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THE IMPACT OF CUSTOMER TRUST, PERCEPTION AND ATTRIBUTES ON SAFETY AND ADOPTION OF CONTACTLESS TECHNOLOGIES ON ONLINE SHOPPING BEHAVIOUR OF CONSUMERS IN THE RETAIL SECTOR IN ZIMBABWE.

BY TATENDA LUGUBE B212159B

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I, **TATENDA LUGUBE**, do hereby declare that this project submitted to **BINDURA UNIVERSITY OF SCIENCE EDUCATION** is the result of my research under the supervision of Dr K. Karedza. This project has not been submitted in part or full for any other degree to any university or institution.

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DEDICATION

This dissertation is humbly dedicated to the Almighty, in appreciation of the wisdom, strength, and grace bestowed upon me during this research. I also dedicate this work to my parents, Mr. and Mrs. Lugube, and my family, whose selfless support and emotional guidance enabled me to stay focused and driven in achieving my academic goals.

ABSTRACT

This research examines how customer trust, perceptions, and individual characteristics affect the perceived safety and uptake of contactless technologies, and consequently influence online shopping behaviour in Zimbabwe's retail sector. Employing a quantitative approach, data were gathered from 279 online shoppers via structured questionnaires. Results indicate that both trust and perception play a critical role in shaping consumers' sense of safety regarding contactless technologies, while factors such as age, digital literacy, and income level significantly impact their likelihood of adoption. These insights provide valuable guidance for retailers and policymakers aiming to improve the digital shopping experience and promote broader use of secure, convenient contactless platforms. The significance of the study highlighted the importance of research to the researcher, the university, society, and the company. The data was analysed with the use of SPSS 27 and SPSS-AMOS software packages. Based on the results collected and analysed, contactless online shopping behaviour is influenced by customer`s trust, attributes, perception and safety. All constructs met the criterion for composite reliability (above 0.7), and average variance extracted (above 0.5).

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CHAPTER 1

1.0 INTRODUCTION

The progression of information and communication technology (ICT) has revolutionized consumer experiences and retail operations worldwide. The growth of online commerce and the incorporation of contactless payment systems have allowed consumers to conduct transactions that are smooth, rapid, and protected, eliminating the necessity for face-to-face interaction. Technologies like mobile payment apps, QR codes, near-field communication (NFC), and wearable payment devices have reshaped the shopping landscape highlighting significance of contactless transactions.

Despite global advancements, the uptake and utilization of contactless technologies in Zimbabwe are still inconsistent. Some consumers, particularly in urban areas, have quickly adopted these tools, while others remain cautious due to concerns about trust, security, and infrastructure constraints. Recognizing the factors that drive and hinder the adoption of these technologies is essential to improving their use and enhancing customer experiences in the digital retail space. This research examines the effects of customer trust, perceived security, and customer characteristics on the adoption of contactless technologies and how these elements impact online shopping behaviour in both Zimbabwe's retail industry and the global retail market.

1.1 BACKGROUND OF THE STUDY

The swift advancement of digital technologies has profoundly impacted consumer interactions in the retail sector globally. The emergence of contactless payment methods, such as, mobile wallets, QR code payments, biometric authentication, and near-field communication (NFC) has greatly improved the convenience, speed, and security of financial transactions, particularly in online shopping environments by 79% (Statista, 2024). These innovations gained significant traction during and after the COVID-19 pandemic as consumers and retailers prioritized hygiene, social distancing, and digital interaction (PwC, 2023). In Zimbabwe, the adoption of contactless payment systems was driven more by necessity than technological advancement. Due to chronic cash shortages, inflation, and banking system instability, Zimbabwe saw a surge

in the use of mobile money platforms like EcoCash, OneMoney, ZIPIT, and TeleCash (Reserve Bank of Zimbabwe [RBZ], 2023). These platforms became central to consumer transactions in both urban and rural settings. In response, many retailers began incorporating contactless payment options to accommodate shifting consumer preferences and facilitate online shopping (Mhlanga, 2022). Despite progress, challenges persist. Adoption and consistent use of contactless technologies for online shopping in Zimbabwe are hindered by customer trust issues, perceived safety concerns, and individual attributes. Many consumers lack confidence in digital platforms' security due to frequent fraud incidents, poor digital infrastructure, weak customer support, and system downtime (Cyber Security and Data Protection Office, 2023). These issues have made users cautious and resistant to fully embracing online retail environments. Customer trust plays a vital role in technology adoption. According to Kim et al. (2020), the perceived integrity, reliability, and competence of service providers directly affect consumers' willingness to engage in online transactions. In Zimbabwe, anecdotal and empirical evidence suggests many consumers distrust online merchants due to product misrepresentation, delayed deliveries, or non-fulfilment of orders. This mistrust is compounded by digital illiteracy, lack of regulatory enforcement, and perceived absence of legal recourse in disputes (Zhou and Zinyemba, 2022). Perception of safety is equally influential. Perceived risk, particularly regarding data privacy, financial theft, and system failure, can significantly deter consumers from transacting online (Alalwan,2021). Although the Zimbabwean government introduced Cyber and Data Protection Act [Chapter 12:07] in 2021 to regulate ICTs' safe use and data privacy, implementation remains weak due to limited technical capacity and public awareness (Ministry of ICT, 2023). Consequently, concerns over cyber fraud, phishing, and personal data misuse remain high, especially among first-time and older users. Additionally, customer attributes like age, gender, income level, education, urban-rural location, and technology exposure play a determining role in shaping adoption patterns. Younger consumers, particularly those in urban areas with better internet connectivity, are more likely to adopt and frequently use contactless technologies (Chitungo & Munongo, 2022). Conversely, older individuals, low-income earners, and those in rural communities often face technological barriers, limited smartphone access, and poor digital literacy, constraining their use of online shopping and contactless platforms (ZIMSTAT, 2023). Existing literature on contactless technology adoption has primarily focused on developed countries and urban populations, leaving a significant gap in understanding rural and peri-urban dynamics in developing economies like Zimbabwe (Shin, 2021; Kim, 2020). While some local studies have assessed mobile money usage or e-commerce challenges, few have examined how customer trust,

perceived safety, and socio-demographic attributes interact to influence consumer behaviour in Zimbabwe's retail sector. This study is crucial as it explores and analyses the impact of trust, perception, and individual attributes on the safety and adoption of contactless technologies in online retail shopping in Zimbabwe. The findings are expected to inform retailers, policymakers, and technology developers about behavioural barriers and motivators shaping consumer behaviour and technology use in the country. With the continued push for digitalization under Zimbabwe's National Development Strategy 1 (NDS1), understanding consumer behaviour is key to achieving inclusive economic growth and building a resilient, tech-driven retail ecosystem.

1.2 STATEMENT OF THE PROBLEM

Widespread adoption and consistent use of contactless technologies in Zimbabwe remain restricted. Numerous consumers are hesitant to participate in online shopping owing to concerns about scams, inadequate service provision, and distrust in retailers' systems. Prior research has emphasized the significance of digital trust and perceived security (Gefen, 2003), yet localized studies investigating the interaction between these factors and demographic attributes are scarce. This research aims to bridge this knowledge gap by testing how these elements influence online shopping behaviour within the Zimbabwean retail setting.

1.3 RESEARCH OBJECTIVES

1. To determine the degree of customer trust in contactless technologies utilized for online shopping within Zimbabwe's retail sector.

2. To assess consumer perceptions concerning the security, dependability, and effectiveness of contactless payment technologies during online retail transactions.

3. To pinpoint crucial customer characteristics (e.g., age, gender, education, income, technological proficiency) that shape the adoption of contactless technologies.

4. To explore the correlation between perceived safety and consumers' willingness to adopt contactless technologies in online shopping.

5. To investigate the extent to which customer trust and perception predict actual usage and behavioural intention toward contactless shopping technologies.

6. To offer recommendations for retailers, policymakers, and technology providers on enhancing the adoption of contactless technologies in Zimbabwe's retail environment.

1.4 STATEMENT OF HYPOTHESIS

H1: Customer trust positively influences use of contactless technologies on online shopping behaviour

H2: Customer perception impacts contactless technologies enhancement for online shopping.

H3: Customer attributes directly influence adoption of contactless technologies for online shopping.

H4: Customer safety greatly impacts use of contactless technologies for online shopping.

1.5 SIGNIFICANCE OF THE STUDY

1.5.1 TO THE RESEARCHER:

Research helps by enhancing the intellectual's comprehension of how customers' trust, perceptions, and attributes regarding safety and adoption of contactless technologies impact online shopping behaviour of consumers in the retail sector. It also refines the skills of the researchers.

1.5.2 TO THE UNIVERSITY:

It helps the university grow its reputation for promoting contemporary and important research subjects. It also fosters cooperation, including work with retail companies. Because it supports the mission to solve real-world issues, the research is also meaningful.

1.5.3 TO THE GOVERNMENT:

The research will add to the expanding existing literature on technology adoption and online consumer behaviour, particularly in the context of developing economies such as Zimbabwe. While most existing research concentrates on developed nations, this investigation will offer insights that mirror the distinct socio-economic, technological, and infrastructural challenges faced by the Zimbabwean retail sector. The results can also help policymakers and regulatory agencies like POTRAZ and the Ministry of ICT in formulating or enhancing digital commerce policies and cybersecurity frameworks. By understanding the factors that drive and hinder the adoption of contactless technologies, policies can be crafted to support secure, inclusive, and consumer-friendly online environments.

1.5.4 TO THE COMPANY:

The findings will enable Zimbabwean retail businesses to comprehend the crucial psychological and demographic factors that shape consumer behaviour towards contactless technologies. This comprehension can assist them in establishing trust, improving safety perceptions, and customizing their digital platforms to match customer preferences, thereby promoting adoption and boosting online sales.

1.5.5 TO THE SOCIETY:

By emphasizing the vital role of trust and safety perceptions, the study will equip consumers with knowledge that promotes safer and more informed utilization of contactless technologies. It may also raise awareness of the significance of digital literacy in reducing risks linked to online transactions.

1.7 ASSUMPTIONS OF THE STUDY.

Rational Consumer Behaviour: Consumers make decisions based on logical evaluations of perceived benefits and risks (Ajzen, 1991).

Technology Access: Participants possess fundamental access to mobile phones, internet services, and digital financial platforms (Munyanyi and Mhlanga, 2021).

Sincere Responses: Respondents will accurately represent their attitudes, perceptions, and behaviours.

Shared Understanding: Definitions and questions are comprehended uniformly by respondents as a result of pre-testing research instruments.

Digital Environment Continuity: The study presumes stability in technological progress and usage throughout the research duration (Ndou et al., 2019).

1.8 DELIMITATIONS OF THE STUDY

This study is bounded by:

Geographical Limitation: Concentrates on urban Zimbabwe, specifically Harare, Bulawayo, and Mutare, where internet infrastructure and retail platforms are more advanced.

Sector-Specific Emphasis: Restricted to the retail sector, excluding other industries like banking and healthcare.

Consumer Demographics: Mature and youthful consumers (16+) with previous experience in online shopping or contactless technology.

Technologies Examined: Solely encompasses contactless payment technologies like mobile wallets, QR codes, biometrics, and NFC cards (Zhou & Piramuthu, 2015).

1.9 LIMITATIONS OF THE STUDY

Limitations include:

Generalizability: Data centred on urban areas may not accurately represent rural consumer experiences.

Sample Bias: Digitally active consumers may disproportionately represent those acquainted with the technology.

Temporal Relevance: Results may become less applicable as technology and consumer behaviours advance swiftly.

Cultural and Psychological Variables: These factors are challenging to measure yet may substantially impact consumer decision-making (Jarvenpaa and Tractinsky, 1999).

Response Bias: Participants may overstate digital literacy or hide distrust due to social desirability bias.

1.10 DEFINITION OF KEY TERMS

Customer Trust: The assured anticipation that a vendor will behave dependably, securely, and with integrity during online transactions (Gefen et al., 2003).

Perception: Consumers' assessment of the utility, simplicity, and risk linked to contactless technologies (Davis, 1989).

Customer Attributes: Consumer characteristics that impact technology utilization, encompassing demographic (age, gender), socioeconomic (income, education), and behavioral attributes (digital literacy, prior experience), (Venkatesh et al., 2003).

Contactless Technologies: Payment methods that eliminate the need for physical contact with a terminal or vendor, such as NFC, QR code scanning, mobile wallets, and biometric authentication (Zhou & Piramuthu, 2015).

Safety: The personal sense of security from fraud, theft, or unauthorized access during digital transactions (McKnight et al., 2002).

Adoption: The consumer's choice and actions to initiate use of a technology (Rogers, 2003).

Online Shopping Behaviour: Purchasing activities carried out through internet platforms, shaped by trust, convenience, and accessibility (Cheung & Lee, 2006).

1.11 SUMMARY

This chapter presented the context and justification for the research, emphasizing the issues and prospects associated with contactless technologies in Zimbabwe's online retail industry.

It delineated the main assumptions, scope boundaries, and study constraints, and furnished definitions of fundamental concepts. The chapter ended with a concise articulation of purpose and objectives.

The subsequent chapter will examine theoretical and empirical literature pertinent to trust, perception, customer attributes, and technology adoption.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

This section observes comprehensively the pertinent body of knowledge with prior studies undertaken by other scholars concerning the influence of consumer trust, perception, and attributes on safety and contactless technologies adoption on consumers' online shopping behaviour within the retail sector and the theoretical framework to direct the study as well as underscore significant research gaps.

2.2 THEORETICAL REVIEW

2.2.1 CUSTOMER TRUST

Customer trust denotes the faith a consumer has in a brand, retailer, or online platforms to deliver promised value dependably, securely, and ethically over time (Gefen, Karahanna and Straub, 2003).Given that e-commerce is a virtual transaction, trust is more vital than it is for physical transactions, making it necessary to accept online shopping technologies and facilitate transactions. As online shopping lacks face-to-face interaction between buyers and sellers, consumer trust is crucial for online shopping service providers' success (Muharam, 2021).

Consequently, each online service provider must persuade customers through their website or other media. Fostering consumer trust is vital for boosting online shoppers' adoption of new technology and supporting e-commerce growth across various retail product categories (Al-Adwan, 2020).

Technical security features, ease of use, information display technique, and personal verification positively impact trust. Building trust is essential for generating purchase intentions and creating long term relations with consumers that encourage devotion and repeat business (Pavlou, P.A. (2003).

