which will then, in turn, result in inaccurate or irrelevant outcomes (Bhandari, 2020).

1.11 Data Analysis and Interpretation

1.11.1 Structural Equation Modelling

Structural Equation Modelling (SEM) determines the different models and multivariate techniques and further demonstrates various elements of the hypotheses, such as the mean and other variances, while not relying on a single indicator (Farhat et al., 2017).

1.11.2 The Measurement Model Accuracy

This model describes the relationships between variables and the constructs (Weston & Gore, 2006). It is a model that relates its variables to its indicators (Bollen, 2001). All data collected was checked for Validity and Reliability for data accuracy;

1.11.2.1 Validity

Validity determines if the research truly measures what it intended to measure (Golafshani, 2003). According to Kalof et al. (2008), if the variables being studied do not measure what they are supposed to or if those variables are inadequately measured, then the research outcomes may not be fair and accurate. The validity tests used in this study are further discussed in Chapter 4.

1.11.2.2 Reliability

Kalof et al. (2008) stated that reliability is the amount of credence placed on the results of a study. The extent to which outcomes are consistent over time and accurately represent the total population is referred to as reliability (Golafshani, 2003). The quantitative research will ensure reliability as the reliability of data collected via questionnaires depends on the survey structure and the accuracy of answers provided by the participants (Queirós et al., 2017). The reliability tests used in this study are further discussed in Chapter 4.

1.11.3 Model Fitness

The measurement model relies on assessing its model fitness (Sahar & Arshian, 2018). Once the model fit was confirmed, the path analysis was tested.

1.11.4 Structural Model

According to Weston & Gore (2006), the structural model describes inter-relationships among the various constructs, or the equations in the model specify the hypothesised relationships among latent variables.

1.11.4.1 Hypothesis Testing

Once the measurement accuracy tests were complete, the structural model was analysed. The data collected was first coded in Microsoft Excel and then analysed using the statistical software SmartPLS 3 software.

1.12 Ethical Considerations

When conducting research that involves collecting data from individuals, the researcher must acknowledge and consider issues that may risk the privacy and confidentiality of the participants from whom the information is collected (Dooly et al., 2017). A cover letter was presented to inform the participants about the study. As such, participants were fully informed of the purpose and approach before engaging in the survey. Furthermore, the researcher obtained consent from participants before implementing the data collection. The data collection process maintained participants' anonymity, and any personal details that could lead to the recognition of a participant were deleted instantly. The researcher provided contact details to all participants to ensure that any ethical issues arising during the research period were to the researcher. Furthermore, the data collected was handled by the researcher, thus ensuring the security and privacy of the respondents' information. The collected information is stored in a password-protected computer for three years after the study.

CHAPTER 2

2 LITERATURE REVIEW

This chapter discusses the grounding theories used to anchor this study and the existing empirical literature relating to this research topic. The Technology Acceptance Model (TAM) and Social Penetration Theory (SPT) are the grounding theories used for the foundation of the literature review. The second section of this chapter reviews the empirical literature relating to the topic, including perceived usefulness, perceived ease of use, perceived pessimism, perceived trustworthiness, perceived privacy concerns, perceived financial risks and perceived invasiveness. Based on this, the hypotheses of this study have been drawn.

2.1 Grounding Theories

2.1.1 Technology Acceptance Model (TAM)

TAM is considered one of the appropriate models for this study as it focuses on the effects of perceptions of the technology's usefulness and convenience on adoption intentions (Lai & Zainal, 2015). Although TAM has been widely used for different studies and proved to be a reliable model explaining technology adoption, TAM has many extensions that have been proposed (Lai, 2016). This study follows the original TAM proposed by Fred Davis in 1986.

Initially proposed in 1986 by Davis, then built on by Davis & Bagozzi in 1989 (Lai, 2017), TAM has five pillar components; Perceived ease of use (PEU) which represents the extent to which a user feels that the usage of the service would be effort-free, Perceived usefulness (PU) which represents the extent to which an individual feels that the usage of the system would lead to improved performance, Attitude toward using (ATU), Behavioural intention to use (BI), and Behaviour system use (BSU). TAM explains users' adoption behaviour highlighting that the effects of external variables on behavioural intention are influenced by perceived usefulness and perceived ease of use (Ofori, 2019). Ren (2019) argues the same, stating that perceived usefulness (PU) and perceived ease of use (PEU) have a direct influence on behavioural intention, as subjective norms impact behavioural intention, not attitude.

Other studies have successfully used TAM in M-marketing research. Alzubi et al. (2018) conducted a study using the technology acceptance model to assist with comprehending and predicting Jordanian citizens' behaviour towards M-marketing and related technologies. Their research

concerning TAM, PU and PEU factors enabled them to provide practical recommendations to businesses by encouraging them to pursue modern marketing mediums and abandoning traditional ones. Gao et al. (2013) examined the factors influencing users' approach toward M-marketing in the United States, China and Europe. Together with the perceived characteristics of innovations theory, they used TAM to examine the joint influences of PU and PEU and individual characteristics and perceptions toward mobile marketing practices. Another study in China conducted by Du (2012) used TAM to understand the user's behavioural intention to use 3G services in China, finding PEU and PU to be important constructs in understanding the users' behavioural intent and acceptance of new technology. A similar study was done by (Goh et al., 2020), who examined the factors influencing consumers' intention to purchase through mobile advertising in Malaysia. Chille & Shayo (2021) also developed the theoretical framework for their study using constructs of TAM, with the assumption that perceived usefulness, perceived ease of use, and perceived online negotiation directly affected the adoption of M-marketing in the Telecommunication industry in Tanzania. The findings of this study indicated the positive influence of the TAM constructs on the adoption of M-marketing in Tanzania, thus, validating the TAM to be useful in the Tanzania context as a developing African country.

For this study, the constructs of TAM are the perceived usefulness (PU) and perceived ease of use (PEU) of M-marketing.

2.1.2 Social Penetration Theory (SPT)

Initially developed by Altman & Taylor in 1973, SPT describes the foundational bonding from a shallow relationship to a more intimate relationship (Altman & Taylor, 1973). SPT allows the researcher to determine the perceived rewards and cost variables affecting the user-technology relationship (Masur, 2018). Carpenter & Greene (2015) state that SPT draws from associations with rewards and costs. They further emphasise that the positive relationship results from the rewards-costs ratio, and when the present and future forecast of the relationship between two entities is deemed potentially rewarding, then the user shall continue to maintain that relationship. However, shall there be a perception shift due to increased costs, the theory suggests that the relationship will either become stagnant or decline to the point of "depenetration" as the costs outweigh the rewards (Altman & Taylor, 1973; Masur, 2018).

SPT has been successfully used in prior studies to understand the interpersonal cost implications of superficial exchange across communication technologies such as mobile phones, text messaging, and e-mail (Carpenter & Greene, 2015) for studies on social networks in the USA (Pennington, 2015), and for studies on blogging conducted in Taiwan (Tang & Wang, 2012). Andrews, Luo, & Fang (2015) researched one of China's largest mobile provider's consumers to explore their motivations and found that in crowded spaces, people turn inward, associating their mobile devices

with a positive feeling and relief. This demonstrates the beneficial use of SPT, as psychology-based explanations can better enhance the understanding and development of M-marketing.

This study focuses on better understanding the user-technology relationship based on the perceived rewards or costs resulting from the information disclosure between the user and M-marketing technology. As such, using the SPT theory as a grounding theory, this study focuses primarily on the perceived costs of M-marketing, such as pessimism issues, trust issues, privacy risks, financial issues and invasiveness concerns.

2.2 Construct Development

2.2.1 M-marketing, Use and Risks

Text messaging, as the initial form of M-Marketing, was conceived in the late 1980 and developed through the 1990s; however, it was not until the turn of the millennium that this technology revealed its high potential as a marketing tool (Haig, 2002). Marketing through a mobile device system has been an industry disruptive technology since its inception (Rekha & Jain, 2018; Appiah et al., 2019). It has since progressed from a simple text viral form of marketing to personalised and dynamic notifications targeted at device users in the past decade (Tong et al., 2020). It has proven to be an effective tool that assists in establishing solid relationships with consumers by engaging them with specific personalised advertisements and content (Hymavathi, 2015). It was through the evolution of technologies such as the first smartphone, QR Codes, and superior connectivity that mobile devices were able to take over desktop devices for internet usage by 2016 and have since become an important marketing tool for businesses (Kilic, 2018; Narang & Venkatesh, 2019).

M-Marketing, along with M-commerce, has become an increasingly important aspect for businesses seeking revenue growth by expanding to new and international markets (Ashraf et al., 2021). It serves businesses as an effective marketing channel to capture media coverage and promote a relevant, interactive process through the user's experience with their mobile devices (Florido-Benítez & del Alcázar, 2016). Tong et al. (2020) state that compared to mass media, marketing on mobile devices enable businesses to send messages such as relevant updates, new products, offers and promotions to target consumers more efficiently, resulting in higher credibility for the business (Amirkhanpour et al., 2014). A key characteristic of M-marketing is the ease of contact between businesses and users, which enables personalized content and interactive experiences (Robayo et al., 2017). Additionally, as highly personal companions, mobile devices give a platform to strengthen the relationship between the consumer and the retailer, making it an ideal channel for distance selling and retailing (Hofacker, 2018). However, there is still a need for more research in developing countries to better understand the use of M-marketing (Merhi et al., 2019) and a need for more

research from the perspective of digital consumer behaviour issues to support M-marketing decision-making in management science (Robayo et al., 2017).

