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THE IMPACT OF ARTIFICIAL INTELLIGENCE (AI) ADOPTION ON MARKETING PERFORMANCE IN ZIMBABWEAN RETAIL SMALL TO MEDIUM ENTERPRISES (SMEs)

BY

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Abstract

Artificial intelligence is reshaping the Global Business environment yet its impact within Zimbabwean Small to Medium Enterprises is not yet fully known. Zimbabwean SMEs contribute approximately USD 8.6 Billion to the country's GDP and provide substantial employment constituting a critical component of the economy. According to the World Bank, Zimbabwean SMEs operate in a difficult environment that is marked by fierce competition in the market, restricted access to capital and operational inefficiencies and the integration of Artificial Intelligence in business operations presents an opportunity for Zimbabwean SMEs to overcome these challenges, improve performance, compete at a global level and ensure sustainable growth. This research investigated the impact of AI adoption on marketing performance among formally registered retail SMEs operating in Harare, Zimbabwe. The research employed a mixed-methods design approach combining qualitative and quantitative data from 38 SMEs operating in Harare. Quantitative survey data was collected via a questionnaire from 23 Artificial Intelligence adopters, and 15 Artificial Intelligence non-adopters and qualitative data was collected via in-depth interviews from 6 SMEs constituting an equal number of adopters and non-adopters. The study employed a combination of the Technology-Organization-Environment (TOE) framework and Technology Acceptance Model (TAM) and data was analysed using SPSS utilizing descriptive statistics, t-tests, correlation analysis, ANOVA and thematic analysis for qualitative data. The results revealed a high level of awareness of AI Technology at 92% among SMEs and an adoption rate of 61% exceeding expectations from a developing country. Both Artificial Intelligence adopters and non-adopters showed a strong perceived usefulness of the technology however the perceived ease of use was low among adopters revealing that there are challenges faced by users of the technology. External environmental factors such as unreliable internet, unstable power, lack of technology vendor support and inadequate information were identified as the major challenges to adoption. Followed by technological challenges such as the cost of the technology and lastly organisational challenges. The study also investigates how other factors such as business size and years in operation affect Artificial Intelligence adoption. The study concludes that Artificial Intelligence adoption results in significant improvement on marketing performance metrics with the t-tests revealing significant positive impacts. The study suggests practical implications and provides recommendations for SME owners, managers, government, policy makers and Artificial Intelligence developers and distributors. The study also contributes to the body of knowledge on technology adoption in developing countries as it focuses specifically on Artificial Intelligence Technology adoption in Zimbabwe and not the broader aspect of Digital Transformation in Zimbabwe.

Keywords: Artificial Intelligence, adoption, marketing performance, Small to Medium Enterprises

Declaration

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

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Dedication

I dedicate this work to the memory of my late father Fordson Mugumbate, whose guidance and love continue to light my path. To my Wife, Mother and Sister whose unwavering support has sustained me throughout this journey. Finally, to my daughter, Joanna - may you always find joy and fulfilment in the pursuit of knowledge, as I have.

List of Acronyms and Abbreviations

AI	Artificial Intelligence
ANOVA	Analysis of Variance
AUREC	Africa University Research Ethics Committee
CBD	Central Business District
CHATGPT	Chat Generative Pre-trained Transformer
CZI	Confederation of Zimbabwe Industries
ESAP	Economic Structural Adjustment Program
GDP	Gross Domestic Product
ICT	Information Communication and Technology
IMF	International Monetary Fund
ITU	International Telecommunication Union
PEOU	Perceived Ease of Use
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
PU	Perceived Usefulness
ROI	Return On Investment
SME	Small-to-Medium Enterprise
SMEDCO	Small and Medium Enterprise Development Corporation
SPSS	Statistical Package for Social Sciences

TAM	Technology Acceptance Model
TOE	Technology-Organization-Environment
ZIMRA	Zimbabwe Revenue Authority