Trust has value hierarchy influence on value perceived, as both intellectual and emotional trust influence consumers' receiving of expressed values (Aslam et al., 2020). According to Steelhouder, M. (2020), e-retailers should consider how they can reassure clients about the protection of their personal information to be more successful. They can build trust by offering facilities that enhance online transaction safety. Trust is defined as an evaluation of one's relationship with another party who will perform specific actions according to the expectations of those engaging in transactions in an uncertain environment (Paluri & Mishal, 2020).

This trust requires time to develop and needs to be nurtured and consistently demonstrated.For online purchasing (e-commerce), Ozdemir and Sonmezay (2020) suggested three key elements businesses should focus on to gain customer trust: competence, integrity, and benevolence.

Firstly, competence relates to a business's ability to fulfil its promises to customers. Secondly, integrity involves businesses acting consistently and truthfully with customers. Thirdly, benevolence is a company's ability to protect and honour customer preferences for their own benefit

2.2.2 CUSTOMER PERCEPTION

Notwithstanding past reservations, consumers are increasingly perceiving online purchases as secure and convenient, largely due to advancements in technology, secure payment systems, and user education (Roach, McLaughlin and McLaughlin, 2020).

As digital literacy improves and secure platforms become more widespread, these shifting perceptions are positively impacting attitudes and purchase intentions, even among novice online shoppers (Ganesh, 2022).The surge in online grocery shopping, particularly during and after the COVID-19 pandemic, has significantly boosted consumer comfort and adoption of contactless technology.

This shift has resulted in a more proactive and optimistic consumer behaviour pattern in e-commerce (Kusumawati and Sri Rahayu, 2020).Although organised retailing currently constitutes around 19% of Zimbabwe’s retail market, this figure is expected to increase as consumer trust, safety, and convenience expectations are better met by evolving retail models supported by technological advancements.

The mitigation of perceived risk has become a key focus of modern retail strategies. Retailers are now more responsive to consumer concerns, actively implementing safety features such as

secure payment gateways, real-time tracking, refund guarantees, and responsive customer service, leading to enhanced customer trust and a decline in apprehension about online purchases (Lakchan and Samaraweera, 2023).

Rather than fear, many customers now display confidence in their ability to navigate digital platforms safely. Security features and positive past experiences are becoming more influential than privacy concerns in shaping online shopping behaviour. Research indicates that customers are developing more favourable attitudes toward e-commerce as technology reduces the gap between intended and actual shopping experiences (Golman, Gurney and Loewenstein, 2021).

This suggests that customer satisfaction is increasingly derived from reliable outcomes, ease of use, and platform trustworthiness. Past studies affirm that consumers now embrace digital commerce with greater optimism, especially where digital literacy and familiarity with the platforms have increased. For example, Swiegers (2018) found that while novice users once exhibited caution, the experience curve has shifted positively, with many becoming repeat buyers due to reduced perceptions of risk across different product categories.

Furthermore, COVID-19 acted as a catalyst for increased consumer awareness of the utility and safety of contactless technologies. As Pham, Do Thi and Ha Le (2020) note, utilitarian value has driven online adoption, indicating a shift from caution to value-seeking behaviour in digital markets.

Social support and increasing digital inclusiveness in communities are also helping reshape online consumer behaviour. Positive societal attitudes are increasingly influencing shopping preferences, promoting digital adoption across different demographic segments (Tham et al., 2019). The evolution of consumer behaviour can be seen as a rational risk management process, where perceived benefits now outweigh perceived risks.

In summary, while perceived risk remains a factor, there is growing empirical evidence of a positive shift in consumer behaviour towards online and contactless shopping. Consumers are no longer predominantly hesitant, instead, they are increasingly confident, especially when security, convenience, and trust are visibly reinforced (Kamalul Ariffin, Mohan and Goh, 2018).

2.2.3 CUSTOMER ATTRIBUTES

Customer attributes denote individual characteristics, traits, and behavioural tendencies that shape how consumers interact with technology in retail settings (Kotler and Keller, 2016).

These attributes include demographic variables, such as age, gender, education, psychographic factors, such as attitudes, personality, technological orientation, such as digital literacy, and socio-economic status. Understanding these attributes is vital for predicting and explaining the adoption and usage of contactless technologies in online shopping, particularly in emerging markets like Zimbabwe.

Younger consumers, often termed “digital natives,” are typically more receptive to adopting digital innovations due to their familiarity with mobile and internet technologies (Puspitasari & Ishii, 2016).

In Zimbabwe, youth and urban populations are prominent users of mobile money and online shopping platforms (RBZ, 2021). Men and women also exhibit differences in supposed user friendliness and risk sensitivity. Studies have indicated that women are more cautious in adopting new technologies due to higher risk perception, while men are generally more motivated by perceived usefulness (Gefen & Straub, 1997).andMoreover, individuals with higher education and income levels are more likely to engage with contactless solutions due to better access to devices and internet services (Asongu and Odhiambo, 2019).

Psychographic characteristics, such as, innovativeness, technology readiness, risk aversion, and personal values impact how consumers perceive and interact with contactless technologies. Technology readiness, defined as an individual's inclination to adopt and utilize modern technologies for achieving goals (Parasuraman, 2000), has been found to positively correlate with the adoption of mobile and contactless payment systems (Lin., 2020).

In the Zimbabwean context, resilience and adaptability, which are psychographic traits developed in response to economic instability, also influence consumer openness to digital innovations. Consumers who view contactless technologies as tools for convenience and financial security are more likely to adopt them (Kabwe , 2022).

One of the most crucial customer attributes in the adoption of contactless technologies is digital knowledge, which means an ability to access, understand, evaluate, and utilize digital tools and platforms effectively (UNESCO, 2018). Limited digital literacy remains a significant barrier to the adoption of online and mobile services in Zimbabwe's rural and underserved communities (Mhlanga, 2020).

Consumers with higher technological self-efficacy—the confidence in their ability to use technology are more confident in trying out contactless services such as online checkouts, QR codes, and mobile wallets (Venkatesh & Davis, 2000).Improving digital literacy among consumers is therefore vital to enhancing the adoption rate and safe use of these technologies.

Affordability and access to technology are also vital customer attributes.Zimbabwec encounters challenges such as high mobile data costs, unreliable internet connectivity, and inflation, which directly affect consumers' ability to consistently utilize online platforms (World Bank, 2022).

Consumers from lower-income backgrounds may view contactless technologies as luxurious or inaccessible, which negatively impacts adoption rates (Chikandiwa et al., 2022). Furthermore, economic constraints also shape consumers' risk tolerance—a crucial determinant of technology adoption.

For consumers living paycheck to paycheck, the perceived risk of failed transactions or digital fraud may outweigh the perceived benefits (Boateng et al., 2016). Zimbabwean consumer behaviour is heavily influenced by community norms, peer influence, and social trust.

In collectivist cultures, decisions are often shaped by what is socially acceptable or promoted within one's community or family (Hofstede, 2001). Word-of-mouth, social proof, and endorsements from trusted community members or religious leaders significantly impact how technologies are perceived (Tobbin, 2011).

Social media platforms such as WhatsApp, Facebook, and TikTok are widely used in Zimbabwe and serve as powerful channels for shaping perception and encouraging adoption of contactless tools, especially when utilized by influential micro-influencers or peer networks (Mare, 2021). Prior experience with digital tools also determines how customers interact with new platforms.

Consumers who have previously utilized mobile banking or online platforms (e.g., Eco Cash, Mukuru, or banking apps) are more likely to explore newer forms of contactless technologies,

such as QR codes or biometric authentication (Maduku, 2016). The Technology Acceptance Model (TAM) states that perceived user friendliness are mediated by past experience (Davis, 1989).

In Zimbabwe, consumers who encountered difficulties with early digital tools may form negative attitudes, reducing future adoption likelihood (Makanyeza, 2017).

Customer attributes also encompass attitudinal predispositions, which refer to a customer's mental preparedness to exhibit specific behaviours based on their beliefs and evaluations. Favourable attitudes toward innovation, convenience, and time-saving facilitate the adoption of contactless solutions (Ajzen, 1991).

Consumers who perceive contactless technologies as a means to enhance their shopping efficiency and experience are more likely to develop positive behavioural intentions.In Zimbabwe, an expanding middle class and urban youth are cultivating stronger attitudes in favour of convenience, online visibility, and speed (Gono et al., 2023).

2.2.4 SAFETY

Customer safety involves safeguarding consumers from physical, psychological, financial, and data-related risks during their online shopping experience. In the realm of contactless technologies, including mobile wallets, QR payments, and biometric verification—customer safety is crucial for driving adoption and influencing online shopping behaviours (Kaur & Arora, 2021).

In emerging markets like Zimbabwe, concerns about cybersecurity, payment fraud, and data privacy substantially impact how consumers engage with contactless technologies (Chitura & Zivanai, 2020). Customer safety in digital platforms comprises multiple facets: technological security, transactional transparency, data privacy, and user autonomy. According to Pavlou (2003), perceived security is a fundamental driver of e-commerce adoption.

When customers view a platform as secure and trustworthy, they are more inclined to make repeat purchases and participate in contactless transactions. Safety encompasses both technical and psychological aspects, referring to the user's confidence while interacting with a system (Shin, 2010).

The security of contactless technologies depends on the robustness of the security infrastructure. Contactless systems need to utilize advanced encryption, authentication mechanisms, and fraud detection systems to guarantee secure transactions (Chopra & Madan, 2021).

Technologies like tokenization and end-to-end encryption in Near Field Communication (NFC) and mobile wallet systems substantially boost consumer confidence (Lee, 2020). However, in the Zimbabwean retail landscape, technological infrastructure is still developing, with challenges such as unstable internet and outdated hardware frequently compromising secure transactions (Muzenda & Chikandiwa, 2022).

Zimbabwe's economic instability has also contributed to mistrust in digital systems. Therefore, customers demand more reassurances, such as visible security seals (e.g., HTTPS), two-factor authentication, and transparent refund policies to feel secure using contactless technologies (Matsika & Mangiza, 2021).

Legal safeguards are essential for enhancing customer safety.In nations with robust e-commerce laws, consumers exhibit greater confidence in adopting contactless technologies (OECD, 2021).Zimbabwe's Cyber and Data Protection Act (2021) marks a step towards strengthening digital consumer rights and ensuring businesses protect customer data (Gov of Zimbabwe, 2021).

However, enforcement remains uneven, and awareness among retailers and consumers remains relatively limited (Chikandiwa & Magaya, 2022).Perceived safety directly influences the adoption of contactless technologies. According to the Technology Acceptance Model (TAM) and its extensions like UTAUT, safety and trust are pivotal factors mediating usage intentions (Venkatesh et al., 2003).In Zimbabwean retail, adoption rates for platforms like EcoCash, OneMoney, and online store payments are substantially influenced by the perceived reliability and safety of the service (Nyagadza, 2023).

Studies in Sub-Saharan Africa indicate that consumers favour platforms with visible verification protocols and customer support services, which mitigate perceived risk and promote use (Mutongwizo & Matsa, 2020).In Zimbabwe, businesses that combine user-friendly, secure interfaces with transparent data usage policies tend to attract more online shoppers (Muzenda & Mandizvidza, 2023).

Retailers are crucial in ensuring a secure online shopping environment. Global brands secure customer data by implementing SSL certificates, firewalls, biometric verification, and fraud detection algorithms (KPMG, 2021).Zimbabwean retailers such as Techzim Mall and Zimex Mall have begun adopting basic security measures, but many still lack advanced systems due to financial and expertise limitations (Mataranyika, 2022).

Retailers can build customer trust and mitigate perceived safety risks by training staff on cybersecurity, providing responsive customer service, and maintaining transparent communication (Chigora and Dzimunya, 2022).Retailers that neglect safety concerns risk losing customers and damaging their brand reputation.

Safety impacts not only adoption but also purchase frequency, basket size, and brand loyalty. When consumers perceive a platform as secure for their data and finances, they are more inclined to make high-value and repeat purchases (Beldad, 2010).

Conversely, perceived risk or past negative experiences can result in cart abandonment or reluctance to use digital payment systems (Wang et al., 2016).In Zimbabwe, this is especially pertinent given the proliferation of scam websites and impersonation pages, which undermine consumer trust (Tirivangani and Nyagadza, 2021).

2.3 CONCEPT OF CUSTOMER TRUST, PERCEPTION AND ATTRIBUTES ON SAFETY AND ADOPTION OF CONTACTLESS TECHNOLOGIES

2.3.1 Relationship Between Variables of Consumer Trust, Level of Adoption of Innovation, Acceptance of Technology, and Shopping Behaviour

The relationship between variables examines the connections between the concepts employed in this study, served as the foundation for developing the paradigm and research framework as well as the hypotheses. It is crucial to comprehend this categorization in order to know that identifying marketing targets is simple. Rehman, (2019), Bauerová and Klepek (2018), and Hamakhan (2020) discovered that, even for various products and analysis units, the degree of consumer trust has a beneficial impact on the rate of innovation adoption.

One variable drawn from the acceptance of technology hypothesis (Davis, 1989) is the degree of technology acceptance, which measures how much a human being believes technology is employed in their daily activities. The philosophy of technology acceptance is divided into two dimensions: perceived ease and perceived utility. Perception of utility measures how much a

person believes the technology has to offer. The more advantages the technology offers and the simpler it is to use, the more likely it is to be adopted. A person's choice and actions when embracing technology are influenced by this perception. According to behavioural theory, often known as the behavioural model, a person's behaviour is influenced by outside circumstances while making decisions, including whether or not to buy anything (Skinner.B.F. 1953).

External stimuli are part of the motivation that propels someone to act, according to this theory, which holds that external stimuli like the reference group's opinion, the attractiveness of advertisements, and societal habits influence a person's behaviour when making a decision, including the decision to choose a product or to have faith in the business or product that will be purchased. The rate at which society adopts a technology is determined by external stimuli that motivate people to assess new developments they come across (Watson.J.B.1913). The combination of the stimulus and intrinsic motivation will produce an evaluation outcome that will impact the individual's behaviour and choices.

Customers who think that internet service providers have a strong reputation will trust websites that sell products under these brands, according to conclusions of Al-Adwan, (2020). According to research by Alnaim (2022), customer perceptions of online sites' reputations and the clarity of the information they provide influence consumers' trust in online buying. In their research, Stouthuysen, (2018) support the findings of earlier studies by showing that customers will have a high level of trust in online purchasing if they have had positive experiences in the past and believe that online shopping has a positive reputation.