Despite M-marketing having many benefits, due to the intimate nature of mobile devices (Nestian et al., 2019), M-marketing has some negative associations. Al-alak & Alnawas (2010) found that consumers subjected to extensive advertising reacted negatively towards M-marketing and consequently had less intention to use the platform. Mobile advertising (as part of M-marketing) provides a wide range of conflicting information, often overwhelming the consumer and making them feel pessimistic towards marketing communications (Hashim & Zorkepli, 2014; Liu & Zhao, 2021). Park & Yoo (2014) stated that businesses should take note of the negative impact of excessive marketing, as consumers are likely to feel infringed upon when exposed to too much marketing, thus impacting their usage and purchase decisions. However, various authors argue that these risks are not dire and can be addressed with amendments to the M-marketing strategies implemented by businesses. Al-alak & Alnawas (2010) emphasised that respondents' privacy concerns could be manageable if service providers obtained consumers' permission before using their personal details.

2.2.2 Mobile Devices Use and M-marketing in Botswana

A study conducted by the International Data Corporation (2017) estimated the global smartphone market at 1.07 billion a year in 2017, highlighting a massive consumption of mobile media which has allowed for expanded and complex strategies through which brands can develop and maintain lasting relationships with consumers (Robayo et al., 2017). With a specific focus on Botswana, subscription to mobile phone networks has become rapidly popular (i.e.) in 2018, the number of subscriptions was 3.38 million, a significant jump from 2.38 million at the start of the decade in 2010 (O'Dea, 2020). According to the ICT Survey Report published by Statistics Botswana (2017), SMS traffic increased from 157,962,098 minutes recorded in 2016 to 178,144,293 minutes in 2017, indicating a rise in the use of SMS technology amongst the residents of Botswana. Correlatively, mobile internet subscriptions increased by 8.8 percent from 1,409,274 subscriptions in 2016 to 1,532,954 subscriptions in 2017. With the escalating use of mobile devices, M-marketing has become a popular marketing choice for businesses in Botswana.

More businesses in Botswana are engaging in M-marketing as commercial messages sent via mobiles relate most to products and services, followed by entertainment and sports-related advertisement (Ifezue, 2014). Furthering the implementation of M-marketing strategies, as a result of the 2020/ 2021 government-mandated lockdowns and social distancing, entities that were moderately engaged in M-marketing platforms before (i.e.) The Botswana Tourism Organisation moved towards a more substantial reliance on digital marketing platforms to recover the losses experienced during the pandemic (Botswana Tourism Organisation, 2020). Simultaneously, other recommended national policies actively encouraged the developing and strengthening the nation’s

micro, small and medium entities' digital capacity and online sales channels (United Nations (Botswana), 2020). However, despite its increasing popularity in Botswana, M businesses (mobile network service providers particularly) have received backlash from users accusing their M-marketing strategy of being ill-timed and highly enticing, translating into irresponsible financial behaviour of customers. (Kgosikebatho, 2015).

2.2.3 M-marketing and Millennials

Millennials/Generation Y are individuals born between 1980 to 2000 (Stein, 2021). According to Hofacker (2018), unlike their predecessor Generation X, Millennials have a positive relationship with predominately functional and purpose-based technology, allowing them to form a substantive part of the population using M-marketing. Hofacker (2018) further identifies Millennials as young tech-savvy consumers whose loyalty towards a particular brand is difficult to establish without an online network presence, as they are the largest consumers of mobile marketing and social media marketing. This is in line with the findings of Barr (2020), who states that millennials are especially adept at using technology and social media platforms. A survey by Delloite (2019) also stated that Millennials and Generation Z accounted for more than half of the world's workforce, thus making them the primary target consumers of mobile shopping and marketing, and the demography with the highest growth rate in the use of these mobile devices are Millennials. (Robayo, Montoya, & Rojas-Berrio, 2017).

Millennials are the primary focus of this study not just based on their ability to spend but also based on their access to mobile technology (Hofacker 2018), as they do not necessarily possess more disposable income than the generation before them at the same comparable age (Delloite, 2017). This notion was supported by E-Marketer (2020), who concluded that Millennials are the most avid users of digital platforms to make purchase decisions, with an estimated 86% of Millennials in the USA alone. E-Marketer (2020) further demonstrated that 60% of 18-34 years old and 50% of 35-54 years old users used mobile retail to gather information about a product or service and were ranked the highest to most likely to make purchases via mobile retail.

2.2.4 Millennials in Botswana

In Botswana, the customer focus is on Millennials, who are considered "the hottest market to target" group of consumers (Mosinyi, 2019). A report published by Statistics Botswana (2015)* estimated the population of Millennials for 2021 at 618,871 (304,401 male and 314,470 female). In terms of the locality, Statistics Botswana (2018)* reported that residences of Batswana Millennials between the ages of 25-29 years were 26.2% in cities, 22.9% in urban villages and 21.5% in rural areas and Millennials between the ages of 30-35 years as 25.3% in cities, 45.6% in urban villages and 29% in rural areas.

**Projections for 2022 are not available as the census/survey is done at a 5-10 year interval*

As 52.6% of the total population (including Millennials) resides in the capital city (Gaborone) and surrounding developed areas of the South-East district (Statistics Botswana, 2020), the South-East district was selected as the most opportune area to conduct this study in terms of locality.

Regarding access to technology, an article published by Mmegi (2016) stated that those within the age groups of 25-34 years and 35-44 years dominated household access to the internet, including mobile and wireless internet technology. This demonstrates that Millennials dominate the use of mobile technology in Botswana. Regarding workforce status, 50.7% of mobile cellular telephone users were earning employees or self-employed individuals, and the remaining 49.3% were unemployed (Pinielo, 2016). Given that Millennials form a large part of the Botswana workforce and that most are employed, this demonstrates that the most significant segment to have the most access to mobile technology is earning individuals with spending capacity.

Reviewing how Botswana businesses interact with Millennials, specifically in terms of the luxury market, Mosinyi (2019) reported that incorporating technology in the Millennial market is an essential investment for this technologically paced generation. This demonstrates that businesses recognise how intertwined technological resources are in the daily lives of the key consumer base in Botswana. Supporting this notion, an article written by an anonymous online author (2018) highlighted that Millennials are both the present driving demand force and also the high future potential for the goods market.

2.2.5 Perceived usefulness & Perceived ease of use

Perceived usefulness (PU) represents the extent to which an individual feels that the usage of the system would lead to improved performance (Davis 1989). It is one of the primary beliefs leading to user acceptance of information technology (Alzubi et al., 2018). Researchers use perceived usefulness as a significant indicator of M-marketing adoption and give insight into the customer's intention to use M-marketing (Chille & Shayo, 2021).

Perceived ease of use (PEU) represents the extent to which a user feels that the usage of the service would be effort-free (Davis 1989), and it is also considered one of the primary beliefs leading to user acceptance of information technology (Alzubi et al., 2018). Users determine their use of the M-marketing when they are confident that the M-marketing platforms will improve their personal and business performances; as such, M-marketing should appear as easy to use on both software and hardware interactions (Chille & Shayo, 2021). Both PEU & PU impact the attitude towards technology and the intention to use technology (Aditia et al., 2018). The intention to use technology in the context of this study is defined as a user's desire to use technology in the future (Teo & Zhou, 2014).

2.3 Hypotheses Development

The literature cited above validates the below hypotheses development. The following section provides an in-depth discussion of this study's ease of use, usefulness, risks, and the related hypotheses developed.

2.3.1 Relationship between perceived pessimism issues and the ease of use perception of M-marketing.

For young users, using the M-marketing platform depends on their technological literacy, feeling and relationship with it (Shahina & Sachitra, 2021). Unlike pessimistic users, optimistic users of technology are not easily intimidated when engaging in technology and are more likely to embrace mobile shopping in their daily lives as they perceive M-marketing and M-shopping to be easy to use (Kumar & Mukharjee, 2013). Supporting this, Bauer et al. (2005) found that consumers who were already familiar with or had an existing understanding of mobile services perceived the use of M-marketing services as less complicated than those who were unfamiliar, thus impacting the user's acceptance and use of the M-marketing services.

Mobile advertising (as part of M-marketing) provides a wide range of conflicting information, making consumers feel pessimistic about marketing communications if not handled carefully (Hashim & Zorkepli, 2014). Users' attitudes towards M-marketing are negative, given that they prefer mobile devices for personal communication and further prefer to exercise substantial control over their interactions with businesses (Lee et al., 2014). Excess interaction is a crucial influencer of pessimism, as users view excess M-marketing interactions as highly irritating and disruptive, which can impact the intention to use and purchase intentions (Uddin et al., 2019). Al-alak & Alnawas (2010) supported this notion by stating that factors affecting a user's pessimistic approach to M-marketing are credited to excessive and offensive advertising, lack of convenience, literacy and prior disruptions. However, implementing a permission-based method of M-marketing would incline negative users to engage in the technology (Al-alak & Alnawas, 2010), thus suggesting that recommendations to tackle risks can outweigh a pessimistic approach toward M-marketing. Therefore, based on the above discussion, this study hypothesizes that:

H1: *Batswana Millennials' perceived pessimism issues negatively impact the ease of use perception of M-marketing.*

2.3.2 Relationship between perceived trust issues and the usefulness perception of M-marketing.

Trust is a critical antecedent factor of PU for various technologies such as mobile payments and marketing Alalwan et al. (2018), information systems, e-commerce and robot technology (Seo & Lee, 2021). Consumers who interact with high trust in the desired task will perceive the technology as useful (Amin et al., 2014; Lee et al., 2018). Trust is deemed a strong motivational construct that often influences subsequent behavioural responses, such as the use of technology, which is why it is an integrated variable in TAM as part of PU (Seo & Lee, 2021).