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CHAPTER 1: INTRODUCTION

1.1 Introduction

The global business environment is undergoing revolutionary transformations driven by the rapid evolution, advancement and adoption of Artificial Intelligence (AI). Business operational efficiencies, strategic decision making and competitive dynamics are being reshaped by AI technologies such as machine learning, natural language processing and predictive analytics (Borges et al., 2021). The Small and Medium Enterprise Development Corporation (SMEDCO), the financing arm of the Ministry of Small and Medium Enterprises and Cooperative Development (MSMECD) in Zimbabwe, views an SME as a firm that has not more than hundred employees and maximum annual sales turnover of USD 830,000 (Bomani et al., 2015). In developing countries Small to Medium Enterprises (SMEs) are the foundation of the economies. In Zimbabwe, SMEs contribute an estimated USD 8.6 Billion Dollars to the GDP and provide a substantial portion of employment (Finscope Survey, 2022). Zimbabwean SMEs operate in a difficult environment that is marked by fierce competition in the market, restricted access to capital and operational inefficiencies (World Bank, 2023). This study proposes that the integration of AI presents a strategic imperative for Zimbabwean SMEs to overcome these hurdles, improve on their performance, and ensure sustainable growth. This chapter outlines the background of the study, the problem statement, research objectives and questions, the significance of the study, and its delimitations and limitations.

1.2 Background to the Study

The Economic Structural Adjustment Program (ESAP), an economic policy that the World Bank and the International Monetary Fund (IMF) suggested and administered to countries facing debt crisis and in economic problems introduced by the Zimbabwe government in 1991 created an environment for the development of SMEs in the country (Bomani et al., 2015) . However, despite their critical role, SMEs in Zimbabwe face perennial challenges such as poor infrastructure, cash flow constraints and low market penetration which according to the World Bank (2023) are driven by lack of data-driven insights for strategic planning.

The global business environment is undergoing revolutionary transformations driven by the rapid evolution, advancement, and adoption of Artificial Intelligence (AI). Business operational efficiencies, strategic decision making and competitive dynamics are being reshaped by AI technologies such as machine learning, natural language processing, and predictive analytics (Borges et al., 2021).

In developing countries like India, China, Brazil, Mexico, and South Africa, there has been a noticeable increase in AI adoption among small businesses in recent years. These countries have seen a rise in the use of AI applications such as chatbots for customer service, predictive analytics tools for business insights, and automation of repetitive tasks. Despite facing challenges such as high initial costs and skills shortages, small businesses in these developing countries are gradually integrating AI into their operations to stay competitive in the global market (Bengio et al., 2017).

In Zimbabwe, the penetration of AI in the SME sector is still in its infancy and preliminary evidence suggests a significant gap between the potential of AI and its

actual application which is influenced by factors such as limited technical skills, high implementation costs, and unreliable internet infrastructure (Dube, 2025). This study seeks to explore this gap by investigating the impact of AI on the marketing performance of Zimbabwean SMEs in the Retail sector.

1.3 Statement of the Problem

Zimbabwean SMEs face significant operational inefficiencies, limited access to data-driven insights, and intense market competition in a country with significantly constrained purchasing power (World Bank, 2023).

While AI technologies offer viable solutions to these challenges, there exists a lack of understanding and empirical evidence on how AI can be practically adopted and leveraged within the context of Zimbabwe. Existing literature within the context of Zimbabwean SMEs such as (Mataruka et al., 2024) only focuses on the broader adoption of Digital Transformation technologies and ICT but do not focus on the specific scope of adoption of AI technologies in relation to business marketing performance.

The Confederation of Zimbabwe Industries (CZI, 2023) reports that Zimbabwean SMEs face operational inefficiencies costing an estimated 15-25% of potential revenue primarily due to lack of data-driven decision-making tools while according to Sage's Small Business, Big Opportunity 2024 survey, 73% of South African small and medium businesses have already invested in AI technologies positioning them to

capture market share. This knowledge gap prevents Zimbabwean SMEs from competing at a higher level with counterparts from the continental and global region who have harnessed the power of AI and as a result risk being left behind. This study, therefore, investigates the impact of AI on marketing performance over the preceding 24-month period to provide a contextualized framework for adoption.

1.4 Aim and Objectives of the Study

1.4.1 Aim

This research aims to investigate and analyse the impact of AI adoption on the marketing performance of selected formally registered retail SMEs in Harare, Zimbabwe.