According to Demirdöğmez and Gültekin’s (2020) research, customer confidence is greatly impacted by how well a website is perceived. In the meantime, Zhang and Dong (2020) assert that a wide range of factors impact how consumers behave when making selections about what to buy. This behaviour may be impacted by a variation of external elements, together with the stimulation of the product or service being viewed, the consumer environment, including the customer's dwelling location (geography), the surrounding technology, culture, and politics, and internal reasons. oneness that works together to create a pattern of consumer assessment in terms of final behaviours, affective responses, and cognitive processes.

The assumptions of Chetioui, Lebdaoui and Chetioui (2021) and Di Virgilio and Antonelli (2018), which explain that customer trust influences the desire to buy through the construction of attitudes about online, constitute the basis of the relationship between consumer trust and

online shopping behavior. Furthermore, trust shapes perceptions about the company (vendor) and the product to be purchased, which in turn shape consumer attitudes, according to Pavlou et al., (2020) and Tran and Nguyen (2022). At the same time, behaviour is shaped by the characteristics of each individual based on their individual perceptions of the issue at hand.

It has been shown that social influence significantly affects both technology adoption (TA) and human behaviour in general. Social influence role in the adoption of online shopping technologies has remained the focus of numerous researches, and it was demonstrated that social identity and batch norm greatly influence customer involvement. Both the association between attitude and shopping intention and the relationship between beliefs and attitudes about online purchase have been found to be strengthened by positive social influence. Authors such as Hu, Chen and Davison (2019) and Naeem (2020) have suggested that social influence can be managed through the influence of people such as family, friends, and co-workers, to whom the customer may turn for information or social approval to use online shopping.

Numerous studies on online purchasing, including those by Morosan and Bowen (2018) and Gu et al. (2021), were covered in the earlier study. The impact of social influence on consumers' intention to shop online has been confirmed by Gunawan, Rahmania and Kenang (2023). According to Sair and Danish (2018), effort expectancy is the level of comfort that comes due to using any technology. Thus, regardless of how simple or complex the system is, effort expectation is related to the amount of work needed to use it. User-friendly technologies can be easily adopted and used by users. Therefore, it is anticipated that effort expectations will significantly impact customers' feelings to be shopping online. According to studies by Iriani and Andjarwati (2020), there is a strong relationship between customer sentiments regarding shopping online and noticeable user friendliness, which is comparable to expectation of effort. According to studies by Dai et al. (2019), the function of effort anticipation significantly predicts the willingness of females to use online shopping, whereas this relationship is more likely to vanish for male groups.

Customers' attitudes affect their likelihood of making purchases online, and attitudes and perceived danger are inversely related. Main factors impacting technology uptake and use, as well as their buy intent outcome on the foundation of consumer behaviour in multi-channel was investigated by Xin et al. (2022). The adoption as well as usage of artificial intelligence (AI)-powered online shopping by customers was examined by Nagy and Hajdú (2021). Consumer acceptability and trust in AI in online retail are examined in this study. For this

study, a database of 439 respondents was created in Hungary through an online survey. One of the most crucial elements in influencing customer perceptions of AI was found to be trust. Perceived usefulness was shown to be the other essential element in attitudes and behavioural intention, and it was found to be more significant than perceived ease of use. Customers still have the option to choose whether or not to adopt modern technologies, for example, buying online in an Artificial intelligence online shop, according to a study by Sharma et al., (2022).

2.4 Digital payment systems definition

Depicting the major players and trade processes as the advent of online commerce results in the goal of Digital Payment Services (DPS) ordinary description. A dynamic environment has emerged as a result of commerce through the Internet and following DPS advancement, where the main advantages of online techniques for business transactions are absent the solution of in-person connection (Sarkar, 2019).

Digital payments have been described in a variety of ways by several research. When it comes to electronic signals between financial institutions, Naeem et al., (2020) have defined digital transaction as type of financial trade where funds are conveyed rather than checks, cash, or other instruments of negotiation being exchanged. This was seen as an electronic payment method that did not require actual currency in Nadler and Chen's contribution (2019).

Electronic payments, according to Naeem, (2020), are an automated mechanism aimed at the transfer and exchange of financial value among business associates over an information technology network. Kredina et al., (2020), earlier noted that non-cash payments are necessary for effective payment systems and went on to discuss the economic development of a dependable and effective payment mechanism. The use of electronic payment systems to improve reporting financial efficiency also has several benefits, such as safety, worldwide use, cost effectiveness, swiftness, availability, suitability, user convenience, and confidentiality, which are necessary to reduce corruption (Putrevu and Mertzanis, 2024.; Tennyson and Mercy, 2014).

DPS activities endure to grow into more universal, with many payment structures being developed to simplify online transactions for customers. The DPS mechanism, comprises of ATMs, e-checks, smart cards and resolutions like mini PayPal. EPS has diversified responsibilities for handlers, involving P2P and DPS (Bakari, 2021). Ahmed, Mohamed and Zakaria (2024) claim that both trade and electronic structures are established by EPS, and assists handlers to evade credit cards use. Through preliminary comprehensive implementation

of internet, the possibility for profitable practice and precisely, e-commerce was extremely predicted.

Several trade impediments, including consumer reluctance to make online payments, have been brought to light by OECD household surveys (Ahmed, Mohamed and Zakaria, 2024). Several issues with online payment systems were frequently cited as one of the key causes of the sluggish expansion of electronic commerce. These assertions partially addressed customer confidence in electronic payments, perceived problems with payment security methods, and the misuse of online purchasing as a result of inadequate payment systems. To put it another way, payment issues were viewed as a major factor, along with other factors including inadequate products, unidentified customers and sellers, and unclear distribution circumstances.

The primary purpose of a payment system is to give different economic partners a way to exchange value. As a result, the transaction's cost is partially economic. It was made to enable quick and effective value transfers with the least amount of additional expenses and dangers. Because they make transactions too expensive, high payment process costs can have a significant impact on economic activity. On the other hand, through effective payment systems, reduced costs may contribute to economic growth (Afaha, 2019).

Applications for online banking services are expanding quickly, according to Botacin, Kalysch,and Grégio (2019). This highlights the significance of internet in DPS, which offers a podium for online dealings, such as, online stock trading, online biddings, and online shopping. Nevertheless, uncertainties and security issues persist despite EPS's many benefits, which include faster transactions and cheaper administration fees (Li, 2021). According to Putrevu and Mertzanis (2024), DPS refers to financial transactions and associated transactions conducted electronically.

Typically, digitally stored value systems and computer networks like the Internet will be utilized. The technology eliminates the need to write and mail cheques by allowing bank accounts to pay directly. Another primary payback of using DPS is providing customers with harmless and protected payment options as a substitute to cash or check payments. A report on the effectiveness of retail payment systems in Thailand is presented by Suwanragsa et al., (2020). However, these issues need to be considered: For example, ease, reliability, and safety in expenditures; service excellence, which includes elements like the swiftness at which payments are processed and the fees levied by monetary organizations at a level and system;

technology improvements that improve swiftness, handiness, or suppleness; as well as demographics.

The form of payment can be characterized because EPS has been identified as a crucial instrument for facilitating online transactions (Rasistia and Sayyidah, 2021). One such definition is provided by Refat (2023), who states that DPS payment methods are quicker, less efficient, and less expensive than credit cards when it comes to facilitating online transactions. According to Jia et al. (2018), one of the reasons for the acceptance of DPS is the promotion of e-commerce, which suggests that DPS may function entirely without credit cards. Nonetheless, DPS may also be considered to encompass transactions done by customers to businesses, banks, and government facilities, or to the government via electronic broadcasting networks (Putrevu and Mertzanis, 2024).

2.4.1 Concept and size of digital payment

Transactions are essential components of both the corporate process and the electronic compensation system used in online commerce. Since the 1960s, electronic dispersal network payment systems have been widely used in the banking and business sectors, mostly when moving large sums of money (Awrey, 2021). Over the four decades ever since its beginning, technology underwent important developments, including the advancement of modern profitable and societal doings and electronic transaction systems. The idea of electronic transactions, which was established in response to the demands of the instant, is inevitably influenced by such advancements. Any payment made to businesses, banks, or government organizations via telecommunications or electronic networks is referred to as a "electronic payment" (Naeem, Hameed and Taha, 2020).

Transactions done by the customer in accordance with this description, either the customer is paying, without the contribution of additional ordinary individual, are clearly the electronic transactions that are relevant to the current outcome. Furthermore, payment is conducted remotely and, of course, does not involve currency unless the payer is present in person. Researchers include sharing account information amongst participants in online commerce payments and offering the idea for an electronic payment method that transmits payments (Fatonah, Yulandari and Wibowo, 2018).

Importance of the electronic payment method has truly revolutionized as a result of the development of EFT technology. EFT is a technology that makes it possible to move money across bank accounts from one individual or organization to another. One piece of consumer

computer technology is the EFT. EFT also makes use of this technology's implementation characteristics. The business that mixes EDI into its operations is a significant contribution (Nguyen, 2019).

Online money transfers, which predate the Internet by a significant margin, were thus the next natural development in the transfer of bank and electronic monies. However, there are several key alterations amid the online payment method that was developed and is used in conjunction with online commerce and the electronic resources transfer program. Nearly all of the first occurred on proprietary systems, while the later was made available to the general public through electronic means (Wang and Li, 2022).

2.4.2 Types of digital payment methods

2.4.2.1 NFC (Near Field Communication) and MST (Magnetic Secure Transmission) technologies

With its wireless magnetic waves, you can quickly pay retailers without using a POS (Point of Sale) to swipe your card. Your phone should support both the NFC device and the MST-enabled app that you can download. After registering your card details, you can use your phone to make contactless purchases at any of the retailers' point-of-sale terminals (Li et al., 2024).

2.4.2.2 E-Wallets

This platform uses a digital wallet payment system to load funds into wallets. When you launch e-wallets, you can also contribute funds using digital wallet apps. The restriction is that money can only be transferred across wallets. A user can move funds to a wallet of PayTM or SBI Buddy app on phones they have SBI Buddy or PayTM installed on their phones only. There isn't a straightforward method to move funds from your PayTM wallet to the SBI buddy wallet app. E-wallets, for example, Mobikwik, Free, Oxigen, Reliance Money, Paypal, Buddy, Lime, Payzapp, Pocket, Yes Pay, and others are also accessible on the digital marketplace.

2.4.2.3 Unstructured Supplementary Service Data (USSD)

By dialling the (Unstructured Supplementary Service Data) USSD code and following the detailed commands, consumers can make transactions with a basic phone. Neither internet services nor smartphones can be used to make payments. Where messages are utilized for transactions, GSM technology is employed. It is a platform that acts as a conduit between telecoms and financial services. Each banking app has a unique dialling code that you must verify in order to receive payments from your service provider (Akinje and Fuad, 2021).

2.4.2.4 Mobile Monetary Identifiers MMIDs

After your mobile number was registered, the bank assigned you this special seven-digit number. Both those who want to send and receive money should have MMIDs for the particular interbank fund transfer. Though, MMID can be used to pay a modest amount (about 10,000 Rs) per single day. This minor payment facility is provided by almost all banks.

2.4.2.5 The UPI App-based payment platform

This includes special function that allows you to create a virtual address and send cash to the company while avoiding sharing your IFS code or account number. Since UPI operates in real time, money transfers instantly. UPI supports the different methods of money transfers. The UPI feature is available on all finance applications, including those from HDFC, SBI, ICICI, and the majority of other private or public banks. According to Lakshmi, Gupta and Ranjan, 2019), the majority of banks currently only incorporate UPI into their mobile banking apps.

2.4.2.6 The QR Code Payments System

QR code is another payment transmission method, which only needs to be scanned by the merchant in order for the money to be transferred. For the purpose of facilitating money transfers, the entire digital transaction application, including BHIM, mostly uses additional banking applications. In order to automatically scan the code information with a smartphone and complete the payment process, the black plate carries information about the items. You don't have to physically form everything when using a QR code.Government introduced the Bharat QR Code to encourage the digital payment effort (Türker, Altay and Okumuş, 2022).

2.4.3 Factors affecting digital payment systems adoption

Several authors have tested the elements that distress DPS adoption success, focusing on businesses or customers. For example, Al Balushi (2019) showed investigation to look at numerous aspects inducing the acceptance of internet finances in Oman from an organizational standpoint. The research's conclusions shade a genuine picture of the financial sector's adoption of online banking in Oman. Safety, a lack of business strategic development and software, a lack of provision from higher administration, a significant lack of IT skills, and an absence of government assistance are just a few of the intriguing observations that have been identified as hurdles. Acheampong et al. (2018), however, examined elements such Ghanaian consumers' complications with electronic transactions. The conclusions were characterized into four key parts: structure, safety, law and regulation, and societal and cultural challenges. Therefore, the knowledge gap is a combination of economic, socio-organizational, political,

and technical aspects that the current research aims to address from an organizational and consumer perspective. These elements consist of

2.4.3.1 Economic factors

Limited researches have demonstrated that modern technology is incorporated into monetary necessities that the telecommunications subdivision may eventually progress, despite the fact that the monetary advancement of emerging nations plays a significant part in encouraging the acceptance of modern technology in the DPS procedure. According to Chege, and Wang (2020), for instance, "the finances of emerging nations constantly plays a significant portion in the advancement of practice of technology." Maksimova et al., (2022) on the other hand, opposed that they trust that 36 businesses and government agencies in five Caribbean nations face numerous trials as an outcome of their research. Monetary contemplations might not be adequate to enable DPS isolation. In particular, the banking sector needs to create collaborative plans to satisfy DPS's demands. According to Hooks (2022), in order to achieve successful technology adoption and DPS aid, widespread acceptance necessitates an examination of important economic variables. This can only be achieved by employing an amount of procedures, for example, lower Internet linking fees and collaboration with current organizations in emerging countries, for example, banks, corporations, and governments. This remained reliable with a study by Soni (2022) that proclaimed that the active practice of PayPal directed to partnership with a variation of handler businesses (such as the eBay auction website).

2.4.3.2 Socio-organizational factors

The government framework can connect social and cultural factors, according to Trivedi et al. (2022) and Huo, Zhang and Ma (2018), who explain why social issues partake a important positive influence on people's purpose to assume novel data techniques. For example, in Asia, it narrates to government-built personal relations that are crucial for the adoption of e-commerce through the Internet (e.g. electronic commerce and DPS). In recent years, research has attempted to ascertain the degree to which social aspects contribute to the speed at which decisions are made in the context of online payments (Lăzăroiu et al., 2020). E-commerce firms are encouraged to implement electronic payment systems by social and organizational factors.