In terms of M-marketing, according to Amin et al. (2014), when consumers use mobile device services, especially those connected to the internet, the most prevalent concern relates to the service provider or operator trust. Trust is essential in M-marketing and mobile commerce interactions as users provide private information, such as banking details to the service provider (Mallat et al., 2008). Lin & Wang (2006) also found that trust is a vital aspect of user satisfaction, loyalty and thus the use of mobile-related services. They further highlight that honest or truthful service providers lead to greater user loyaltyThe credibility of the business and the bearer of the message also impact the user's trust (Anyasor & Umeadi, 2016). Therefore, M-marketers should establish themselves amongst their customers as honest and trustworthy service providers, as it depends upon which customers' intent to use and satisfaction are based (Amin et al., 2014).

A study conducted by Van der Heijden et al. (2003) at Dutch institutions used trust to understand users' intention to purchase using online platforms and found that it indirectly impacts a positive perception and attitude towards technology. Another study by Uddin et al. (2019) found that as long as M-marketing adverts are deemed as trustful, personalised, and reliable by users to the extent that they are not in excess. Therefore, based on the above discussion, this study hypothesizes that:

H2: *Batswana Millennials' perceived trust issues negatively impact the usefulness perception of M-marketing.*

2.3.3 Relationship between perceived privacy issue and the usefulness perception of M-marketing.

Users consider mobile phones as intimate and personal gadgets they always carry (Alam et al., 2015). As such, users often view their devices as a mode of personal interaction and have a strong desire to control shared communications and the access they give to businesses through them (Lee et al., 2014). According to Banerjee et al. (2021), consumers who do not believe that a business shall adequately respect and protect their privacy will be less likely to accept mobile marketing campaigns or M-marketing services. They further state that customers may refuse personal data or

submit false information if they feel their privacy is not secure, which in turn is counterproductive for the companies. Therefore, such fears around privacy will impact the accuracy and validity of the user's profiles held by the companies to make services relevant and impactful (Banerjee et al., 2021).

Another study conducted by Aziz et al. (2021) in Malaysia found that M-marketing had a positive impact on its users; however, there were challenges relating to the legal framework concerning customer privacy protection and personal data violation. For M-marketing to grow to its full usefulness in Malaysia, users felt that businesses must guarantee data protection and generate trust, which could be done by attaining prior consent and giving an appropriate disclosure about the data processing through mobile technologies (Aziz et al., 2021). Another study by Persaud & Azhar (2012) found that attaining consent or having a permission-based platform eased users' concerns and was a significant predictor of the users' intentions to use M-marketing. Therefore, based on the above discussion, this study hypothesizes that:

H3: *Batswana Millennials' perceived privacy issue negatively impacts the usefulness perception of M-marketing.*

2.3.4 Relationship between perceived financial issues and the usefulness perception of M-marketing.

The perceived usefulness of technology is the utilitarian value that technology serves to its customers; however, if there is a posed risk of financial nature, no matter how useful the product is, the user's intention to use it will drop (Amin et al., 2014). Potential financial risks threaten a user's confidence and trust in a technology which is of crucial importance to the profitability of the M-marketers (Mallat et al., 2008). Perceived risks, including financial risks (Noreen et al., 2021), are one of the biggest determinants of adopting and using digital payment systems (Wismantoro et al., 2020). This is due to the fear that online transactions performed via smart devices are subject to hacking which may lead to financial loss and overall risk (Shaikh et al., 2018). Financial concerns surrounding the technology especially relate to the handling of personal and financial information of the user (Oscar et al., 2017). Fear of losing financial assets also prevents users from using innovative financial services, including through mobile devices (Chauhan, 2015). If activities, particularly those connected to online or the internet, involve a higher level of risk and uncertainty, there will be a direct adverse impact on the customer's desire to use the technology (Amin et al., 2014).

In Botswana, M-marketing has been accused of marketing promotions which result in highly charged enticements that may translate into irresponsible financial behaviour (Kgosikebatho, 2015). A study conducted in the developing economy of Pakistan found that if customers experience potential financial losses due to technology usage, it increases the users' sensitivity to risk (Noreen et al., 2021). The researchers found that financial risks were a very strong barrier to the adoption of mobile

money used in platforms such as M-marketing as factors like lack of understanding, low financial literacy rate, and the fear of losing their hard-earned money were too great the risk. The study further showed that although the use of virtual cash for mobile services was generally secure in Pakistan, customers typically preferred their trustworthy service providers to mitigate excess financial risk. Therefore, based on the above discussion, this study hypothesizes that:

H4: *Batswana Millennials' perceived financial issues negatively impact the usefulness perception of M-marketing.*

2.3.5 Relationship between perceived invasiveness and usefulness perception of M-marketing.

Intrusiveness has a direct effect on customer attitudes towards M-marketing (Gazley et al.,2015). M-marketing poses the risk of perceived invasiveness as consumers may not be able to adequately restrict receiving 'cyber junk' on devices they consider intimate (Al-alak & Alnawas, 2010). However, perceived invasiveness can be minimised with recommended changes to a business's M-marketing strategies (i.e.) M-marketers could encourage mobile operators not to send unrelated messages to their users as this impacts the perception of the usefulness of the services (Amin et al., 2014). Another change suggested by a study conducted in Malaysia was to gain consent or permission from users for the receipt of marketing messages; this allowed users to feel a level of control over their data and the nature of the messages, consequently highlighting the importance of legislative initiatives on this issue (Aziz et al., 2021). Al-alak & Alnawas (2010) supported this notion and found that obtaining consumers' permission could be beneficial in managing risk perception; however, despite permission, some users may still believe that mobile devices were only for personal use and be unwelcoming towards M-marketing.

A study conducted by Smutkupt, Krairit, & Do Ba (2012) found that personalised messages can be implemented to minimise such risk perceptions. However, they did caution that implementing personalisation requires businesses to establish a potentially expensive client database that reflects customers' true preferences. Pasqua & Elkin (2012) suggest that although there are fears around the risk relating to M-Marketing, these concerns overlap many of the fears similar to those of online commerce or e-commerce and are expected to fade over time the same way. Therefore, based on the above discussion, this study hypothesizes that:

H5: *Batswana Millennials' perceived invasiveness on their personal devices negatively impacts the usefulness perception of M-marketing.*

2.3.6 Relationship between perceived ease of use and the intention to use M-marketing.

Venkatesh & Davis (2016) defined perceived ease of use (PEU) as the manner in which an individual feels when using the technology, which involves the level of effort exerted when engaging and interacting with a particular technology. PEU examines the user's acceptance of a particular technology and plays an important role in users' technology usage intention (Montazemi & Saremi, 2013). Users determine how much effort is required when performing a technical task and evaluate if adapting their behaviour to the technology will be easy (Morosan, 2012). This challenges businesses and service providers as they must innovate and create user-friendly infrastructures and personalized services for users that can be used at any location (Amin et al., 2014).

In most prior studies, PEU has proven to be a valuable indicator of the user's intention to use and adopt the technology. For example, PEU indicated a significant influence on the adoption of mobile marketing and the adoption of mobile services in Tanzania (Chille & Shayo, 2021), South Korea (Kim et al., 2010), Zimbabwe (Chitungo & Munongo, 2013), Malaysia (Said et al., 2019) and Ghana (Tobbin & Kuworn, 2011). Users determine their use of the M-marketing products when they are sure that the M-marketing platforms will improve their personal and business performances; as such, M-marketing should appear as easy to use on both software and hardware interactions (Chille & Shayo, 2021).

M-marketing facilitates the easy spread of product information and adverts to consumers and enables easier interaction (Salem & Althuwaini, 2018). M-Marketing has also made it easy for consumers to compare product information and prices before making any final purchase decision (Hymavathi, 2015). Therefore, based on the above discussion, this study hypothesizes that:

H6: *Batswana Millennials' perceived ease of use positively impacts the intention to use M-marketing.*

2.3.7 Relationship between perceived usefulness and the intention to use M-marketing.

Various studies have shown significant effects of PU on the use of mobile marketing (Chille & Shayo, 2021; Mehra et al., 2020; Abdinoor & Mbamba, 2017). PU plays a significant role as a key driver of a consumer's decision to use a mobile service by determining the relative advantage of the technology, its ability to fit with existing usage patterns, the perceived complexity, the ability to engage with innovation, the perceived risk, and the level of usage and if the use of the innovation is observable by others (Rogers, 1995). Smutkupt et al. (2010) identify usefulness and convenience factors of M-marketing as the ubiquity, personalisation, two-way communication, localisation,

industry background and ability to offer multiple channels to reach customers. The importance and usefulness of advertising in M-marketing are convergent points also identified as influential factors for user engagement (Silva et al., 2019).

Consumers' intention to adopt the product occurs once they perceive the product as useful in solving their problems; thus, researchers use PU as a significant indicator of M-marketing adoption and o the customer's intention to use M-marketing (Chille & Shayo, 2021). PU relates to the user's belief that by engaging with the technology, they will benefit through enhanced job performance, which in turn positively impacts their intention to use (Amin et al., 2014). Individuals weigh the expected outcomes of mobile technology usage against existing platforms of commerce and compare its advantages to available offline activities in the market (Rouibah et al., 2011) when determining its usefulness. As such, PU serves as an overall assessment and perception of the usability by consumers (Amin et al., 2014).