1.4.2 Objectives

i. To assess the current level of awareness, adoption and perceived value of AI technologies among SMEs in Zimbabwe.

ii. To identify the challenges to AI adoption for Zimbabwean SMEs

iii. To analyse the impact of AI adoption on marketing performance in Zimbabwean SMEs over the preceding 24-month period.

1.4.3 Research Questions

The study aims to answer the following questions

i. What is the current state of awareness, adoption and perceived value of AI among SMEs in Zimbabwe?

ii. What are the challenges faced by SMEs in adoption of Artificial Intelligence technologies?

iii. How has the adoption of AI technologies influenced marketing performance of Zimbabwean SMEs over the preceding 24-month period?

1.5 Hypothesis

Ho – AI has no impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe.

H1 - AI has impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe.

1.6 Significance of the Study

The significance of this research is demonstrated across three core academic domains—theoretical, methodological, and conceptual. The primary contribution lies in addressing a gap within the existing literature on technology adoption in developing economies. Current scholarly work within the Zimbabwean context focuses on generic

digital transformation or foundational ICT tools in SMEs which is a broad and overarching long term strategy approach whereas the study on AI adoption provides a narrow and focused approach on specific technologies and tools. Therefore, the study will make a theoretical significance by moving beyond the established narrative of general digitalization to adoption of specific AI technologies and tools.

The study also possesses methodological significance; by concentrating exclusively on the retail sector which is a major contributor to Zimbabwe's GDP and a sector where marketing activities are directly linked to revenue generation, the research will provide a robust and valid dataset of information. This allows for the development of a validated conceptual framework that can be tested in similar developing countries, contributing to comparative studies.

Conceptually, this research provides an opportunity to develop and test a framework that links AI adoption directly to measurable marketing performance metrics such as customer satisfaction, customer conversion rate, return on investment on marketing campaigns and customer acquisition cost within the Zimbabwean socio-economic landscape. It moves beyond conceptualizing AI as a single digital tool or technology but instead investigates the significance of specific AI applications e.g. AI-powered chatbots for customer service, content creation AI tools and marketing automation tools and how their integration impacts specific marketing outcomes.

In addition to the academic significances, the study will also provide practical value to critical stakeholders. The research will empower SME owners and managers with

evidence-based knowledge on the benefits of AI integration into their business for making informed decisions and realise growth and profitability. For policymakers in entities like the Ministry of SMEs and the Ministry of ICT, the research provides insights into the barriers to AI adoption informing the development of supportive policies, incentives and digital infrastructure projects. Finally, for technology developers, the insights will provide the precise needs and operational constraints of Zimbabwean retail SMEs, guiding the design of affordable and relevant AI solutions tailor-made for Zimbabwean SMEs.

1.7 Delimitation of the Study

This study is deliberately bounded to ensure depth and focus. The research will be confined to a set sample of formally registered SMEs operating within Harare, Zimbabwe within the retail sector specifically clothing and accessories, food and groceries and electronic gadgets. The study will investigate a defined set of relevant AI applications such AI-powered chatbots for customer service, content creation AI tools and marketing automation tools. The study will exclude advanced, complex and capital-intensive AI systems used in large corporations. The timescale will cover the current state of AI adoption and its perceived impact over a recent two-year period. Data collection will be limited to the perspectives of SME owners, SME managers, and SME marketing staff.

1.8 Limitations of the Study

The study acknowledges certain limitations. The reliance on self-reported data from SME owners, managers and marketing staff may be subject to social desirability bias in reporting AI technological adoption. The case study design limits the generalizability of the findings to a sample of formally registered SMEs operating in Harare. While the statistically recommended sample size for a 95% confidence level and 5% margin of error was 375 SMEs, a sample of 38 formally registered SMEs was achieved as a result of practical constraints faced during data collection explained in chapter 4 (absence of accessible SME Databases, legal restrictions on Data sharing, participant scepticism and organisational hierarchical challenges). The study is therefore presented as an exploratory investigation, a first systematic examination of AI adoption and its impact on marketing performance among SMEs in Zimbabwe.