2.4.3.3 Political factors

Groups that are publicly appointed and consistently executed inside a nation are linked to political variables (Kemal, 2023). Regarding public roles, policy aspects make clear the degrees

of IT advancements and educational experience, which improves buyers' and sellers' comprehension and acceptance of DPS. Legal frameworks have been shown to be a major obstacle to the implementation of DPS, according to Gromova, Koneva and Titova, (2022). According to a Brazilian consumer survey, official laws have substantially impeded the use of DPS. Specifically, privacy, security, the absence of DPS business regulations, the insufficiency of legal protection for online purchasers, and worries regarding the taxation of online purchases (Morić, 2024). Because there were no legislation encouraging the adoption of DPS, another Chinese study likewise discovered that customers were quite concerned about online shopping (Zhu, Srivastava and Sutanto, 2020). The fact that 18 political power allows governments to manage public resources, such as labour and wealth, is an interesting aspect of society. Additionally, political expert is not limited to national leaders; it can also be applied to individuals or organizations that have the ability to affect society. This will be a crucial requirement given the existence of a significant regulatory framework to improve trust in e-business, information, and communication technology (and hence enhance the development of DPS adoption).

2.4.3.4 Technical and system quality factors

Technical considerations in relation to issues obtaining suitable technology to meet DPS adoption requirements are described by Hussain, Gupta and Bhardwaj, (2024). According to Hussain, Gupta and Bhardwaj, (2024), DPS has a quantity of structure quality restraints, including those linked to the internet, security, site trust, DPS secrecy, acceptability, usability, accessibility, and convenience. Meanwhile, Jamal, Algeelani and Al-Sammarraie, (2024) contended that security is a significant issue in relation to online payments since they rely on information that is weak to hacking if it is not adequately safeguarded. Furthermore, Chang (2024) contends that trust and reliability influences have been established to be important protection concerns influencing the adoption of DPS and e-banking in underdeveloped nations. It also emphasizes that people assess the online standard of a payment prior to using DPS. It's interesting to note that the Libyan banking system has a lot of drawbacks, including acceptability, convenience, availability, and ease of use, all of which hinder e-banking. Ghrbeia, (2020) state that the majority of e-banking concerns in Libya are related to transaction misreports. Technical issues will be examined here in order to determine whether or not the Libyan telecoms industry may be impacted by the subsequent examination conducted to determine whether or not the chaos in Libya may affect the adoption of DPS technically.

2.5 THEORETICAL FRAMEWORK

2.5.1 Technology Acceptance Theory

Davis created the Technology Acceptance hypothesis in 1989. This hypothesis demonstrates how individuals use and accept technology. According to the notion, a person's choice is impacted by a number of things when they encounter cutting-edge technology. According to Davis (1986), there is a correlation between the adoption of an innovation and its perceived ease of use, client attitude toward the innovation, and user behavioural intentions. The theory predicts user acceptance of information technology in a robust and economical manner. The idea has been applied in a number of investigations and has been shown to be high-quality and statistically sound.

Ofori and Appiah-Nimo (2019) investigated online customer behaviour and demonstrated the validity and efficacy of technology acceptance theory in research on online shopping behaviour. The research exposed that growing their alleged value, perceived worth, and perceived userfriendliness could result in a favourable consumer perception. The primary drawback of technology acceptance theory is its failure to consider additional elements, such as economic considerations and the influences of competitors, suppliers, and customers. The goal of technology acceptance theory is to comprehend the fundamental connection between user approval and real adoption of electronic shopping and external factors. Because the study focuses on online customer purchasing behaviour, this theory will be used. Depending on their perceptions of the ease of making purchases online and the perceived benefits of doing so, consumers will adopt and utilize online shopping.

2.5.2 Technology adoption and level of electronic commerce

The key to the success of electronic marketplaces is the process by which consumers and retailers adopt new technologies. To demonstrate the assumed elements, we modified Davis's (1989) Technology Acceptance Model (TAM). It is suggested that external elements like system quality, training, and education can influence how retailers and customers see the technology's usability and simplicity of use. A user's purpose to practice behaviour and, ultimately, the necessity to use the electronic commerce system are influenced by their favourable attitude, which is developed when technology is helpful and simple to use. In order to develop effective strategies for persuading customers to embrace and utilize e-commerce, the model helped investigate the reasons why users were rejecting specific technologies.

Determining the correlation between consumers' behavioural intention to use e-commerce and the selected criteria of perceived usefulness, perceived ease of use, and perceived attitude toward usage is crucial. Depending on the degree of technology adoption in the company, barriers to successful electronic commerce adoption can be examined (Villa, 2018). The success of technology is influenced by a number of external factors that are not related to business or consumers. These factors can be categorized as follows: factors that occur prior to adoption, such as the overall telecommunications infrastructure; during adoption, such as transaction security and enforcement structures like legal systems; and following adoption, such as changing consumer values (Shareef et al., 2018).

2.5.3 Unified theory of acceptance and use of technology (UTAUT)

According to the idea, purpose and conduct are directly influenced by four key constructs: ease of use, social influence, anticipation of achievement, and anticipation of determination. Gender, age, experience, and willingness to use all modify the effect of the four major variables on use intent and behaviour (Natarajan, Balasubramanian and Kasilingam, 2018). Eight models—the theory of reasoned action, the model of technical acceptance, the model of motivation, the planned behavioural theory, a blended behaviour/acceptation of technology, the model of PC usage, the theory of innovation diffusion, and social awareness that had been employed by previous studies were examined and synthesized to create the theory. 70% of the variance in usage intent was found after UTAUT was validated in a long-term research.

2.5.4 The Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), is a widely accepted model used to predict and understand human behaviour, particularly in contexts involving conscious decision-making such as technology adoption. TPB suggests that a person's purpose to engage in a particular behaviour is inclined by three key components: attitude toward the behaviour, subjective norms, and perceived behavioural control. Attitude refers to the individual's positive or negative evaluation of performing the behaviour; subjective norms relate to perceived social pressure from significant others to perform or not perform the behaviour; and perceived behavioural control reflects the perceived ease or difficulty of performing the behaviour, which is closely linked to self-efficacy.

In the setting of online shopping using contactless technologies in Zimbabwe, TPB is particularly relevant, for example, if consumers have a favourable attitude towards contactless payments, for example, they believe it is fast and safe, are encouraged by peers or media

(subjective norms), and believe they have the necessary resources and skills to use the technology (perceived behavioural control), they are more likely to adopt it (Mataranyika & Nyagadza, 2023). TPB offers a background for considering how consumer perception and behavioural intentions influence the adoption of emerging technologies in the Zimbabwean retail landscape.

2.5.5 Protection Motivation Theory (PMT)

According to Rogers (1975) and expanded by Maddux and Rogers (1983), explains how individuals respond to perceived threats by adopting protective behaviours. The theory is grounded in two main cognitive processes: threat assessment and coping assessment. Threat appraisal assesses the perceived brutality of a risk and one's defenselessness to it, while coping appraisal evaluates the efficacy of the recommended preventive behaviour (response efficacy) and one's ability to carry it out (self-efficacy).

In the context of online shopping using contactless technologies in Zimbabwe, PMT is crucial for understanding how concerns about cyber threats, for example, fraud and identity theft influence consumer behaviour. If Zimbabwean consumers perceive high risks in using digital payment systems but also believe that adopting secure, contactless platforms (such as Paynow or EcoCash) can reduce their vulnerability and that they are capable of using these platforms then they are more likely to adopt them (Mbunge et al., 2021). Moreover, the theory explains the psychological motivation behind why consumers demand safety features, such as biometric verification or transaction alerts, before engaging in online transactions.

2.6 EMPIRICAL EVIDENCE

2.6.1 CUSTOMER TRUST AND ONLINE SHOPPING BEHAVIOUR

Customer trust plays a critical role in shaping consumer behaviour in digital environments. In online shopping, especially when mediated by contactless technologies, trust functions as a safeguard against uncertainty, perceived risks, and the absence of physical interaction (Pavlou, 2003; Gefen et al., 2003). Trust becomes especially important in developing economies like Zimbabwe, where digital infrastructure and regulatory enforcement may be limited, increasing consumers' reliance on emotional and cognitive trust factors when using digital services (Nyagadza, 2023).

Trust in contactless technology refers to the belief that digital platforms are reliable, secure, and capable of protecting consumers' financial and personal data. When customers perceive a

retailer or platform as trustworthy, they are more likely to adopt technologies such as mobile wallets, NFC, QR payments, and biometric verification during online shopping (Kaur & Arora, 2021; Mataranyika & Nyagadza, 2023).

Nyagadza (2023) conducted a survey-based study on the adoption of mobile payment platforms (such as EcoCash, OneMoney, and ZIPIT) in Harare and found that customer trust was the highest important predictor of mobile wallet use for online purchases. The study exposed a solid positive correlation ($r = 0.72$, $p < 0.01$) between trust in mobile platforms and frequency of digital shopping.

Mataranyika and Nyagadza (2023) also found that Zimbabwean consumers tend to avoid platforms that lack visible security assurances (e.g., HTTPS, two-factor authentication), reinforcing the idea that perceived trustworthiness directly influences contactless technology use.

Chitura and Zivanai (2020) discovered that trust in e-retailers significantly affects the likelihood of customers adopting QR-based payments and digital platforms in Zimbabwe's retail sector. Their regression analysis indicated that trust accounted for over 40% of the variance in contactless technology adoption behaviours.

H1: Customer trust positively influences the use of contactless technologies on online shopping behaviour in Zimbabwe.

2.6.2 CUSTOMER PERCEPTION AND ONLINE SHOPPING BEHAVIOUR

Customer perception refers to the cognitive and emotional impressions, beliefs, and attitudes consumers form about products, services, or technologies based on their experience, information, and environment (Kotler & Keller, 2016). In the context of online shopping using contactless technologies, perception influences how safe, convenient, efficient, and trustworthy a customer believes these systems to be (Aji et al., 2020).

When consumers perceive contactless technologies as user friendliness, secure, reliable, and helpful, they remain probable to practice them and even advocate for their enhancement. This perception, shaped by personal experience, peer influence, and digital literacy, directly influences behavioural intentions and adoption behaviour (Davis, 1989; Venkatesh et al., 2012). In Zimbabwe, positive perception of mobile money, QR code payments, biometric

logins, and other touch-free technologies has accelerated adoption, especially during and after COVID-19 (Mataranyika & Nyagadza, 2023).

In Zimbabwe,Mataranyika and Nyagadza (2023) found that consumers who perceived contactless platforms like EcoCash, ZIPIT Smart, and ClicknPay as fast, secure, and convenient were significantly more likely to use them for online shopping. Their study revealed that positive perception accounted for 58% of the variance in customer engagement with these platforms.

Nyagadza (2022) reported that perception of digital convenience and safety was the strongest influencer of consumer preference for mobile payment systems in the Zimbabwean retail sector, especially during COVID-19. Consumers expressed concern over hygiene and safety, which shaped favourable views toward contactless payments.

Mujuru and Mangwendeza (2021) established that visual cues and user interface design of contactless technology apps significantly impacted consumer perception, which in turn enhanced trust and usage. For instance, apps with clean layouts and clear security indicators (e.g., padlock symbols) were perceived as more trustworthy.

H2: Customer perception positively impacts the enhancement and adoption of contactless technologies for online shopping.

2.6.3 CUSTOMER ATTRIBUTES AND ONLINE SHOPPING BEHAVIOUR

Customer attributes refer to the individual characteristics or demographic and psychographic traits of consumers that influence their decision-making and behaviour. These include age, gender, education, income level, digital literacy, lifestyle, innovativeness, and risk tolerance (Kotler & Keller, 2016; Schiffman & Wisenblit, 2019).In the context of online shopping and contactless technologies (e.g., NFC, mobile wallets, biometric logins, QR codes), customer attributes significantly shape adoption behaviour ,for example, younger consumers are often more tech-savvy and open to innovation (Alalwan et al., 2021).

Highly educated and urban consumers better understand security features and perceive lower risks. Consumers with higher income levels are more likely to have access to smartphones, internet, and digital payment systems (Mataranyika & Nyagadza, 2023).In Zimbabwe, where

digital adoption is uneven across urban and rural populations, attributes such as income, digital exposure, and mobile phone ownership play a crucial role in determining adoption of contactless technologies (Mbunge et al., 2021; Kareem et al., 2021).

Mataranyika & Nyagadza (2023) examined over 350 consumers across Harare and Chitungwiza and found that age, income, and smartphone access significantly predicted adoption of EcoCash and ZIPIT Smart platforms. Respondents aged 18–35 with tertiary education were the dominant adopters ($\beta = 0.67$, $p < 0.001$).Nyagadza (2022) revealed that consumers with higher education levels and frequent internet use were more likely to trust and adopt contactless payments, citing digital literacy as a key driver.

Mujuru & Mangwendeza (2021) reported that female users in urban areas adopted mobile-based contactless payment technologies faster, with tech-savviness and peer influence also playing a role.Moreso, Kareem et al. (2021) conducted a comparative study across Zimbabwe, Nigeria, and Ghana. The findings indicated that age, gender, education, and employment status had significant predictive power over the adoption of mobile-based contactless technologies. Zimbabwean respondents in urban settings with higher education were most active. Furthermoreo, Mbunge et al. (2021) found that access to technology and perceived ease of use—often a result of demographic attributes, were key factors in contactless payment adoption post-COVID-19 in Zimbabwe and South Africa.

H3: Customer attributes directly influence the adoption of contactless technologies for online shopping.

2.6.4 SAFETY AND ONLINE SHOPPING BEHAVIOUR

Safety in online shopping reflects to the degree to which consumers trust that engaging with digital platforms (such as contactless technologies) will not result in risks to their personal information, financial data, or transactional integrity (Belanger et al., 2002; Pavlou, 2003). It encompasses data security, payment security, privacy protection, and freedom from fraud, In the context of contactless technologies, such as mobile wallets (e.g., EcoCash), biometric logins, QR code payments, and tap-and-go cards—safety concerns are central to user acceptance and behaviour (Mbunge et al., 2021). When users feel secure, they are more likely to adopt and repeatedly use such platforms (Kaur & Arora, 2021). In Zimbabwe, where fraud, mobile theft, and limited digital literacy present notable risks, the perceived safety of using

contactless technologies strongly influences their usage—especially among older or less tech-savvy consumers (Mataranyika & Nyagadza, 2023).