Previous studies have found M-marketing to be useful. For example, according to Strom et al. (2014), as M-marketing provides unique functions such as the camera or apps that augment the shopping experience collaborated with other retail experiences is deemed a useful and satisfying experience which can be engaged. Therefore, based on the above discussion, this study hypothesizes that:

H7: *Batswana Millennials' perceived usefulness positively impacts the intention to use M-marketing.*

2.4 Conceptual Model

Based on the literature presented, the hypotheses of this study have been diagrammatically represented in the conceptual model below:

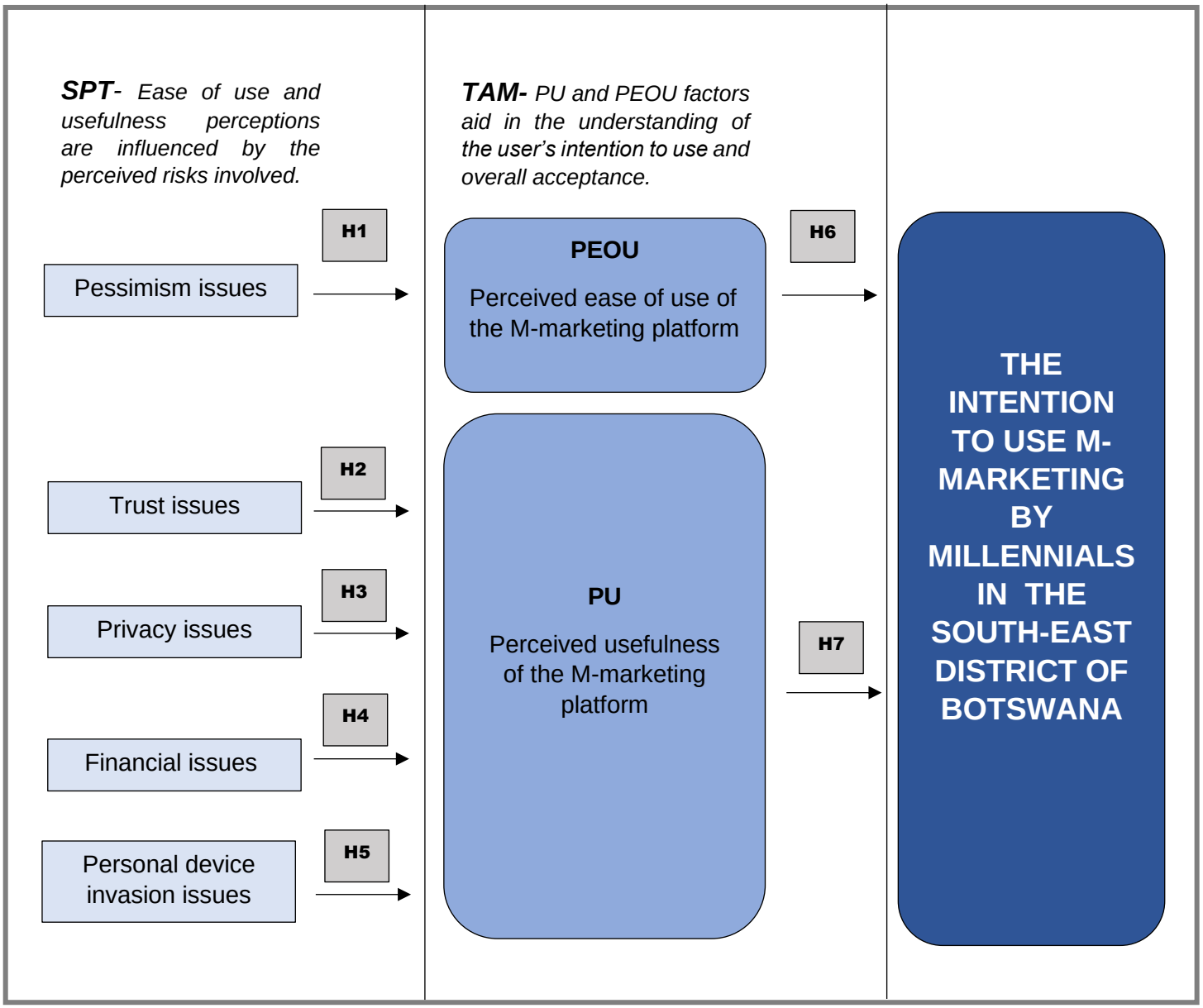


Figure 2 Proposed Framework Model

CHAPTER 3

3 RESEARCH METHODOLOGY

This section of this study focuses on the research philosophy and research design approach. It provides information regarding the participants, the rationale for their selection and the method used to sample the representatives of the target population. This chapter will further describe the data collection instrument used for this research, the procedures, and the methods used to analyse the data.

3.1 Research Design

3.1.1 Research Paradigm

The most accepted philosophical research paradigms in research are broken down into; critical theory, interpretivism and positivism (Ryan, 2018). This study follows a positivist philosophical research paradigm. A few key aspects of a positivist approach involve empirical observation via human senses, inductive reasoning used to develop hypotheses for testing, and that common sense is not engaged, for it may act as a bias in the research findings (Dudovskiy, 2022). A positivist paradigm indicates that the researcher is independent of the research and is purely objective (Dudovskiy, 2022), unlike the post-positivist approach, which argues that reasonable inferences may occur by combining empirical observations and logical reasoning (Habib, 2020). With the positivist paradigm, minimal interaction by the researcher results in studies being based purely on facts and considers the world to be objective (Ryan, 2018).

3.1.2 Research Approach

This study uses a deductive research approach to align with the hypotheticodeductive model. The deductive process begins with a theory from the literature, developing hypotheses and finally conducting an empirical study to verify the hypotheses (Park et al., 2019). When conducting such deductive research, quantitative methods like correlation analysis, mean, mode and median are often used to test the hypotheses (Dudovskiy, 2022). As such, this study uses a quantitative research design. The quantitative research methodology allows for a quick data collection time frame (Choy, 2014).

3.2 Sample Design

According to Mujere (2016), a sample is a finite part of a population whose properties are studied to gain information required about the overall population; however, there is never truly a guarantee that a selected sample will precisely represent the population completely. He further elaborates that sampling is found to be a cheaper method to observe as compared to observing the whole population.

The sampling process, as suggested by Taherdoost (2016), as shown in Figure 3, was followed.

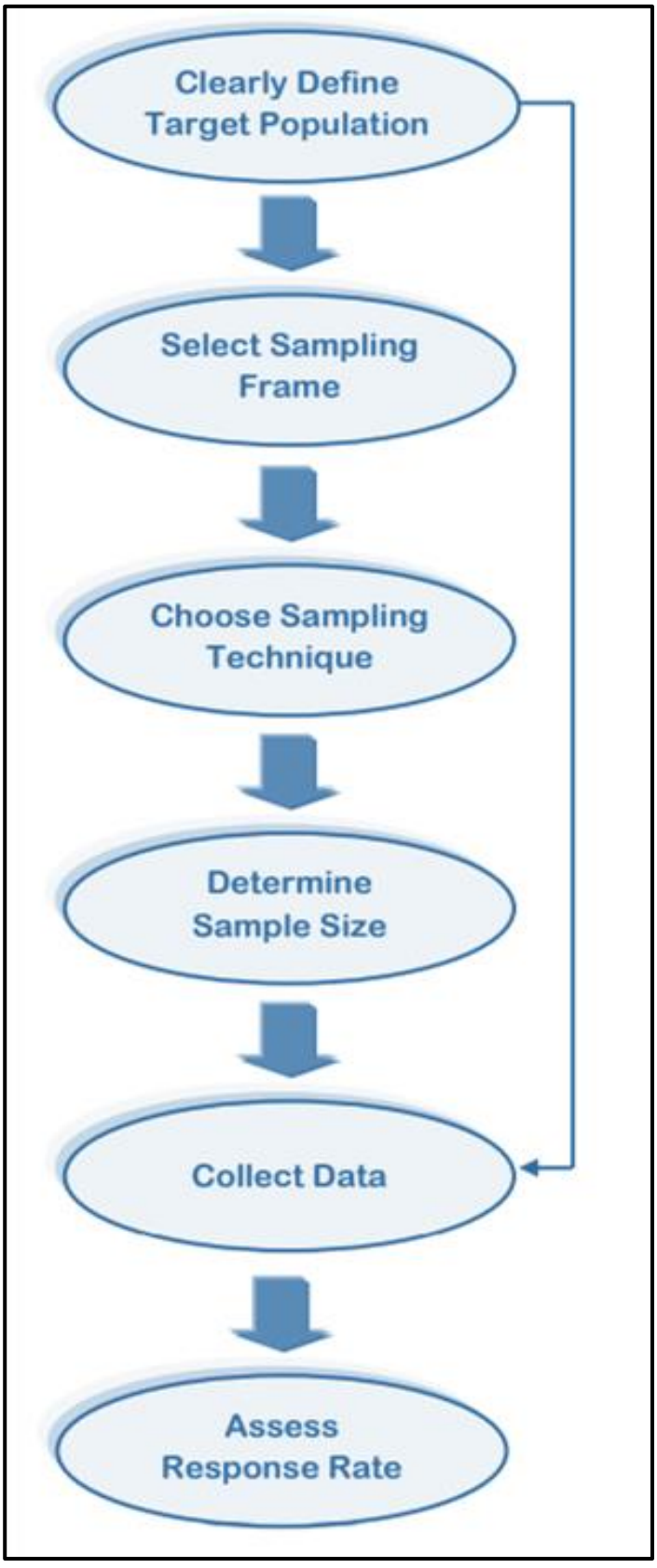


Figure 3: Sampling Process Steps *(Taherdoost, 2016)*

3.2.1 Target Population

The target population of a study is the group of participants with specific attributes of interest that are relevant to the research and is refined compared to the overall population, which has no characteristics related to research (Asiamah et al., 2017).