CHAPTER 2: REVIEW OF RELATED LITERATURE

2.1 Introduction

This section gives information on work that was done by several researchers on the field of study. Information will be examined from various papers from different authors who have done such similar work and have presented their facts on the most important key variables of the research. This chapter reviews existing literature relevant to the impact of AI on marketing performance with specific focus to SMEs in developing countries. The review is structured to explore the perspective on AI in the business landscape of Zimbabwe particularly formally registered SMEs operating in Harare in the retail sector. The chapter concludes with the presentation of the study's combined theoretical framework which integrates the Technology-Organization-Environment (TOE) framework and the Technology Acceptance Model (TAM) to provide a detailed assessment for analysing AI adoption and its impact.

2.2 Theoretical Framework

To comprehensively understand the impact of AI in Zimbabwean SMEs, this study will employ a combination of the Technology-Organization-Environment (TOE) framework and Technology Acceptance Model (TAM).

2.2.1 The Technology-Organization-Environment (TOE) Framework

The TOE framework was developed by Tornatzky and Fleischer in 1990 is a theoretical framework that explains technology adoption in organizations and

describes how the process of adopting and implementing technological innovations are influenced by the technological context, organizational context, and environmental context

The Technological Context refers to the internal and external technologies relevant to the organisation including technologies being currently used at the organisation and new technologies available in the market not being used at the organisation. This context will be used to assess the specific AI tools available to formally registered SMEs operating in Harare, for instance AI-powered chatbots for customer service, content creation AI tools and marketing automation tools. This includes the three key factors which are perceived relative advantage**,** perceived compatibility and perceived complexity. The perceived relative advantage is the degree to which AI technology is seen to be providing marketing performance benefits over current technologies being used whereas the perceived compatibility is the fit between AI technologies and the SMEs existing technology infrastructure, values and existing business practices and perceived complexity refers to the difficulty by the organisation's members in understanding, implementing and using AI technologies.

The organisational context refers to the nature and the resources of the organisation itself. This context focuses on the internal aspects of the SME that promote or discourage AI adoption such as organisation size and resources which represents the financial and human capital available within the organisation to invest and experiment with AI technologies, management support which is managements attitude and buy in towards innovation and technologies such as AI and employee skillset and readiness

which focuses on the existing technical capabilities of the workforce to leverage on AI technologies.

The Environmental Context refers to the landscape where the organization conducts its business – the sector, the market, competitors and engagements with various stakeholders such as suppliers and government regulatory bodies. This context captures the external pressures and support that influence an SME's decision. Key factors in the context of Zimbabwe include Infrastructure, technology vendor support and the Government of Zimbabwe policy and support. Infrastructure focuses on the availability and reliability of supporting infrastructure such as affordable high-speed internet and a stable supply of electricity while technology vendor support focuses on the availability of local AI Technology providers offering products, training and support and government policy and support focuses on the presence of digital transformation policies and incentives that support and encourage AI adoption.

2.2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) originally developed by Davis in 1989 is one of the most influential models for predicting individual technology use. Its core constructs are Perceived Usefulness (PU)—the degree to which a person believes that using a particular system would enhance their job performance—and Perceived Ease of Use (PEOU)—the degree to which a person believes that using the system would be free of effort (Davis 1989). In the context of this study, these perceptions are held by the SME owners, managers, and marketing staff who are the end-users of the AI tools**.**

2.2.3 Integration and Relevance of the TOE and TAM Theoretical Framework

Combining the TOE and TAM Frameworks provides a comprehensive end-to-end model for the study. The TOE frameworks establish the initial conditions that determine whether an SME is positioned to adopt AI technologies. The TOE framework offers a macro-level perspective which analyses the internal and external factors affecting AI Adoption to the organisation while the TAM model offers a micro-level perspective or individual-level view of the psychological processes that determine whether a technology will be used or not by individuals. The combination of the models is relevant to the study because adoption and impact of AI is not only determined by external and internal resource factors affecting the organisation but is also influenced by the willingness of the SME owners, managers and staff to use the technology.