Furthermore, In Zimbabwe, Mataranyika & Nyagadza (2023) reported that security of payment platforms (EcoCash, ZIPIT Smart) and privacy of user data significantly influenced continued usage among Zimbabwean urban dwellers. 73% of respondents cited safety as their main reason for platform loyalty. Nyagadza (2022) found that perceived safety of transaction channels was a dominant factor in determining whether consumers used or abandoned contactless platforms. Users demanded two-factor authentication and digital receipts as trust mechanisms. More so, Mujuru & Mangwendeza (2021) observed that visual safety cues (e.g., padlock icons, HTTPS, OTPs) impacted trust and usage of contactless platforms among consumers in Harare.

Mbunge et al. (2021) conducted a study in Zimbabwe and South Africa post-COVID-19. It revealed that perceived digital hygiene, fraud protection, and privacy controls significantly influenced adoption of contactless payment platforms. Consumers preferred safer alternatives to physical cash.Kareem et al. (2021) found that platforms perceived as safe saw higher adoption across urban Zimbabwean and Nigerian users. Those platforms invested in user education and anti-fraud policies.

H4: Safety greatly impacts use of contactless technologies for online shopping.

2.7 CONCEPTUAL FRAMEWORK

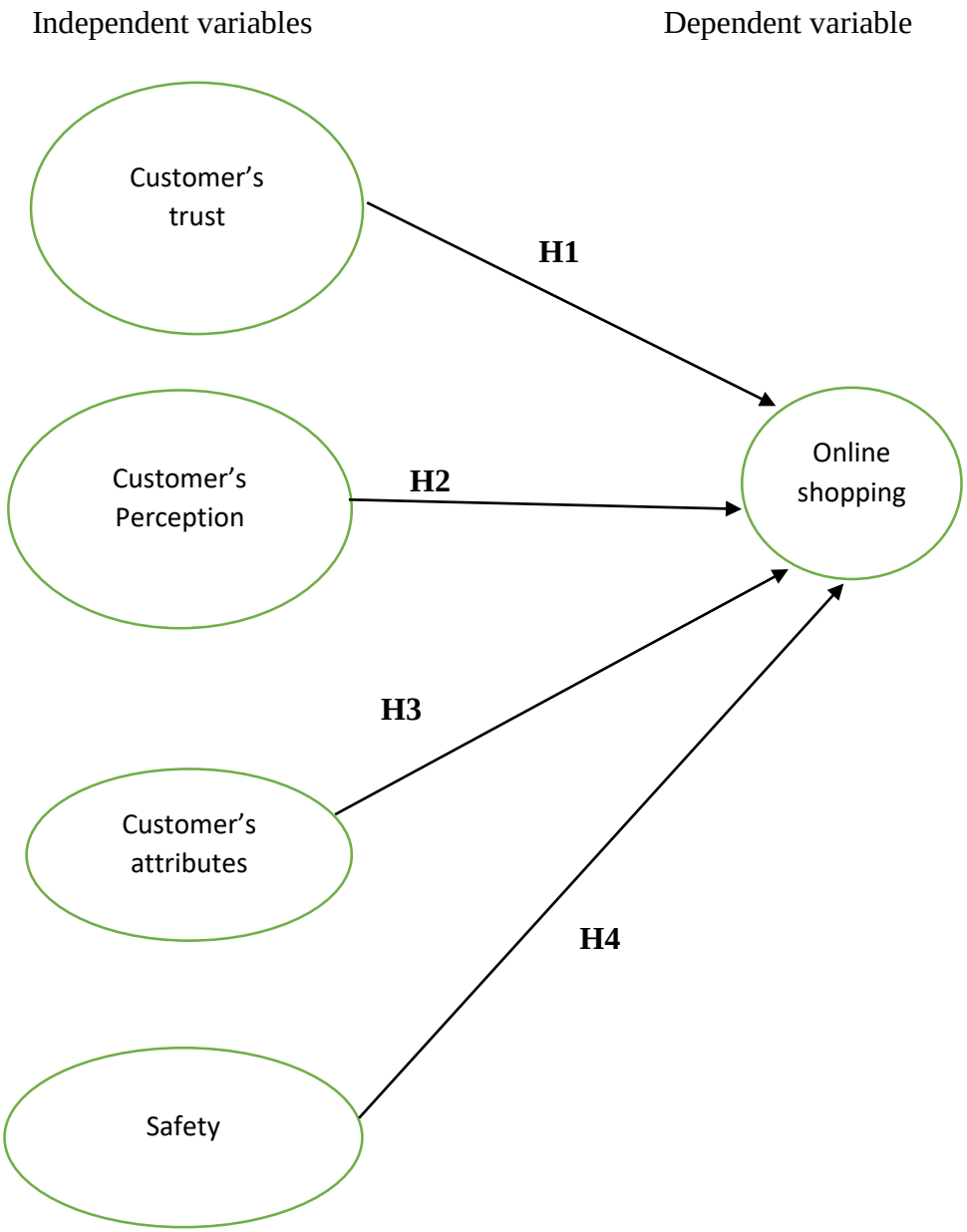

Figure 1 Conceptual framework

2.8 RESEARCH GAP

Our study focused on a range of age groups from 18 years and beyond, whereas the majority of previous studies concentrated on internet shoppers between the ages of 24 and 35. While previous research has concentrated on specific aspects of the retail industry, this study will examine all retail industries. Our work is contributing literature on the limited studies that have been conducted in Zimbabwe.

2.9 SUMMARY

This chapter reviewed the literature on how consumer trust, perception, and attributes influence safety and adoption of contactless technologies, impacting online buying behaviour in retail. It highlighted the research gap, empirical and conceptual frameworks, and theoretical underpinnings. The next chapter will outline the study's method.

CHAPTER 3

3.0 METHODOLOGY

3.1 INTRODUCTION

The methodology used to carry out this investigation is described in this section. The techniques and strategies employed for data collection, organization, and interpretation are highlighted. As a result, it offers a summary of the research design, the study's target audience, sample size and sampling strategy, and the data gathering and analysis strategies used in the investigation.

3.2 RESEARCH METHODOLOGY

The exact phases or systems used to find, prefer, practice, and assess facts for a study are recognized as research methodology (Kumar and Praveenakumar, 2025). This study uses a mixed method research technique, collecting and analysing data using both qualitative and quantitative research approaches. In qualitative research, non-numerical data is gathered and analysed to get insight into concepts, lookouts, or skills (Adedoyin, 2020). It can be useful to deliver new study concepts or to get deeper understanding of an issue. The opposite of quantitative research, which folds up and surveys arithmetical statistics for arithmetical examination, is qualitative research (England, 2022).

These techniques were used to gather information on consumer safety perceptions, trust, and qualities as well as the uptake of contactless technology in online purchasing. Participants were given questionnaires and interviewed in order to gather qualitative data.

In order to provide a research conclusion that is more robust than either strategy alone, a mixed method approach was utilized, which combines both approaches repeatedly or simultaneously. Exploring extra complicated surfaces and relations of the human and social setting is made imaginable by the mixture of quantitative and qualitative methodologies. The question, according to Grønmo (2023), is not whether quantitative or qualitative methods are better, but moderately whether one is using a universal method to understand the interaction of issues in a complex environment or an analytical approach to comprehend a few controlled variables.

3.3 RESEARCH DESIGN

Muratovski (2021) describe research design as a set of instructions that guide researchers in conducting their studies in an effective and feasible manner. For this study, a descriptive and causal-comparative approach was utilized, which involves the use of descriptive and inferential statistics (Callas, 2020). The reason for this investigation design is to investigate the association amid variables without manipulating or controlling any of them (McKissick, 2021). Under inferential analysis, the use of regression, ANOVA and correlations is adopted. Correlation value can be positive or negative, depending on the course of the association amid the variables. The goal of correlational research is to identify variables that have a relationship with each other, such that a change in one variable results in a change in the other (Ghanad, 2023). This research design was appropriate for this study because it enabled the researcher to determine the relationship between the independent variables (customer trust, customer perception, customer attributes and perceived safety) and the dependent variable (adoption of contactless technologies) of online customers.

Understanding the methodology used to conduct the research is essential before beginning any research. This study used primary data collection methods in order to achieve its goals. Since structured questionnaires are typically used to acquire input from a large target group, one was created to attain information from the respondents for this research. The same set of questions were posed to each respondent. The self-administering questionnaire was distributed electronically over the internet as well as on paper. In order to reach a larger number of respondents, questionnaires were disseminated online. Likert scales were included in the survey to gauge customer perception, trust, qualities, and perceived safety.

The validity and reliability of the research tool were examined. According to Nawi (2020), an instrument's internal consistency throughout time is referred to as its reliability in research. Validity is the degree to which the results obtained from a research study are accurate when compared to those of comparable people who were not included in the study (Sürücü and Maslakci, 2020).

3.4 POPULATION

According to Malthus (2023), a population is a group of people fitting to the identical species that coexist and procreate in a certain area. A population's members frequently share resources, are impacted by comparable environmental factors, and rely on one another's availability to

survive over time. According to Raymond and Darsaut (2025), a population is a collection of people who share certain traits and are taken into consideration for a study or statistical analysis.

Since everyone has an equal probability of being included in the final sample, population research is often representative (Lohr, 2021). According to Stratton (2021), the target population is the group that a researcher wants to generalize. Therefore, the target population is the particular group from which the desired information is gathered. Stratton (2021) states that if an estimate for the percentage of the target population thought to possess the required traits is unavailable, 50% of the population is advised.

The intended audience consists of those who are familiar with and have used contactless technology for online purchasing in Zimbabwe. According to Zimbabwe National Statistics Agency (ZIMSTATS), the total population in Zimbabwe for the year 2025 is 17,375,285 persons.

3.5 SAMPLING PROCEDURE

According to Mweshi and Sakyi (2020), sampling is the process of choosing a number of participants for a study so that they are representative of the larger group from which they were drawn. They also point out that the goal of sampling is to obtain a representative group, which allows the researcher to learn more about the total population when time, money, and effort are limited. Stratified random sampling was utilized in the investigation.

A stratified sample makes sure that each of a community's subgroups (called strata) is fairly represented in the entire sample population used for a study. The stratified random sampling technique guarantees that a further illustrative model is pinched from a moderately similar population and produces estimations of general population limits with better accuracy. By giving some control over variation, stratification seeks to lower standard error (Nguyen et al., 2021). Each stratum's participants were chosen at random.

Regardless of gender, the researcher carefully chose participants who were between the ages of 18 and 70. However, a question about whether a respondent used internet services was asked in order to collect data from internet users solely. This allowed the researcher to determine her target group and proceed with the interview. In this sense, any person on the street who was at least eighteen and under seventy years old and who acknowledged using the internet was considered a respondent. The responders were chosen from a variety of sites extending outward from the country centre in the four compass directions (North, South, East, and West).

3.6 SAMPLE SIZE

This is defined as the total amount of participants in a research study (Omair, 2025). To make sure that the complete population is represented by the full sample, this number is frequently broken down into demographics. Slovin's formula was used to get the sample size for this study.

$$\boldsymbol{n = \frac{N}{(1 + N(e^2))}}$$

Where:

n = Sample size (the number of respondents to be selected)

N = Total population size

e = Margin of error (expressed as a decimal, which is 0.05)

Therefore,

$$n = \frac{17375285}{\left(1 + 17375285(0.05^2)\right)} = 299.99 = \mathbf{300}$$

Thus, 300 was the calculated sample size.

For the qualitative analysis 15 participants were chosen according to the following criteria in Table 3.1.

Table 3.1: Sample determination criteria

Selection criteria	Contribution
Online shopping experience in the last 4 months	Knowledge on how it works
Diversity in key attributes	Broad range of insights
Use or awareness of contactless technology	Varying level of experience

Willingness to participate	Accurate information will be given

3.7 DATA COLLECTION

3.7.1 STRUCTURED QUESTIONNAIRE

A structured questionnaire was used. This instrument will be consisting of sections where the primary section will collect the demographic data of the participants. The following sections will contain Likert scale questions where each question corresponds to the information needed to answer each objective of the study.

The method's ability to methodically gather quantifiable data from a sizable sample made it the preferred choice for spotting patterns and trends in the adoption of contactless technology. One of the main benefits of structured questionnaires is that they may be used to guarantee consistent responses, which improves the comparability of data from various respondents. According to Taherdoost (2022), structured questionnaires reduce the likelihood of researcher bias by using a consistent strategy to data collecting. However, as noted by Schmid, Brianza, and Petko (2020), organized questionnaires have drawbacks, such as encouraging respondents to give socially acceptable answers rather than their true beliefs. The questionnaire uses a 5-point Likert scale.

Table 1 Measurement scales

Construct	**Measurement Item**	**Scale**
Customer Trust (CT)	CT1: I trust online retailers to protect my personal data.	
	CT2: Online retailers are reliable in handling my transactions.	
	CT3: I feel secure when making online transactions.	
Customer Perception (CP)	CP1: Contactless technologies (e.g., mobile payments) are convenient.	
	CP2: Contactless technologies are easy to use.	
	CP3: Contactless technologies enhance my shopping experience.	
Customer Attributes (CA)	CA1: I am tech-savvy and comfortable using new technologies.	
	CA2: I value security and privacy when making online transactions.	
	CA3: I am willing to try new contactless technologies.	

Safety (S)	S1: I feel safe using contactless technologies for online transactions.	
	S2: Contactless technologies reduce the risk of online transactions.	
	S3: Online retailers take adequate measures to ensure safety of contactless transactions.	)
Online Shopping Behaviour (OSB)	OSB1: I frequently shop online using contactless technologies.	
	OSB2: Contactless technologies influence my decision to shop online.	
	OSB3: I spend more when using contactless technologies for online shopping.	

3.8 RESEARCH HYPOTHESIS

Founded on the literature review, the resulting hypothesis are projected for the study.

H1: Customer trust positively influences use of contactless technologies on online shopping behaviour

H2: Customer perception impacts contactless technologies enhancement for online shopping.

H3: Customer attributes directly influence adoption of contactless technologies for online shopping.

H4: Customer safety greatly impacts use of contactless technologies for online shopping.

3.9 DATA ANALYSIS AND INTERPRETATION

Enhancing the relevance of participants' answers to the variables under investigation is part of the data analysis process, which also helps to develop a thorough framework for evaluating study results (Tracy, 2024). Before being processed with Cronbach's Alpha, the data collection questionnaires were carefully examined for consistency and coherence. Both quantitative and qualitative data analysis techniques were used in this investigation. Establishing the correlation between variables was the main goal of applying these techniques to analyze and appraise statistical data. Additionally, the researcher can remove biases from the study and improve the accuracy of the results by using quantitative data (Fox, MacLehose, and Lash, 2021).