The target population for this study are the Millennials in the South-East district of Botswana who engage or have engaged in mobile marketing or commerce. “Millennials” are the people born between 1980 and 2000 (Stein, 2021).

3.2.2 Sampling Frame

A sampling frame is a collection of units, such as people, that can be selected for the research and approximates the population as closely as possible (Mujere, 2016). It is the list of the actual cases from which the sample was drawn (Taherdoost, 2016).

3.2.3 Sampling Technique

Sampling techniques assist in selecting units to be included in the sample. There are two groups of sampling techniques: probability sampling techniques and non-probability sampling techniques (Mujere, 2016). For this research, the probability sampling technique was selected to use in the form of Simple Random Sampling. Simple random sampling is defined as a technique in which each unit of the target population has an equal or fair opportunity of being selected by conducting a step where each member is selected independently of the other members (Sharma, 2017). The purpose of a simple random sample is to restrict any human bias in the selected sample units, which results in a sample that is highly representative of the population, assuming that there is limited missing data (Sharma, 2017; Mujere, 2016). The advantages of simple random sampling as a method that allows for a fair selection is that it adequately represents the population and allows for reasonable generalizations from the results of the sample back to its population (Sharma, 2017). For these reasons, simple random sampling was used for the online data collection.

3.2.4 Sample size

Selecting the number of units represented in the sample size is crucial to researchers as it directly affects the research's time, cost and precision of the sample estimate (Anokye, 2020). The sample size is a significant feature of any empirical study that aims to make inferences about a population from a sample (Khalilzadeh & Tasci, 2017).

Structural Equation Modelling (SEM) studies require a large sample size (Kline, 2016). As such, for SEM models to be safely evaluated, the sample should be a minimum of 200 participants to offer adequate statistical power (Kyriazos, 2018). SEM tests such as the Chi-Square test or the Root Mean Square Error of Approximation are sensitive to sample size and may fail to reject an unfit model if the sample size is less than 200 (Kyriazos, 2018). Therefore, this study should have a minimum of 200 respondents. Although a sample size of 300 participants was considered, only 263 participants responded.

3.2.5 Data Collection Method

After establishing the target population, sampling frame, sampling technique and sample size, the next step is to collect data (Taherdoost, 2016). Data collection is the process of gathering information and finding answers to the research problem or testing the hypotheses (Dudovskiy, 2022). The data was collected using a survey method. According to Young (2016), a survey aims to make interpretations about the population by examining the representative sample of that population as compared to drawing observations from the whole population. Surveys are often conducted in the form of a variety of questionnaire formats that are appealing, especially to student researchers, as they are easy to conduct, gather large datasets easily, can be made available on digital platforms, and data collected via this method may be analysed easily as compared to spoken data (Young, 2016).

Survey questionnaires provide numerical data, the extent of agreement and measures to test the hypotheses whilst maintaining a low-cost data collection method (Queirós, Faria, & Almeida, 2017). Questionnaires even eliminate the risk of the researcher leading the question toward the desired outcome from the respondent as it grants the respondent a flexible schedule to answer the survey on their own time (Kabir, 2016). A survey questionnaire was used for this research due to the Covid-19 pandemic circumstance, as close proximity to the respondent presents risks (African Population and Health Research Center, 2021). Botswana strongly practised restrictions, including government-mandated face masks, social distancing and gathering restrictions (Ministry of Health Botswana, 2022). The five-point Likert-scales self-administered questionnaire was disseminated via online platforms such as relevant online groups. All data were collected in the South-East district of Botswana. In line with the statistics that most of the Millennial population in Botswana are in cities and urban villages/towns (Statistics Botswana, 2020), Gaborone and surrounding urban villages such as Lobatse, Ramotswa, Otse and Tlokweng were targeted (The Botswana Information Directory, 2021).

3.2.6 Questionnaire design

The questionnaire was designed based on existing literature (Tong et al., 2020) and subject expert opinions. The questionnaire was categorised into two sections; Section A related to the respondent's profile, and Section B related to the research variables, including perceived usefulness, perceived ease of use, perceived pessimism issues, perceived trust issues, perceived privacy issues, perceived financial issues and perceived invasiveness. The questionnaire sample can be found in the Annexure section.

3.3 Data Analysis

3.3.1 Assess Response Rate

According to Taherdoost (2016), a response rate is the number of people agreeing to participate in the study, and most surveys do not achieve a 100 per cent response rate due to the unwillingness of participants to respond, their inability to respond, or inaccessibility. Taherdoost (2016) further elaborates that using the correct sampling technique and large sample size may help to limit the likelihood of sample bias. Although a sample size of 300 participants was considered, only 263 participants responded.

3.4 Data Coding, Cleaning & Interpretation

The data collected were coded in Microsoft Excel and then analysed using the statistical software SmartPLS 3 software. SmartPLS is a professional statistical software with a graphical user interface for structural equation modelling (Ringle, Wende, & Becker, 2015). For its advantageous uses, partial least squares structural equation modelling (PLS-SEM) is a very popular tool for SEM analysis, as it has an intuitive graphical user interface (Sarstedt & Hwa, 2019). The SmartPLS 3 software allows for an in-depth analysis, given its in-built explanations of the algorithms and meaningful defaults, while allowing the researcher to create a path model and data groups to run multi-group analyses quickly (Numerical-analytics, 2022).

3.5 Data Analysis and Interpretation

3.5.1 Structural Equation Modelling

Structural Equation Modelling (SEM) determines the different models and multivariate techniques; it also demonstrates various elements of the hypotheses, such as the mean and other variances, while not relying on a single indicator (Farhat et al., 2017). It is a collection of techniques that examines the relationships between one or more independent variables and one or more dependent variables and further determines linear causation among latent and observed variables (Karakaya-Ozyer & Aksu-Dunya, 2018). The advantages of using SEM for this study are the detailed assessment of the measurement error, the estimation of latent variables via observed variables and the effectiveness of model testing to assess the fitness of the data (Urbano, 2013). SEM has two primary components: the measurement model and the structural model, and when the two are considered together, the model may be called a full structural model (Weston & Gore, 2006).

3.5.2 The Measurement Model Accuracy

This model describes the relationships between variables and the constructs (Weston & Gore, 2006); it is a model that relates its variables to its indicators. The indicators affecting these latent variables in the model are analysed to establish the relationship and fitness of the data (Chin, 1998).

Reliability is the extent to which a measuring procedure yields the same result on multiple trials, without a reliability component in research tools researchers would be unsuccessful in concluding, formulate theories, or establishing claims relating to their research (Howell, et al., 2023). However, it is important to note that even though researchers may try to ensure accuracy in their studies, the only measuring device available is the researcher's own observations of human interaction or human reaction to varying stimuli and thus resulting in unreliable and multiple interpretations are possible (Howell, et al., 2023).

This was not the case in this research as this study has quantitative approach.

Validity refers to the extent to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure, and it is concerned with measuring what the researchers set out to measure. External validity refers to the extent to which the results of a study are generalisable, while internal validity refers to the the extent to which the designers of a study have taken into account alternative explanations for any causal relationships (Howell, et al., 2023)..

All data collected was checked for validity and reliability for data accuracy. The validity and reliability tests used in this study are further discussed in Chapter 4.

3.5.3 Model Fitness

The measurement model relies on assessing its model fitness (Sahar & Arshian, 2018). This study tested the acceptable model fit using Standardized Root Mean Square Residual (SRMR), Chi-Square and Bentler-Bonett Normed Fit Index. Once the model fit was confirmed, the path analysis was tested.

3.5.4 Structural Model

According to Weston & Gore (2006), the structural model describes inter-relationships among the various constructs, or the equations in the model specify the hypothesised relationships among latent variables. According to (Gefen et al., 2000), the structural model represents the interrelationships of the variables and establishes the relationship and fitness of the data.

3.5.4.1 Hypothesis Testing

Once the measurement accuracy tests were complete, the structural model was analysed. The data collected were coded in Microsoft Excel and then analysed using the statistical software SmartPLS 3 software. SmartPLS is a professional statistical software with a graphical user interface for structural equation modelling (Ringle et al., 2015).

CHAPTER 4

4 DATA ANALYSIS AND RESULTS

This chapter presents the descriptive statistic results (demographic data) first as per the recommendation of Loeb et al. (2017), followed by the substantive analysis/ analysis of the direct effects as emphasised by Yu et al. (2019).

Loeb et al. (2017) state that descriptive statistics characterises a phenomenon by identifying patterns in data that have not previously been recognized and helps with a general understanding of patterns across a population of interest. Descriptive statistics are important as raw data presented would be challenging to visualize, enabling a more straightforward interpretation of the data (Laerd Statistics, 2022). For the substantive analysis of this study, the data were analysed using Structural Equation Modelling (SEM). SEM entails a five-process analysis which includes model specification, identification, parameter estimation, model evaluation, and finally, model modification (Fan et al., 2016). SEM analysis was conducted using the SmartPLS 3 software. Multiple alternate tests were used to increase the chances of the overall accuracy of test results by measuring the consistency of scores across comparative tests administered to the same group (Dimitrov, 2002; Ghazali, 2016).