The data was analysed using descriptive and inferential statistical methods. A study method called descriptive analysis aids in the useful description, illustration, or summarization of data points, enabling the discovery of patterns that satisfy all of the data's requirements (Alabi and Bukola, 2023). Descriptive statistics, such as frequencies, means, standard deviations, and percentages, will be produced using SPSS software version 26. According to Stapor & Stapor (2020), inferential statistics compare treatment groups and make inferences about the general population using measurements from a sample of participants in an experiment. Regression and correlation will be used in the inferential analysis. The statistical link between the study variables will be explained by the regression model, compatible reliability and measurement model using SPSS-AMOS.

3.10 ETHICAL CONSIDERATIONS

How a researcher handles volunteers and the data they supply are ethical considerations (Brittain et al., 2020). Throughout the research, the following ethical guidelines will be adhered to.

3.10.1 Freedom to participate

Whether responding to surveys or interviews, the participants were free to participate in the study. Nobody was coerced into taking part. Respondents who feel compelled to discontinue

the research will be allowed to do so without facing any consequences. To encourage respondents to take part in the study, the researcher adhered to the highest standards of sensitivity and refrain from using any form of deceit.

3.10.2 Confidentiality

Respondents are assured that the information they submitted was kept private and that no part of it will be shared with the general public. The supplied data was utilized for the purpose of the study. Paper records containing study-related data were destroyed when the study was completed.

3.10.3 Time management

Since the surveys will proceed according to the timetable that the responder and the researcher have agreed upon, the researcher will take care to avoid wasting the participants' time.

3.11 CONCLUSION

The methodological strategy employed in this investigation was explained in this chapter. Both qualitative and quantitative data gathering and analysis approaches were used in a mixed methods design. Questionnaire surveys and in-depth interviews were used to gather data for this investigation. For qualitative data, thematic analysis was used, and for quantitative data, descriptive and inferential statistical techniques were applied. The rights of participants and the integrity of the results were generally safeguarded throughout the research procedure, which also addressed ethical issues.

CHAPTER 4

DATA ANALYSIS AND PRESENTATION

4.0 Introduction

This section presents the statistics investigation conclusions and hypothesis testing results. Questionnaire data were analyzed using SPSS 27 and SPSS AMOS software. The chapter covers response rates, participant demographics (age, gender, employment, and education), structural model results, and hypothesis testing outcomes of all variables. It concludes with in-depth discussions of each hypothesis test's findings.

4.1 QUESTIONNAIRE RESPONSE RATE

A set of 300 questionnaires were distributed to consumers living in both urban and suburban areas. Out of the total number of questionnaires distributed ,279 were returned and completed by the respondents. While 21 questionnaires were not returned. This indicates a favorable response rate of 93%. The table below displays the response rate of the participants.

Table 2 Response rate

	Frequency	Rate
Questionnaires distributed	300	100%
Questionnaires returned	279	93%

Source: Primary source

According to Babbie,E.R .(2020) guidelines ,a satisfactory response rate for a quantitative study is considered to be at least 70% and above. In this study, the response rate achieved was 93%, surpassing the minimum threshold. This high response rate indicates that the study had a substantial number of participants providing their input, which enhancer the reliability of the findings. Urban and suburban consumers completed the questionnaires without any apprehension and this contributed to the favorable response rate of 93%. Therefore, the study can be deemed satisfactory for drawing conclusions based on the collected data.

4.2 Demographic profile of respondents

This segment delivers a summary of the demographic features of the respondents.

The demographic information collected includes age groups, gender (sex),occupation and level of education, use of contactless technologies and type of contactless technologies.

Table 3 Profile of respondents

Questions	Frequency	Percentage of Frequency

Age	18 and below	6	2.2
	18-24	178	63.8
	25-34	95	34.1
	35-44	0	0
	45 and above	0	0
	Total	279	100
Gender	Male	125	44.8
	Female	154	55.2
	Total	279	100
Level of Education	Primary school	50	17.9
	Secondary school	112	40.1
	Tertiary	57	20.4
	Other	60	21.5

	Total	279	100
Employment Status	Student	120	43.0
	Employed	159	57.0
	Self Employed	0	0
	Unemployed	0	0
	Total	279	100.0
Use of contactless technologies	Daily	85	30.5
	A few times a week	70	25.1
	A few times a month	75	26.9
	Rarely	30	10.8
	Never	19	6.8
	Total	279	100.0

Type of contactless technologies	Near Field Communication (NFC)	33	11.8
	QR Code payments	60	21.5
	Mobile wallets	122	43.7
	Biometric authentication	31	11.1
	Wearable payment devices (eg, Smartwatches)	26	9.3
	In-app contactless checkouts (eg, ZimDelivery	7	2.5
	Total	279	100

Source: Primary Data

According to the provided table, the age group distribution of the respondent was examined as the first demographic characteristics in this study. The sample population was divided into 5.

Out of the 279 participants, the largest group was 18-24, comprising of 63.8% of the sample, relatively followed by 25-34 group which accounted for 34.1%. The distribution reduced drastically in a group of 18 and below. There was no frequency on ages 35-44, and 45 and above respectively.

From the table above, it indicates that from the total population of 279 participants,55.2% identify as female and 44.8% identify as male participants. The study shows that there was a relatively balanced representation of both genders, ensuring a diverse sample population.

The table goes on to show the employment status of the respondents which is an essential demographic characteristic that delivers perceptions into the professional diversity of the sample population. The participants are classified into four categories; students, employed, self-employed, unemployed. Among the 279 respondents 57% are employed clarify substantial representation of respondents in various professional careers. Among the respondents,43% are students and there are no self-employed and unemployed respondents. This shows that there was an inclusivity of participants from various occupational backgrounds hence enlarging the diversity of the study.

More so, educational levels achieved by the respondents is shown in the table as a crucial demographic factor that shows their intellectual background. The respondents are divided into four categories namely; primary, secondary, tertiary and other (such as, master's degree). The results indicate that majority of participants, comprising 40.1% completed their education up to high school level. This is followed by tertiary education with 20.4% of respondents who attained this level of education. Lastly, participants who have primary school back ground only have a 17.9% and there are no participants in other (master`s degree).

Furthermore, respondents who frequently use contactless online technologies are in five categories, namely, daily, a few whiles per week, a few times a month, rarely and never. There were 30.5% respondents who use contactless online technologies daily, followed by 26.9% reflecting a few times a month. There has been a relative decrease of respondents who use

contactless online technologies for respondents who use few times a week of up to 25.1%. Frequency drastically dropped for respondents who rarely use contactless online technologies to 10.8%. Some respondents with a percentage of 6.8% in total have never used contactless online technologies.

From the table above, type of contactless online technologies used by participants is categorized in six groups, namely mobile wallets and this includes 43.7% with majority of respondents who use ,for example, Ecocash,One Money, Apple pay and Inn bucks. This is followed by QR code payments with a 21.5%. These include participants who have paid at shops online, for example, paying at OK Zimbabwe or Pick n Pay using Ecocash scan code. More so, respondents of Near Field Communication (NFC), for example, participants who once paid at POS terminals by tapping a Visa or Mastercard with NFC capability had a percentage of 11.8% and 11.1% of Biometric authentication respectively, which includes making a payment by fingerprint on your phone or facial recognition for secure logins and payments. Wearable payment devices, such as Apple watches, drastically reduced to 9.3% and there was only a small fraction of In-app contactless checkouts, for example, Amazon and ZimDelivery applications with a 2.5%.

4.3 Measurement Model

The measurement model was done to evaluate the validity and reliability of the conceptual model in effectively capturing the intended constructs. The measurement model for the study is presented below.

Fig 3 Measurement Model

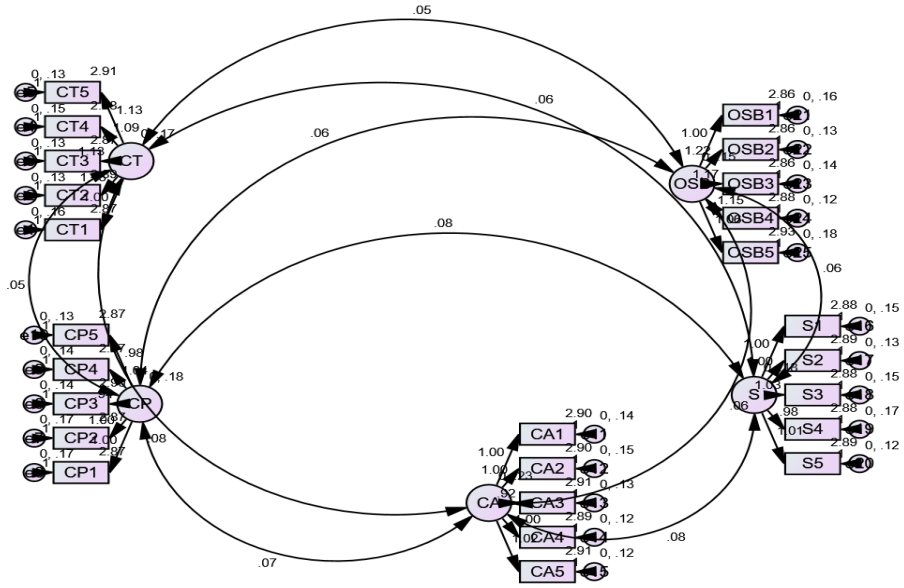

Figure 2 Measurement model

Source: AMOS

Measurement model assessment shows that every item is significantly loaded onto their respective factors, confirming the presence of convergent and discriminant validity was accessed using Average Variance Extracted (AVE). The AVE values for all research constructs were above 0.5 and this means that there is convergent validity. Discriminant validity was attained in this study and this is shown by the lack of correlations between factors. Reliability of the findings was measured by

the composite reliability, the results indicated that the data was reliable and this is shown by a composite reliability which is above 0.7. The table below shows the AVE ecoefficiency, composite reliability and shared variances results.

Table 4 Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
CT1	<---	CT	.715				
CT2	<---	CT	.790	.094	12.194	***	
CT3	<---	CT	.789	.093	12.176	***	
CT4	<---	CT	.758	.093	11.726	***	
CT5	<---	CT	.783	.094	12.089	***	
CP1	<---	CP	.716				
CP2	<---	CP	.718	.092	10.922	***	
CP3	<---	CP	.730	.085	11.098	***	
CP4	<---	CP	.767	.089	11.599	***	
CP5	<---	CP	.765	.085	11.577	***	
CA1	<---	CA	.790				
CA2	<---	CA	.780	.072	13.781	***	
CA3	<---	CA	.774	.067	13.652	***	
CA4	<---	CA	.804	.070	14.290	***	
CA5	<---	CA	.817	.070	14.560	***	
S1	<---	S	.730				
S2	<---	S	.761	.085	11.817	***	
S3	<---	S	.747	.089	11.606	***	
S4	<---	S	.702	.089	10.923	***	
S5	<---	S	.770	.085	11.943	***	

			Estimate	S.E.	C.R.	P	Label
OSB1	<---	OSB	.697				
OSB2	<---	OSB	.799	.104	11.812	***	
OSB3	<---	OSB	.773	.102	11.497	***	
OSB4	<---	OSB	.785	.099	11.640	***	
OSB5	<---	OSB	.690	.102	10.388	***	

Source: Amos

All variables in the measurement model were confirmed to have significant loadings, which supports the presence of both convergent and discriminant validity. Average variance extracted (AVE) was used as the standard to measure the effectiveness of the measurement model. All the research constructs had an AVE value of more than 0.5, proving good convergent validity. Not finding any correlation between the factors means that discriminant validity was met. Composite reliability was applied to confirm how reliable the constructs were, and the results proved that by producing composite reliability that was greater than 0.7, indicating that the data was reliable. Table 4 below shows the average variance extracted, composite reliability, and the degree of shared variance for each variable.

4.3.1 RELIABILITY TEST

Table 5: Composite reliability and average variance extracted

Construct	Number of items	Composite reliability	Average variance extracted
Customer trust	5	0.826	0.589

Customer perception	5	0.797	0.547
Customer attributes	5	0.845	0.629
Safety	5	0.798	0.551
Online shopping behaviour	5	0.809	0.563

The table above provides an insight about reliability and validity of the five constructs which are affective engagement, behavioural engagement, cognitive engagement, environmental awareness and brand preference. The composite reliability for all constructs ranges from 0,797 to 0,845 indicating internal consistency and reliability of items used to measure those constructs.

4.3.2 CONVERGENT VALIDITY

According to Hair et al., (2015) convergent validity refers to how closely two or more measures of similar ideas relate in practice. It reviews if different instruments measuring the same concept provide similar outcomes. In relation to convergent validity, the Average Variance Extracted (AVE) value range from 0.547 to 0.629. All constructs had AVE above 0.5, indicating a significant amount of variance. The results show that the constructs are reliable and have good convergent validity

4.3.3 DESCRIMINANT VALIDITY

Discriminant validity is how much a construct is really different from the others, both through concepts and by numbers. It makes certain that questions measuring one concept do not show much relation to items intended for other concepts (Hair et al.,2015). Discriminant validity is attained when the correlation between latent variables is less than 0.85.(Byrne,2016; Kline, 2015; Awang, 2015).

Table 6: Average variance extracted (AVE), composite reliability and shared variance

CONSTRUCTS	COMPOSITE RELIABILITY	AVERAGE VARIANCE EXTRACTED	SHARED VARIANCES				
			CT	CP	CA	S	OSB
CT	0.826	0.589	1				
CP	0.797	0.547	0.092	1			
CA	0.845	0.629	0.159	0.120	1		
S	0.798	0.551	0.144	0.1769	0.154	1	
OSB	0.809	0.563	0.105	0.154	0.104	0.142	1

4.4 HYPOTHESIS TESTING

4.4.1 MODEL FIT FOR THE STRUCTURAL MODEL

This technique is used in statistics to examine connections between observed and hidden variables in complex settings. It uses pieces of factor analysis and multiple regression to

examine theories that have both direct and indirect influences between variables. It helps to assess both measurement models and structural relationships among latent constructs simultaneously, making it ideal for testing theoretical frameworks (Kline, 2015).