4.1 Descriptive Statistics

Below is the analysis of the demographic profile of the respondents for this study. The data presented has been prepared per the visual representation recommendations of Loeb et al. (2017), which are based on function, familiarity and simplicity. In total, 263 participants provided the data for this study and were included in the analysis. The participants were classified by gender, age group, and technology use classification.

		Frequency	Valid Percent
GENDER	Male	158	60.1
	Female	101	38.4
	Prefer not to state	4	1.5
AGE GROUP	Born between 1980 and 2000	263	100
LOCALITY	Resides in the South-East district (Botswana)	263	100
TYPE OF PERSONAL DEVICE	Smartphones, tablets and other mobile devices	263	100
MOBILE MARKETING	Have used or do use personal devices for Mobile Marketing activities	263	100

Table 1 Descriptive statistics of the respondents

Table 1 above gives us the respondents' age and locality distribution. The socio-demographic results conclude that 100% of all participants were Millennials residing in the South-East district of Botswana, making them the appropriate sample for this study's target population.

Table 1 further reflects that the majority of the participants were male (60.1%), followed by females (38.4%) and a few who preferred not to disclose their gender identity (1.5%). This presented an interesting trend given that according to Statistics Botswana (2020), the target population gender-mix of individuals in the district is more balanced in these areas (i.e.) there are 52.3% males & 52.9% females residing in Gaborone or 6.5% males and 6.7% females in Lobatse, but significantly more male residents than female residents participated in this study. However, this does not indicate that female respondents were restricted from accessing the online survey, as females lead households constituted 43.5% of the use of computers and mobile cellular in Botswana (Statistics Botswana, 2019). This may instead reflect the individual's relevance or willingness to participate in this study, as males dominate engaging in digital commerce more than females in Botswana (Statistics Botswana, 2019)*. All participants (100%) owned a smart personal device used to engage in M-marketing. This is in line with the national statistics, which indicate that both males and females engage in M-commerce and that settlements in the South-East district access information and communication via mobile technology (i.e.) 98.69% in Gaborone, 90.97% in Lobatse, etc. (Statistics Botswana, 2019)*.

**Projections for 2022 are not available as the census/survey is done at a 5-10 year interval.*

NOTE: For the substantive analysis section of this chapter, use the Key below as reference:

KEY	
Perceived usefulness	**PU**
Perceived ease of use	**PEU**
Perceived pessimism issues	**PP**
Perceived trust issues	**PT**
Perceived privacy issues	**PPI**
Perceived financial issues	**PF**
Perceived invasiveness	**PI**
Intention to use	**IU**

4.2 Reliability

For this study, reliability was tested using Cronbach's Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) for their efficiency in testing reliability (Taherdoost, 2016).

	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
IU	0.945	0.958	0.821
PEU	0.792	0.856	0.543
PF	0.830	0.960	0.859
PI	0.797	0.924	0.752
PP	0.705	0.807	0.461
PPI	0.902	0.927	0.719
PT	0.782	0.851	0.538
PU	0.900	0.926	0.716

Table 2 Construct Reliability Tests

4.2.1 Cronbach Alpha

Cronbach's Alpha is used to demonstrate that the scales adopted for research are fit for purpose and that the recommended threshold for Cronbach's Alpha tests on individual constructs must be greater than 0.7 (Taber, 2018). Table 2 above demonstrates that the Cronbach Alpha coefficients range between 0.705 to 0.945. This confirms that the measures used in this study are reliable.

4.2.2. Composite Reliability

The internal reliability assessment of each variable was done using the Composite Reliability (CR) index test. According to Mwesiumoa et al. (2021), the reliability analysis provides an acceptable CR threshold above 0.7. Table 2 indicates that composite reliability indexes were between 0.807 and 0.958. This confirms that the measures used in this study are reliable.

4.2.3 Average Variance Extracted

The average variance extracted (AVE) measures the amount of variance captured by a construct regarding the variance due to measurement errors (Mendes dos Santo & Cirillo, 2021). An AVE of less than 0.50 indicates that the items explain more errors than the variance in the constructs, and for any measurement model, the AVE for each construct must be at least 0.50 (Analysis Inn, 2020). The results shown in Table 2 for all the constructs were greater than 0.5, except for PP at 0.461, which is not significantly off the desired 0.5 when rounded off mathematically. Additionally, given that the other tests did not highlight consistency issues with this specific construct, it is not considered highly unreliable. All other constructs range from 0.538 to 0.859, thus validating an acceptable threshold for AVE.

4.3 Validity

For this study, the validity was evaluated by using the cross-loading of indicator Fornell & Larcker criterion and the Heterotrait-monotrait (HTMT) ratio of correlation as they are effective tests of validity (Taherdoost, 2016). Discriminant validity determines that there is no correlation between tests that measure different matters and that the latent constructs used for measuring the causal relationships are truly distinct from each other or risk the issue of multicollinearity (Hamid et al., 2017).

4.3.1 Fornell & Larcker Criterion

	IU	PEU	PF	PI	PP	PPI	PT	PU
IU	0.906							
PEU	0.623	0.737						
PF	0.675	0.456	0.828					
PI	0.651	0.496	0.577	0.777				
PP	-0.609	-0.465	-0.468	-0.474	0.675			
PPI	0.586	0.498	0.629	0.599	-0.502	0.848		
PT	0.776	0.629	0.614	0.648	-0.515	0.607	0.735	
PU	0.928	0.596	0.546	0.612	-0.583	0.464	0.724	0.846

Table 3 Fornell-Larcker Criterion

The Fornell & Larcker Criterion compares the square root of the AVE with the correlation of latent constructs, where the square root of each construct's AVE should have a greater value than the correlations with other latent constructs (Hamid et al., 2017). The results in Table 3 above show no significant issues in discriminant validity other than the value of PU being 0.928; however, the figure is not significantly greater than 0.906 and is still less than 1 complete unit of difference.

4.3.2 Monotrait Ratio

	IU	PEU	PF	PI	PP	PPI	PT	PU
IU								
PEU	0.698							
PF	0.768	0.545						
PI	0.725	0.607	0.725					
PP	0.716	0.587	0.595	0.590				
PPI	0.641	0.577	0.711	0.673	0.613			
PT	0.895	0.777	0.775	0.817	0.652	0.721		
PU	0.981	0.674	0.608	0.689	0.676	0.497	0.836	

Table 4 Monotrait Ratio (HTMT) ratio of correlation

According to Hamid et al. (2017), HTMT values close to 1 indicate a lack of discriminant validity, with the recommendation that anything higher than the proposed value of 0.90 suggests a lack of discriminant validity. In Table 4, all the HTMT values between the constructs are below the 0.90 thresholds, pointing out that discriminant validity has been achieved except again for PU at 0.981; however, the figure is not significantly greater than 0.90 and is still less than 1 complete unit of difference.

4.4 Quality

Testing the quality of research is critical and is done by determining test scores. Scores obtained by a measuring instrument are the sum of the 'true score' and 'error score', and the quality can be determined by establishing if the error margins are low, resulting in the research findings being of high-quality standards (Mohajan, 2017). To determine the quality of the structural model for this study, we check the collinearity and predictive powers.

4.4.1 Collinearity Statistics

	VIF
IU1	6.157
IU2	5.244
IU3	4.727
IU4	2.281
IU5	3.655
PEU1	2.461
PEU2	2.377
PEU3	1.466
PEU4	1.715
PEU5	1.523
PF1	4.205
PF2	6.146
PF3	5.183
PF4	3.253
PI1	2.111
PI2	3.273
PI3	3.422
PI4	2.181
PP1	1.108
PP2	1.418
PP3	1.305
PP4	1.457
PP5	1.383
PPI1	4.166
PPI2	4.813
PPI3	2.218
PPI4	3.730
PPI5	3.944
PT1	1.704
PT2	1.372
PT3	2.035
PT4	1.244
PT5	2.169
PU1	4.667
PU2	5.335
PU3	2.258
PU4	1.663
PU5	2.068

Table 5 Collinearity Statistics (VIF)

Collinearity possibilities were tested by evaluating the degree of collinearity among the independent variables using a variance inflation factor (VIF). According to Akinwande et al. (2015), a VIF between 5 and 10 shows a high correlation that may be problematic, especially if the VIF goes above 10; it can be assumed that the regression coefficients are poorly estimated due to multicollinearity. Table 5 shows that the only constructs statistics that went beyond 5 were IU, PF and PU; however, none went beyond 6.1, which is close to 5. Most notably, none of the construct statistics went beyond Figure 10, which would have been highly problematic.

4.4.2 R-Square

	R Square	R Square Adjusted
IU	0.868	0.867
PEU	0.422	0.413
PU	0.580	0.574

Table 6 R Square

Initially introduced by Wright in 1921, the R^2 quantifies how much the dependent variable is determined by the independent variables in terms of the proportion of variance (Chicco et al., 2021). According to Hair et al. (2013), R^2 values can be described respectively as 0.75 being substantial, 0.50 being moderate, and 0.25 being weak. The results in Table 6 indicate figures above 0.25, thus making it moderate or substantial.

4.4.3 F-Square

	IU	PEU	PF	PI	PP	PPI	PT	PU
IU								
PEU	0.058							
PF								0.018
PI								0.075
PP		0.281						
PPI								0.009
PT								0.349
PU	3.544							

Table 7 F-Square

F^2 evaluates local effect size (i.e.) one variable's effect size within the context of a multivariate regression model (Selya et al., 2012). The results in Table 7 do not indicate any substantial issues with quality.

4.5 Model Fitness

The measurement model relies on assessing its model fitness (Sahar & Arshian, 2018).

	Saturated Model	Estimated Model
SRMR	0.075	0.084
Chi-Square	2548.599	2714.675
NFI	0.728	0.710

Table 8 Model Fit

4.5.1 Standardized Root Mean Square Residual

The acceptable model fit was tested using Standardized Root Mean Square Residual (SRMR). As the SRMR is an absolute measure of fit, a value of zero indicates a perfect fit and a value less than 0.08 is generally considered a good fit (Asparouhov & Muthén, 2018). The SRMR result in Table 8 for this study is 0.075, thus demonstrating a good fit.

4.5.2 Chi-Square

For this study, the Chi-square test was used for goodness of fit. It assessed the overall fit and the discrepancy between the sample and fitted covariance matrices, and its p-value should be > 0.05 (Shachar et al., 2015). The chi-square value for this study in Table 8 is 2,549. If the chi-square test rejects the model and SRMR is less than 0.08, the model has a poor fit and has to be modified, but that was not the case for this study.

4.5.3 Bentler-Bonett Normed Fit Index

Known as the Bentler-Bonett Normed Fit Index (NFI), NFI is an incremental measure of the goodness of fit of a model which is not impacted by the variables in the model (Hooper et al., 2008). When an NFI ranges between 0 and 1, especially when it is close to 1, it represents a good fit (Hayashi et al., 2011). The NFI value for this study, as shown in Table 8, is 0.728.

Recommended statistics for the model revealed an acceptable fit of the measurement model to the data.

4.6 Hypotheses Testing Results

After the data processing and adjustments of the model, the final results for the data analysis are as below:

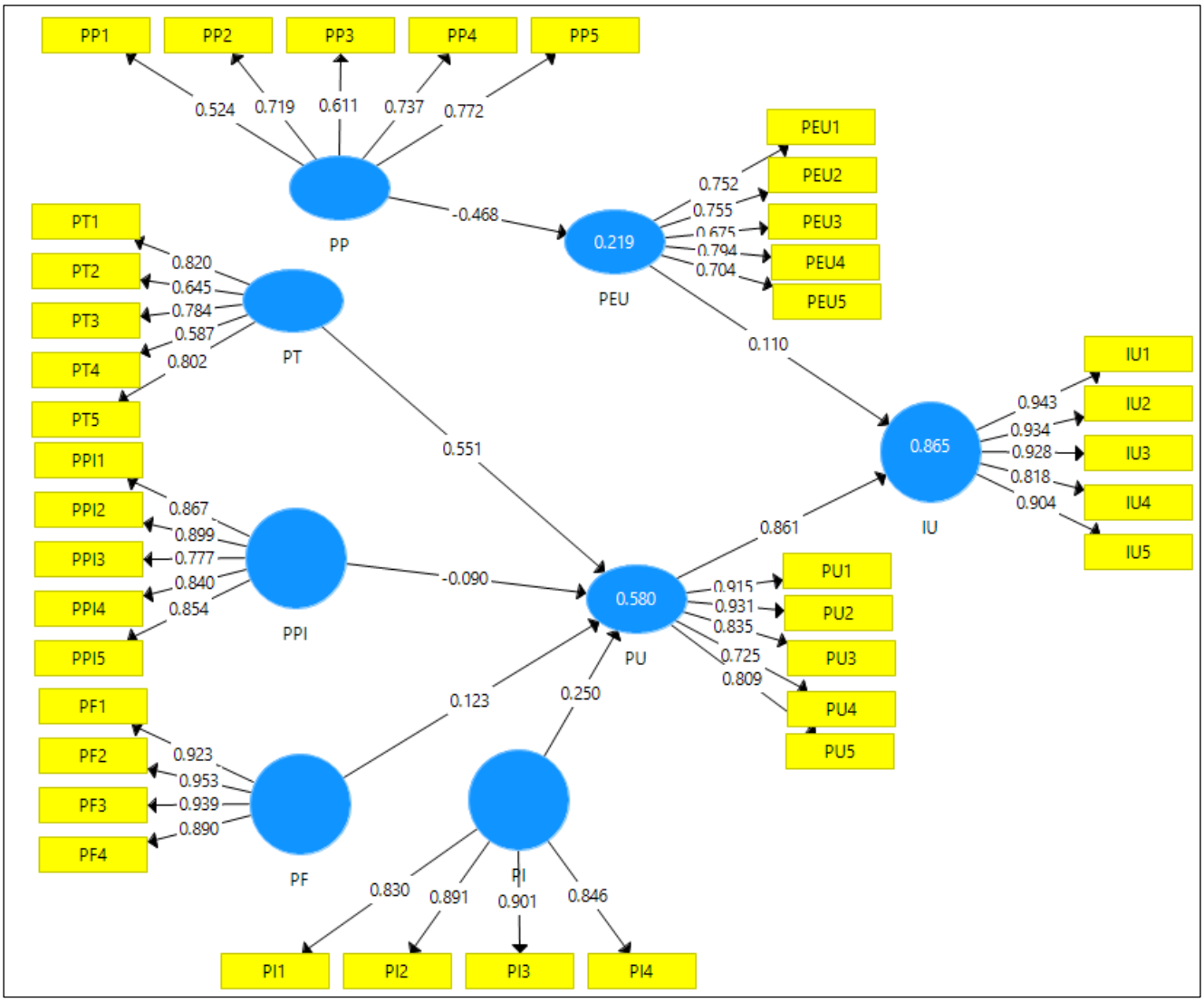


Figure 4 Final Path Coefficient Results

KEY	
Perceived usefulness	**PU**
Perceived ease of use	**PEU**
Perceived pessimism issues	**PP**
Perceived trust issues	**PT**
Perceived privacy issues	**PPI**
Perceived financial issues	**PF**
Perceived invasiveness	**PI**
Intention to use	**IU**

4.6.1 Path Coefficient

	IU	PEU	PF	PI	PP	PPI	PT	PU
IU								
PEU	**0.110**							
PF								**0.123**
PI								**0.250**
PP		**-0.468**						
PPI								**-0.090**
PT								**0.551**
PU	**0.861**							

Table 9 Path Coefficient

A path coefficient indicates the direct effect of a variable assumed to be a cause on another variable which is assumed to be an effect (Randolph & Myers, 2013). As seen in Table 9, all hypotheses support a positive relationship except for two; PP & PEU and PPI & PU.

4.6.2 Hypothesis testing result

Proposed Hypothesis relationship	Hypothesis	Accepted/ Rejected
PP → PEU	**H1**	**Reject**
PT → PU	**H2**	**Accept**
PPI → PU	**H3**	**Reject**
PF → PU	**H4**	**Accept**
PI → PU	**H5**	**Accept**
PEU → IU	**H6**	**Accept**
PU → IU	**H7**	**Accept**

Table 10 Hypothesis testing result

Hypothesis 1 for this study was "*Batswana Millennials' perceived pessimism issues negatively impact the ease-of-use perception of M-marketing*". However, according to the path coefficient results of -0.468, indicating that PP does not have a direct effect on PEU. Therefore, this study rejects H1.

Hypothesis 2 for this study was "*Batswana Millennials' perceived trust issues negatively impact the usefulness perception of M-marketing*". Based on the proposed hypothesis statement, PT has an impact on PU. The research findings show that this hypothesis is supported. The path coefficient is 0.551 indicating a positive relationship. This study accepts H2.

Hypothesis 3 for this study was "*Batswana Millennials' perceived privacy issues negatively impact the usefulness perception of M-marketing*". However, the path coefficient results in Table 10 show -0.090, indicating that PPI does not have a direct effect on PU. Therefore, this study rejects H3.

Hypothesis 4 for this study was *"Batswana Millennials' perceived financial issues negatively impact the usefulness perception of M-marketing".* Based on the proposed hypothesis statement, PF has an impact on PU. The research findings show that this hypothesis is supported. The path coefficient is 0.123 indicating a positive relationship. This study accepts H4.

Hypothesis 5 for this study was *"Batswana Millennials' perceived invasiveness on their personal devices negatively impacts the usefulness perception of M-marketing".* Based on the proposed hypothesis statement, PI has an impact on PU. The research findings show that this hypothesis is supported. The path coefficient is 0.250 indicating a positive relationship. This study accepts H5.

Hypothesis 6 for this study was *"Batswana Millennials' perceived ease of use positively impacts the intention to use M-marketing".* Based on the proposed hypothesis statement, PEU has an impact on IU. The research findings show that this hypothesis is supported. The path coefficient is 0.110 indicating a positive relationship. This study accepts H6.

Hypothesis 7 for this study was *"Batswana Millennials' perceived usefulness positively impacts the intention to use M-marketing".* Based on the proposed hypothesis statement, PU has an impact on IU. The research findings show that this hypothesis is supported. The path coefficient is 0.861 indicating a positive relationship. This study accepts H7.

CHAPTER 5

5 DISCUSSIONS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSIONS

This study attempted to examine the impact of perceived usefulness, ease of use & risk considerations on the intention to use M-marketing by Millennials in the South-East district of Botswana. These factors were measured using a five-point Likert scale and distributed as an online questionnaire. The results found are as follows;

5.1 Discussion of Results

Previous studies, such as the one conducted by Chowdhury et al. (2016), highlighted that a consumer's attitude towards M-marketing-related activities is certainly influenced by the people's feelings of dishonour and resistance when engaging with such technology. Although empirical literature has shown that perceived pessimism issues do have a direct adverse effect on perceived ease of use (Kumar & Mukharjee, 2013; Al-alak & Alnawas, 2010; Hashim & Zorkepli, 2014; Lee et al., 2014; Uddin et al., 2019)., it was found untrue in this research (H1). This may be credited to the fact that despite a user's relationship with technology, the specials/ promotions offered by mobile campaigns are more valuable and are the specific aspects of M-marketing towards which users have a positive attitude (Shahzad et al., 2021). Trust issues were found negatively impact the usefulness perception of M-marketing (H2), in line with the literature which states that the higher the credibility, the better the response and trust from the users (Salem, 2016; Lee et al., 2018; Alalwan et al., 2018; Seo & Lee, 2021; Siraj et al., 2021).