Table 7: Goodness for fit-results for the structural model

Goodness of Fit statistics	Desired range of values for good fit	Values for the study
Incremental Fit Index (IFI)	>0.90	0.989
Normal Fit Index (NFI)	>0.90	0.917
Tucker Lewis Index (TLI)	>0.90	0.988
Comparative Fit Index (CFI)	>0.90	0.989
Root-Mean Error Square of Approximation (RMSEA)	0≤0.08	0.022
Chi-Square (CMIN/DF)	0≤3	1.137

Source: Amos

Testing the hypothesis and using Structural Equation Modelling (SEM) were done using the AMOS software. Only two out of the four proposed hypotheses failed to get support from the findings. Figure 4 below illustrates the structural model of the study.

FIGURE 4 STRUCTURAL MODEL FOR THE STUDY

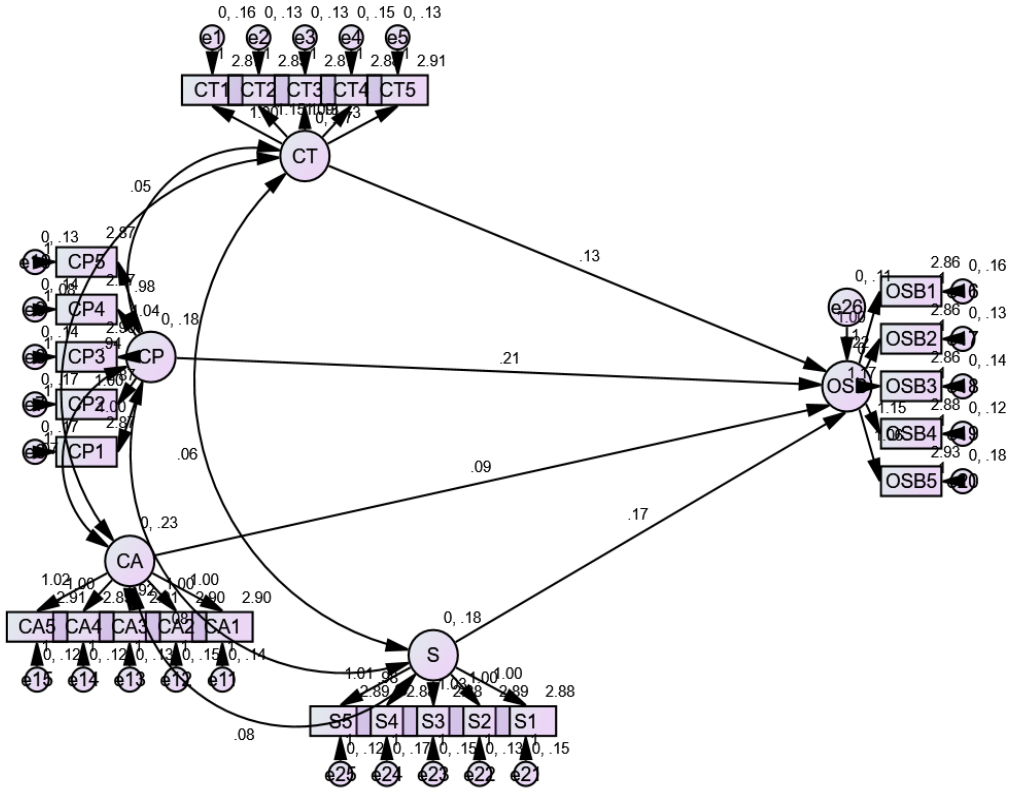

Figure 3 Structural model for the study

Source: Amos

Table 8: Hypothesis testing results

Hypothesis	(B) Estimate	T (C.R)	P-value	Decision
H1. Customer trust Positively influences use of contactless technologies on online shopping behaviour	0.131	1.893	0.058	Not supported
H2. Customer perception impacts contactless technologies enhancement for online shopping.	0.211	3.098	0.002	Supported
H3. Customer attributes directly influence adoption of contactless technologies for online shopping.	0.093	1.574	0.116	Not supported
H4. Customer safety greatly impacts use of contactless technologies for online shopping.	0.167	2.325	0.020	Supported

Source: Primary Data

Hypothesis 1 suggested a negative relationship between customer trust and use of contactless technologies on online shopping behaviour. The results, as indicated in Table 6 above, showcase the regression estimate (β)of 0.131, a critical ratio (T) of 1.893, and a p-value of 0.058. A negative relationship between customer trust and use of contactless technologies on online shopping behaviour indicates that consumers who have no trust in contactless technologies rarely shop online or do any online transactions that much. The relationship between customer trust and use of contactless technologies on online shopping behaviour indicates negativity, hence, H1 was not supported.

Hypothesis 2 suggested that customer perception impacts contactless technologies enhancement for online shopping. This is indicated by the results in table 6 with a regression estimate of 0.211, the critical ratio of 3.098, and a p-value of. The p-value of 0.002 hypothesis 2 was not greater than the threshold value ($p < 0.05$). The results show that customer perception impacts contactless technologies enhancement for online shopping. The positive relationship between customer perception and online shopping behaviour indicates that H2 was supported.

The third hypothesis was not supported, with a regression estimate of 0.093, a critical ratio(T) of 1.574, and a high p-value represented by 0.116. The results in Table 6 demonstrate that customer attributes do not directly influence adoption of contactless technologies for online shopping. A negative relationship shows that H3 was not supported.

Hypothesis 4 suggested that customer safety greatly impacts use of contactless technologies for online shopping. The hypothesis was strongly supported with a regression estimate of 0.167, a high critical ratio(T) of 2.325, and a significant p-value of 0.020. The results show that customer safety greatly impacts use of contactless technologies for online shopping, indicating that H4 was supported.

4.5 DISCUSSION OF FINDINGS

The sample size that was intended to be used in the research was 300, out of which 279 responded, and no data was missing. 279 responded questionnaires had a total percentage of 93%, indicating the reliability of the data. The demographic section included age, gender, level of education, employment status, and how often consumers use contactless technologies on online shopping.

The author analysed data using two software packages, which were SPSS 27 and SPSS-AMOS. The data was analysed and was reliable with a Cronbach's Alpha of all variables above 0.7. According to Cronbach (1951) the threshold value for Cronbach is 0.7.

The average variance extracted for all constructs ranged from 0.786 to 0.862, and the composite reliability ranged from 0.798 to 0.845. A high average variance extracted indicates convergent validity and also indicates the quality of the theoretical model. A high level of composite reliability indicates that items used reliably measure the same thing. Discriminant validity was assessed using the comparison between shared variances and average variance extracted, and the results indicate that shared variance values were below the average variance extracted values. A hypothesis test was conducted, two of them were supported and other 2 hypothesis were not supported.

4.5.1 CUSTOMER TRUST POSITIVELY INFLUENCES USE OF CONTACTLESS TECHNOLOGIES ON ONLINE SHOPPING BEHAVIOUR

The purpose of the first hypothesis was to determine the relationship between customer trust positively influencing use of contactless technologies on online shopping behaviour. The results of the study showed that customer trust, that is, confidence a consumer places in a brand, retailer ,or online platforms, to deliver promised value reliably, securely, and ethically over time (Gefen,Karahanna &Straub,2003) ,however negatively influences use of contactless technologies on online shopping behaviour.When digital fraud,privacy violations and poor regulatory enforcement are common there will be low customer trust leading to consumers being discouraged from using contactless technologies for online shopping (Mbunge et al.,2021). This was supported by Pavlou, (2003), who studied" The impact of customer trust on the use of contactless technologies on online shopping". The results were unreliable with a Cronbach's alpha below 0.7. The relationship was also not supported by the Technology Acceptance Model (TAM), which says that, external elements like system quality, training, and education can influence how retailers and customers see the technology's usability and simplicity of use. A user's intention to use behaviour and, ultimately, the necessity to use the electronic commerce system are influenced by their favourable attitude, which is developed when technology is helpful and simple to use which, as a result, leads to increased online shopping.

4.5.2. CUSTOMER PERCEPTION IMPACTS CONTACTLESS TECHNOLOGIES ENHANCEMENT FOR ONLINE SHOPPING.

The purpose of the second hypothesis was to analyse the impact of customer perception on contactless technologies enhancement for online shopping. Previous authors supported that customer perception positively impacts on contactless technologies enhancement for online shopping. Mataranyika and Nyagadza (2023) concluded that consumers who perceived contactless platforms like EcoCash, ZIPIT Smart, and ClicknPay as fast, secure, and convenient were significantly more likely to use them for online shopping. This was supported by the Unified theory of acceptance and use of technology (UTAUT) which says that according to the idea, purpose and conduct are directly influenced by four key constructs: ease of use, social influence, expectation of success, and expectation of effort. gender, age, experience, and willingness to use all modify the effect of the four major variables on use intent and behaviour (natarajan, balasubramanian and kasilingam, 2018). The results of this study were positive, it shows that customer perception impacts contactless technologies enhancement for online shopping with a p-value of 0.002, lesser than the threshold value of 0.05.

4.5.3 CUSTOMER ATTRIBUTES DIRECTLY INFLUENCE ADOPTION OF CONTACTLESS TECHNOLOGIES FOR ONLINE SHOPPING.

The purpose of the third hypothesis was to examine if customer attributes directly influence adoption of contactless technologies for online shopping. The results of the study indicate that there is a negative relationship between customer attributes and their influence on adoption of contactless technologies for online shopping. According to Laukkanen ,(2016) demographic traits ,such as ,low income ,lack of higher education and digital literacy, and older age significantly limited consumers ‘ability and willingness. More so Davis, (1989) created the Technology Acceptance hypothesis and this hypothesis demonstrates how individuals use and accept technology. According to the notion, a person's choice is impacted by a number of things when they encounter cutting-edge technology. According to Davis (1989), there is a correlation between the adoption of an innovation and its perceived ease of use, client attitude toward the innovation, and user behavioural intentions. The theory predicts user acceptance of information technology in a robust and economical manner. However, the results on the third hypothesis are not supported by this theory, with a regression estimate of 0.093, a critical ratio(T) of 1.574, and a high p-value represented by 0.116 higher than the threshold value of 0.05.

4.5.4 CUSTOMER SAFETY GREATLY IMPACTS USE OF CONTACTLESS TECHNOLOGIES FOR ONLINE SHOPPING.

The purpose of hypothesis four was to analyze if ccustomer safety greatly impacts use of contactless technologies for online shopping. The results of the study indicate that there is a positive relationship between customer safety and their impact on adoption of contactless technologies for online shopping. According to Protection motivation theory (PMT) by Rogers ,(1975),individuals are motivated to adopt protective behaviours ,for example, secured online transactions when they perceive a threat and believe that adopting a particular technology can mitigate that threat. In online shopping if customers believe contactless technologies are safe, they are more likely to adopt them (Ifinedo,2012). A study by Mbunge et al.(2021) found that Zimbabwean consumers were more likely to adopt Ecocash, ZIPIT Smart and online grocery platforms when they perceived enhanced security features,such as one-time password (OTPs) ,secure login and fraud detection tools. The results on the fourth hypothesis are supported by this theory, with a regression estimate of 0.167, a high critical ratio(T) of 2.325, and a significant p-value of 0.020. The results show that customer safety greatly impacts use of contactless technologies for online shopping, indicating that H4 was supported.

4.6 SUMMARY

This chapter provided detailed information on data analysis. SPSS 27 and SPSS AMOS software were used to analyse data. A questionnaire was used as a measurement instrument and highlighted a high response rate of 93%, indicating reliability. The respondents' demographics showcased a wide range of characteristics, with a massive participation from the age of 18 and below up to 45 and above. Confirmatory factor analysis was used to confirm the construct's validity. The results produced were reliable as indicated by a Cronbach's Alpha above 0.7. The structural model supported two hypotheses, which are hypotheses 2 and hypotheses 4. A p-value greater than 0.05 for hypotheses one and three indicated rejection. Furthermore, the findings were compared with those of previous studies on related topics.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter presents an overview of the results obtained from the study, from chapters 1 to 4. Conclusions to support or reject the topic depend on the results. Recommendations are provided for future purposes and improvements.

5.1 SUMMARY

Chapter 5 offers a summary of findings, conclusions, and recommendations. The study aimed to examine the impact of customer trust, perception and attributes on safety and adoption of contactless technologies on online shopping behaviour of consumers in the retail sector in Zimbabwe. Results were conducted with a sample of 300 participants; 279 responded. Data was analysed using SPSS version 27 and SPSS-AMOS.

Results showed that Hypothesis 1 was not supported and suggested a negative relationship between customer trust and use of contactless technologies on online shopping behaviour. The results, as indicated on Table 6 in Chapter 4, showcase the regression estimate (β) of 0.131, a critical ratio (T) of 1.893, and a p-value of 0.058. A negative relationship between customer trust and use of contactless technologies on online shopping behaviour indicates that consumers who have no trust in contactless technologies rarely shop online or do any online transactions that much. H1 was not supported meaning that the relationship between customer trust and use of contactless technologies on online shopping behaviour indicates negativity.

Results suggested that Hypothesis 2 was supported meaning that customer perception impacts contactless technologies enhancement for online shopping. This is indicated by the results in table 6, chapter 4 with a regression estimate of 0.211, the critical ratio of 3.098, and a p-value of. The p-value of 0.002 hypothesis 2 was not greater than the threshold value ($p < 0.05$). The results show that customer perception impacts contactless technologies enhancement for online shopping. The positive relationship between customer perception and online shopping behaviour indicates that H2 was supported.

The third hypothesis was not supported, with a regression estimate of 0.093, a critical ratio(T) of 1.574, and a high p-value represented by 0.116. The results in Table 6,chapter 4 demonstrate

that customer attributes do not directly influence adoption of contactless technologies for online shopping. A negative relationship shows that H3 was not supported.

Hypothesis 4 suggested that customer safety greatly impacts use of contactless technologies for online shopping. The hypothesis was strongly supported with a regression estimate of 0.167, a high critical ratio(T) of 2.325, and a significant p-value of 0.020. The results show that customer safety greatly impacts use of contactless technologies for online shopping, indicating that H4 was supported.

5.2 CONCLUSIONS

This research aimed to investigate the extent to which customer trust, perception, and attributes influence both perceived safety and the adoption of contactless technologies in the online shopping behaviours of consumers within Zimbabwe's retail sector. The study was conducted against the backdrop of increased digitisation in sub-Saharan African economies, with Zimbabwe experiencing a significant shift in consumer transaction patterns due to mobile commerce growth, especially post-COVID-19 (Mbunge et al., 2021).

The study adopted a quantitative methodology and tested four hypotheses using data gathered from consumers who engage in online retail activities across Zimbabwe. The findings yielded both expected and unexpected outcomes:

H1 (Customer Trust) was not supported, revealing that customer trust did not significantly influence the use of contactless technologies. While trust has been established as a critical enabler in many global studies (Gefen et al., 2003; Nyagadza, 2022), the lack of influence in the Zimbabwean context may be attributed to prevalent institutional distrust, limited consumer protection policies, or consumers' greater reliance on safety features over interpersonal or brand trust. This is consistent with prior research in emerging markets which suggests that in low-trust environments, consumers are more motivated by functional and transactional assurances than by general trust (Chikandiwa, 2020).

H2 (Customer Perception) was supported, confirming that positive consumer perceptions—particularly regarding usefulness, ease of use, and convenience—enhance the likelihood of adopting contactless shopping platforms. This supports the Technology Acceptance Model (TAM), identifies perceived usefulness and ease of use as central to technology adoption (Davis, 1989). Zimbabwean consumers who perceive online platforms as reliable, responsive, and cost-effective are more inclined to adopt them, as supported by Makurumidze and Mutsikiwa (2021).

H3 (Customer Attributes) was not supported, indicating that demographic factors such as age, education, income, and prior tech experience did not significantly influence adoption. This contrasts with other UTAUT-based studies (Venkatesh et al., 2003), but may reflect the increasingly widespread exposure to mobile technology across various demographic segments in Zimbabwe, facilitated by mobile network providers and fintech platforms (ZIMSTAT, 2022).

H4 (Customer Safety) was supported, strongly affirming that safety concerns are critical to the adoption of contactless technologies. Consumers prioritise secure platforms with fraud protection, data privacy, and transaction traceability. The Protection Motivation Theory (Rogers, 1975) supports this finding, asserting that perceived severity and vulnerability to digital threats motivate protective behaviour—in this case, cautious adoption of secure platforms. These findings align with those of Mbunge et al. (2021), who noted that privacy and security remain central in African consumers' decision-making when using mobile and online technologies.

5.3 RECOMMENDATIONS

This study examined how customer trust, perception, and attributes influence the safety and adoption of contactless technologies in Zimbabwe's retail sector. Based on the findings where customer perception and safety were significant influencers, while trust and customer attributes were not several practical recommendations are proposed.

Develop a National Digital Consumer Protection Strategy**.**

To improve safety and consumer confidence in using online shopping platforms, the government, through agencies like POTRAZ and the Ministry of ICT, should create policies that enforce:The use of secure payment platforms and mandatory privacy policies on retail websites More so, Quick-response helplines for victims of digital fraud,for example, initiative like “Shop Safe Zimbabwe” could educate the public on verifying genuine retail websites and spotting scams.

5.3.1 Support SMEs with Innovation Grants for Secure Digital Platforms

Most retail businesses in Zimbabwe are small or medium-sized and lack the capital to invest in secure contactless technology. The government or donor agencies can offer grants or low-interest loans to help these businesses adopt: mobile payment systems like PayNow or EcoCash,for example A small grocery shop in Mbare could receive funding to build a secure online store with delivery and mobile payment options, improving customer safety and convenience.

Many Zimbabweans, especially in rural and peri-urban areas, remain digitally excluded. National campaigns should aim to: teach people how to use online shopping apps, show them how to spot phishing websites and also guide them through safe payment methods, for example, using community radio in Mutoko or WhatsApp short videos to teach women how to securely buy groceries or clothes online

5.3.2. Design Platforms Around Consumer Feedback and Perceptions.

Since customer perception was a key factor in adoption, retailers should improve the design and security of their online platforms by: collecting customer feedback on the user experience danedisplaying refund policies, payment security features, and delivery tracking systems, for example, an online fashion retailer in Harare might implement a real-time customer chat to resolve trust and safety concerns during checkout. 3Launch Digital Literacy Campaigns for Consumers.

5.3.3 Partner with Telecom and Fintech Companies

Retailers should work with mobile network providers, such as ,Econet and Net One, and payment platforms (like One Money and Inn bucks) to make online shopping safer and more accessible. A collaboration between Pay Now and local supermarkets could enable contactless payments at delivery points using QR codes, reducing fraud.

5.3.4 Integrate Digital Commerce into Educational Curricula

Zimbabwe's universities and vocational training institutions should introduce modules on e-commerce, cybersecurity, and customer engagement to help young entrepreneurs build safe, trusted online platforms, for example, Midlands State University could offer a certificate in "Secure E-Commerce Management" targeting ICT and business students.

5.4 Areas of Further Research

This study opens the door for further investigations into related issues that were not fully covered. These future studies can help policymakers, retailers, and researchers understand how to strengthen adoption of contactless technologies in Zimbabwe.

Since trust was not statistically significant in this study, future research could explore whether economic and political uncertainty in Zimbabwe leads to low institutional trust overally.More so, Consumers trust mobile networks and banks more than individual retailers, for example ,consumers might trust Eco Cash to process a payment but still not trust a small retailer they've never heard of.

The study grouped attributes generally. Future research could explore more specific attributes such as education level, age, past online shopping experience, for example, are university students in Harare more likely to adopt contactless technologies compared to rural women in Gokwe due to exposure?

In Zimbabwe, some cultural and religious groups may avoid digital transactions due to beliefs around fraud, control, or lack of familiarity. Studying how social pressure or community opinions affect adoption could reveal key behavioural patterns, for example, in conservative religious communities, women might be discouraged from using mobile phones or shopping online, limiting adoption.

Furthermore, Zimbabwe faces frequent power cuts and slow internet speeds, which may negatively affect adoption. Research could examine how infrastructure challenges affect consumer decisions to shop online, for example, buyer might start a transaction but abandon it because the mobile internet failed mid-purchase.

Most studies focus on consumers. Future research should investigate, how retailers perceive customer trust and safety and their readiness to adopt and invest in secure digital tools, for example, a small retailer might avoid going online due to the perceived high cost of website development and cyber risks.

Demographic studies could explore how men vs women, youth vs older adults, or urban vs rural dwellers adopt online shopping differently, for example, urban millennials may focus more on convenience and speed, while older rural residents may prioritise transaction safety and physical proof of purchase.

COVID-19 forced many consumers to use contactless options. A future study could track if those behaviours have continued or declined post-pandemic, for example, were the online shopping habits adopted during lockdown temporary or are they becoming permanent? Researchers could compare Zimbabwe with countries like Zambia, Botswana, or South Africa to identify regional patterns and best practices, for example, South Africa is more developed and has a digital infrastructure which might reveal how policies or trust-building strategies affect adoption differently than in Zimbabwe.

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Bindura University of Science Education

Dear participant:

You are invited to participate in an academic research study conducted by TATENDA LUGUBE (Reg number B212159B) Bachelor of honors degree in Marketing, student from the Faculty of Commerce,

Department of Marketing at the Bindura University of Science Education (BUSE).

The topic under study is**: THE IMPACT OF CUSTOMER TRUST, PERCEPTION, AND ATTRIBUTES ON SAFETY AND ADOPTION OF CONTACTLESS TECHNOLOGIES ON ONLINE SHOPPING BEHAVIOUR OF CONSUMERS IN THE RETAIL SECTOR IN ZIMBABWE.**

Please note the following:

- This study involves an anonymous survey. Your name will not appear and the answers you give will be treated as confidential. It will not identify you in person based on the answers you give.
- Your participation in this study is very important. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer the questions as honestly as possible. This should not take more than a few minutes of your time.

• The results of the study will be used for academic purposes only and may be published in an academic journal. I will provide you with a summary of my findings upon request.

QUESTIONNAIRE OBJECTIVES:

The main objective of this questionnaire is to collect data to examine the impact of customer trust, perception, and customer attributes on the perceived safety and adoption of contactless technologies in online shopping behaviour within Zimbabwe's retail sector.

SPECIFIC OBJECTIVES:

1. To assess the level of customer trust in contactless technologies used for online shopping in the Zimbabwean retail sector.

2. To evaluate consumer perceptions regarding the safety, reliability, and efficiency of contactless payment technologies during online retail transactions.

3. To identify key customer attributes (e.g., age, gender, education, income, technological literacy) that influence the adoption of contactless technologies.

4. To examine the relationship between perceived safety and the willingness of consumers to adopt contactless technologies in online shopping.

5. To investigate the extent to which customer trust and perception predict actual usage and behavioural intention toward contactless shopping technologies.

6. To provide recommendations for retailers, policymakers, and technology providers on improving the adoption of contactless technologies in Zimbabwe’s retail environment.

SECTION A: DEMOGRAPHIC INFORMATION

Please provide the following information by ticking the appropriate box

1. What is your age?

Options	
18 and below	
18-24	
25-34	
35-44	
45 and above	

2. What is your gender?

Male

Female

3. What is your level of education?

Primary	
secondary	
Tertiary	
Other	

4.What do you do for a living? (Employment status)

Student	
Employed	
Self employed	
Unemployed	

5. How frequently do you engage with contactless online technologies?

Daily	
A few times a week	
A few times a month	
Rarely	
Never	

5.What contactless online technologies do you most frequently use to make payments?

Near Field Communication (NFC)	
QR Code payments	
Mobile wallets	
Biometric Authentication	
Wearable Payment Devices (eg Smartwatches)	
In-App Contactless checkouts (eg ZimDelivery)	

SECTION B**:** CUSTOMER TRUST.

Indicate the extent to which you agree or disagree with the following statement by ticking the appropriate box.

1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

	Statements	**1**	**2**	**3**	**4**	**5**
CT1	I trust online retailers to protect my personal data in Zimbabwe.					

CT2	Online retailers are reliable in handling my transactions.					
CT3	I feel secure when making online transactions.					
CT4	My past experiences with online shopping have increased my trust in the process.					
CT5	I trust that payment systems like Eco Cash ,ZIPIT ,Apple Pay ,One Money and Google Pay are secure.					

SECTION C: CUSTOMER PERCEPTION

Indicate the extent to which you agree or disagree with the following statement by ticking the appropriate box.

1=strongly disagree 2 =disagree 3=neutral 4=agree 5=strongly agree

	Statements	**1**	**2**	**3**	**4**	**5**
CP1	Contactless technologies (e.g.,mobile payments) are convenient.					
CP2	Contactless technologies are easy to use					
CP3	Contactless technologies enhance my shopping experience.					
CP4	I believe contactless technology is fast and efficient for transactions					
CP5	I believe contactless technologies to be safe from fraud and mis use.					

SECTION D: CUSTOMER ATTRIBUTES

	Statements	**1**	**2**	**3**	**4**	**5**
CA1	I am tech savvy and comfortable using new technologies.					
CA2	I value security and privacy when making online transactions.					
CA3	I'm willing to try new contactless technologies.					

CA4	I seek information before using a new online shopping platform					
CA5	My level of education has influenced how I use contactless technology.					

SECTION E: SAFETY

Indicate the extent to which you agree or disagree with the following statement by ticking the appropriate box.

1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

	Statements	**1**	**2**	**3**	**4**	**5**
S1	I feel safe using contactless technologies for online transactions.					
S2	Contactless technologies reduce the risk of online transactions.					
S3	Online retailers take adequate measures to ensure safety of contactless transactions.					
S4	I am more likely to shop online if secure contactless technology payments are available.					
S5	Availability of secure contactless options influence my choice of retailer.					

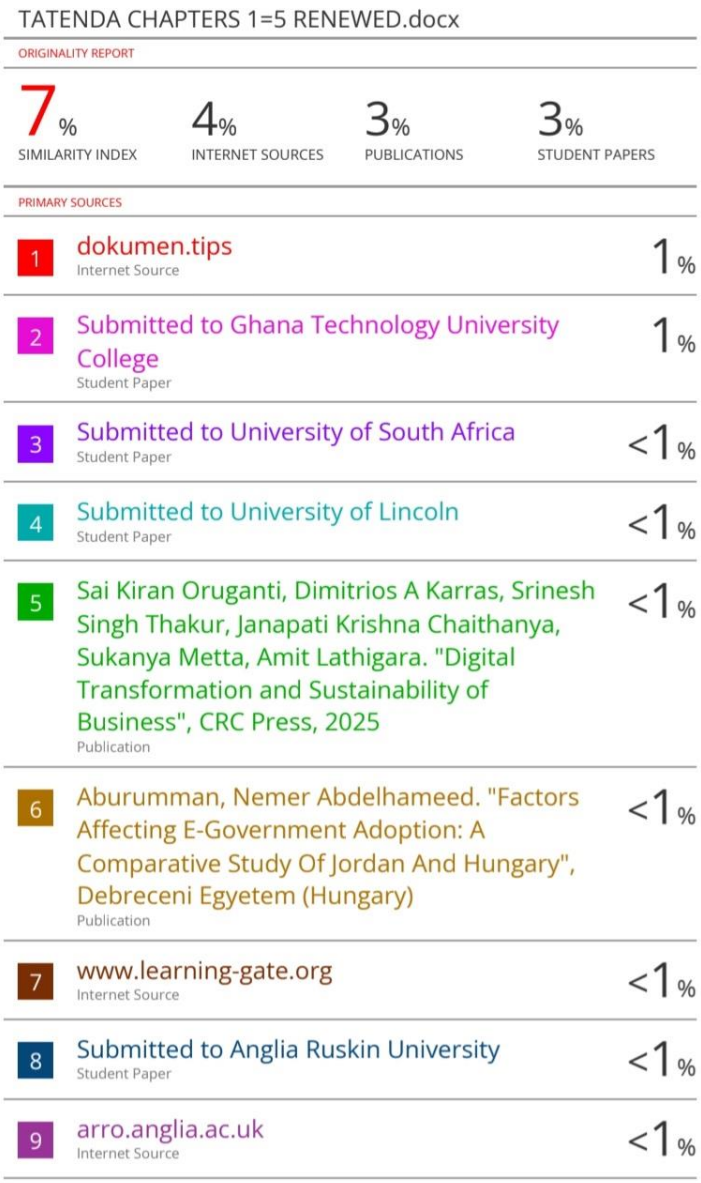
SECTION F: ONLINE SHOPPING BEHAVIOUR (OSB)

Indicate the extent to which you agree or disagree with the following statement by ticking the appropriate box.

1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

	Statements	**1**	**2**	**3**	**4**	**5**
OSB1	I'm likely to shop online if there are discounts or promotions using contactless technologies.					
OSB2	I tend to repeat purchase from online stores that provide reliable service					

OSB3	I prefer online shopping over in-store shopping					
OSB4	I spend more when using contactless technologies for online shopping					
OSB5	The ease of using contactless technologies motivates me to shop online more often					



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