Although empirical literature has shown that privacy issues do impact the usefulness perception of M-Marketing (H3) (Al-Adwan & Smedly, 2013; Huan et al., 2013; Gazley et al., 2015; Banerjee et al., 2021), the same result was not found for this study. This may be because many users are aware of privacy breach issues, a number of them falsify their personal information as a result of perceived control (Martin, 2016), or firms can successfully use vulnerability suppressors to control privacy concerns by an information collection disclosure notification (Martin et al., 2016). Perceived financial issues were also found to negatively impact the usefulness perception of M-marketing (H4). Financial concerns surrounding the technology (Amin et al., 2014; Oscar et al., 2017; Wismantoro et al., 2020; Noreen et al., 2021) and perceived financial risks resulting in irresponsible financial behaviour (Kgosikebatho, 2015) are found to be in line with previous studies. The higher the tracking of a user's

financial data (such as credit card numbers and purchase history), the more risky and negative the perception of the user (Martin et al., 2016). The findings relating to perceived invasiveness on personal devices were also found to negatively impacts the usefulness perception of M-marketing (H5), which is in line with existing literature (Pasqua & Elkin, 2012; Park & Yoo, 2014; Gazley et al., 2015), who suggested that as M-marketing is invasive by nature consideration must be made in receiving consent from the users. Unlike traditional advertising, M-Marketing is of comparatively low cost, and thus advertisers can send repeated short messages, which results in the users getting disturbed by the information provided by those advertisements (Chowdhury et al., 2016).

The results of this study further found that perceived ease of use does positively impact the intention to use M-marketing (H6) (Florido-Benítez et al., 2017; Alzubi et al., 2018). Finally, the study confirms that perceived usefulness does positively impact the intention to use M-marketing (H7), as usefulness is also identified as a very influential factor for engagement in M-marketing (Silva et al., 2019; Saeed & Bekhet, 2018).

5.2 Recommendations

Other than perceived pessimism and privacy issues, variables tested in this study were found to influence consumers' intention to use M-marketing. As such, these variables should be integrated into the development and implementation of M-marketing strategies used by companies. The findings of this study will add practical value to the businesses and offer a better understanding of mobile users' beliefs surrounding M-marketing, which could influence an organisation's effective strategic view of mobile marketing resources management. Furthermore, the academic merits of this study are significant as it provides valuable knowledge to other researchers and academia.

5.3 Research Limitations & Future Research Suggestions

Firstly, the study was conducted in the South-East district only; as such, the findings may not be generalized to the whole of Botswana. Furthermore, the study only made use of a quantitative research approach which has its limitations (Choy, 2014). Future researchers may consider using a mixed-method approach to both a qualitative and quantitative research design, as qualitative research facilitates the understanding of the nature and complexity of the concept being studied, as such, allows for new areas of research and a greater depth of research (Basias & Pollalis, 2018).
In terms of possible future research opportunities this study provides, as this study was conducted during a particular time and circumstances (during the Covid-19 global pandemic), there is an opportunity for a researcher to see if there has been a specific shift in perspective amongst consumers post-pandemic. As further validation of the findings in other regions of Botswana and

other African regions is required, future studies could include samples with more diverse location profiles. It is recommended, therefore, that future research replicate this study in other cities throughout the country and other South African countries' contexts.

5.4 Conclusion

This study looked at factors affecting the intention to use M-marketing, such as perceived usefulness, perceived ease of use, pessimism issues, trust issues, privacy, financial issues and invasiveness. The main purpose of this study was to gain insights directly from the end users of M-marketing on the factors that influence their engagement in the M-marketing platforms.

The research also highlighted that despite the vulnerabilities involved when engaging in M-marketing activities, such as potential privacy breaches, Millennial Batswana did not deem that factor intimidating enough to restrict their interaction with the technology. Furthermore, it also proved that irrespective of the overall aversion to technology, a pessimistic attitude towards technology did not transfer to a pessimistic approach in wanting to use M-marketing. However, their perceived usefulness, ease of use, trust, financial safety and invasiveness perceptions did impact their intention to use the M-Marketing platform. Businesses can use this information and findings to design productive and long-lasting relationships with consumers through their M-marketing policies and strategies.

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ANNEXURE

Online Questionnaire

You are invited to join an academic research project by Shuchita Shukla as part of her Masters of Commerce in Marketing at the University of the Witwatersrand, Johannesburg. Data collection for this project will be done using an online questionnaire. Please note that as this is a self-administered online questionnaire, participation in the survey implies consent from you that your responses will be used as part of the research report and that other researchers may use your responses for their study, but none of your names or any personal information will not be used or passed on. Your participation further implies that you understand what the research is about as per the Participation Information Sheet shared and volunteer to take part in this survey. You further consent to cover any internet/ technology costs that you may incur during the completion of this online questionnaire.

SECTION A- DEMOGRAPHIC INFORMATION

This section focuses on your background information. Please indicate your answer by selecting the appropriate box with a tick.

1: Please indicate your gender

1	Male	
2	Female	
3	Prefer not to state	

2: Please indicate if you were born between the years 1980 to 2000

1	Was born between 1980 and 2000	
2	Was not born between 1980 and 2000	

3: Please indicate your residence in relation to the South-East district of Botswana

1	Resides in the South-East District (Botswana)	
2	Does not reside in the South-East District (Botswana)	

4: Please indicate the type of personal devices you own for regular use

1	Smart devices such as smartphones, tablets and other mobile devices.	
2	Feature or press-button devices	
3	Does not use any personal devices	

5: Please indicate if you or have you ever used your personal device for Mobile Marketing activities (i.e.) receiving information regarding promotions, commercial activities, part-take in competitions, etc.

1	Have used or do use personal devices for Mobile Marketing activities	
2	Has not or does not use personal devices for Mobile Marketing activities	

SECTION B- Mobile marketing and the user

The following statements in this section relate to variables relating to Mobile marketing (M-marketing).

Please indicate the extent to which you agree or disagree with the statements below by marking your response to the most appropriate number using a tick.

1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree.

	Sections and Details	1	2	3	4	5
	M-marketing usefulness					
PU1	**M-marketing helps me make informed purchase decisions**					
PU2	**M-marketing adds value to my lifestyle**					
PU3	**M-marketing's time-sensitive adverts are useful to me for making purchases**					
PU4	**M-marketing provides a unique platform for understanding my suppliers**					
PU5	**M-marketing received helps to reduce the time it takes me to search for goods and services**					
	M-marketing's ease of use					
PEU1	**M-marketing is easy to use**					
PEU2	**M-marketing is easy to access using my device**					
PEU3	**The terms and conditions of the M-marketing platform are easy to understand**					
PEU4	**M-marketing is a convenient tool for me**					
PEU5	**M-marketing doesn't require technical training for shopping activities**					

	Sections and Details	1	2	3	4	5
	Attitude towards M-Marketing					
PP1	**M-marketing messages received on my mobile phone annoy me**					
PP2	**M-marketing technology is difficult to engage in**					
PP3	**M-marketing technology is intimidating**					
PP4	**The lack of user-friendliness of M-marketing makes me want to use it less for shopping activities**					
PP5	**M-marketing is frustrating to use**					
	Personal feelings when using M-marketing					
PT1	**It feels safe to use M-marketing**					
PT2	**I feel more comfortable with M-marketing when I am familiar with the supplier sending the messages**					
PT3	**M-marketing provides me with reliable information**					
PT4	**I trust M-marketing messages when I travel to new locations outside my familiar radar**					
PT5	**I trust the information I receive using M-marketing**					

	Sections and Details	1	2	3	4	5
	Safety when using M-marketing					
PPI1	**Suppliers use M-marketing ethically when engaging with me**					
PPI2	**Information collected about me via the use of M-marketing is protected**					
PPI3	**Information collected about me via the use of M-marketing is confidential**					
PPI4	**The M-marketing platform is hacker-proof**					
PPI5	**The mobile marketing platform is virus-proof**					
	Personal feelings when receiving M-marketing alerts					
PI1	**M-marketing alerts are well timed**					
PI2	**M-marketing alerts are not invasive**					
PI3	**M-marketing alerts do not disturb my day-to-day life**					
PI4	**M-marketing is preferable as compared to other channels of marketing**					
PI5	**Suppliers should obtain consent from me first before sending M-marketing alerts**					

	Sections and Details	1	2	3	4	5
	Financial safety when using M-marketing					
PFI1	I feel safe giving financial information over M-marketing platforms					
PFI2	Fraud and financial theft activities are restricted when using M-marketing					
PFI3	The risk of financial transaction errors is restricted on M-marketing platforms					
PFI4	M-marketing is very safe to use to make purchases and payments.					
PF15	Enticing M-marketing promotions do not risk irresponsible financial behaviour					
	Intention of use and M-marketing					
IU1	I intend to use M-marketing over other marketing channels					
IU2	I feel excited to use M-marketing					
IU3	I will use M-marketing to gather information about the next product I intend to purchase					
IU4	I will use M-marketing to purchase the next product I intend to purchase					
IU5	I recommend the use of M-marketing platforms to my friends and family					