2.3 Conceptual Framework

Figure 1 is the conceptual framework for the study:

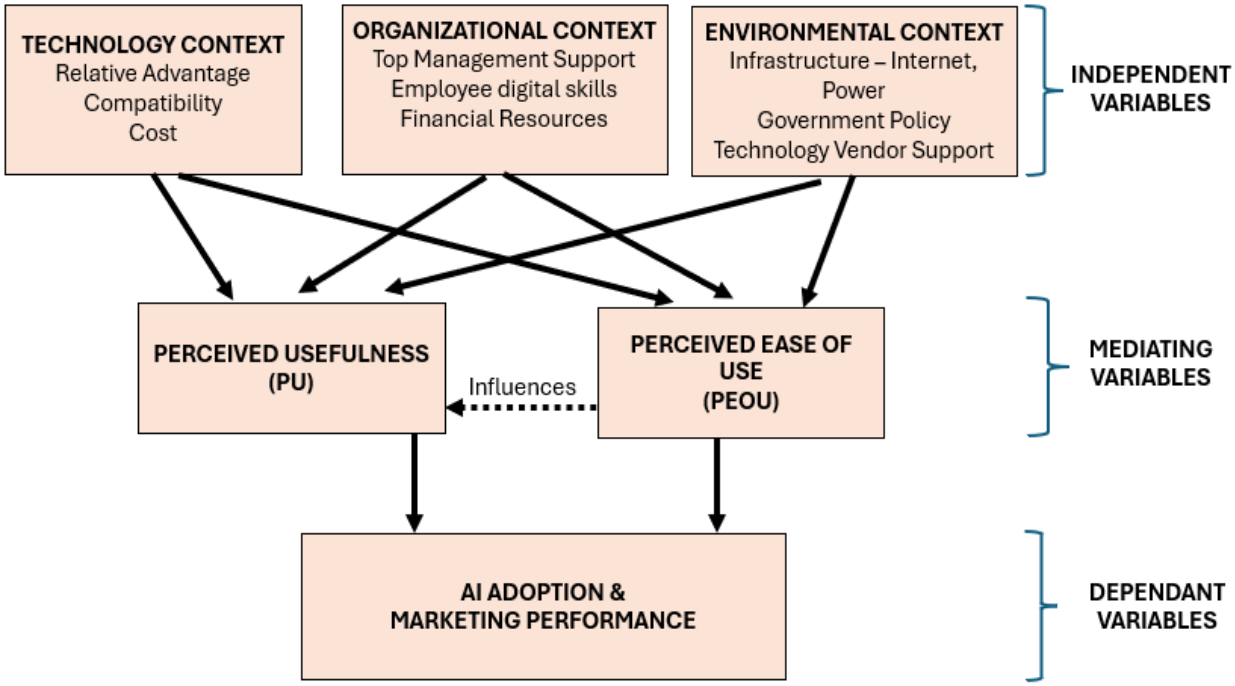

Figure 1: Conceptual Framework

2.4 Review of Literature

2.4.1 The Global Impact of AI in Business and Marketing

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. These intelligent systems can perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation (Martins, 2024). Key components of AI include machine learning, where systems learn from data, and deep learning, a subset of machine learning involving neural networks with many layers. Artificial Intelligence (AI) has emerged as a transformative force, revolutionising business operations and decision-making. Modern marketing strategies increasingly embrace AI to enhance operational efficiency and secure a competitive advantage (Chintalapati & Pandey, 2022). Through machine learning and data insights, SMEs

can craft personalised marketing campaigns that maximise customer engagement and improve Return on Investment (ROI) (Grewal et al., 2020). In customer support, AI-driven tools like chatbots and virtual assistants provide real-time, customised interactions, significantly boosting customer satisfaction (Diederich et al., 2022). Globally, research confirms that AI adoption is a key differentiator, with studies indicating it can automate 40-50% of routine administrative tasks, freeing human capital for more strategic work (Brynjolfsson & McAfee, 2017). Companies like eBay leverage AI for machine translation, enhancing decision-making and operational efficiency. Similarly, Vodafone employs AI-driven analytics to personalize services, exemplifying its transformative impact (Jorzik et al., 2024). Amazon, one of the world's largest online retailers, has successfully leveraged AI to optimize its operations. It utilizes AI algorithms to analyse customer data and preferences, enabling personalized product recommendations. This has significantly improved customer experience and increased sales. Additionally, Amazon employs AI-powered robots in its warehouses to automate order fulfilment and optimize inventory management. This has led to faster and more efficient order processing, reducing operational costs and improving overall productivity (Martins, 2024). Uber, the ride-hailing service, relies heavily on AI to optimize its operations. The platform uses AI algorithms to match riders with drivers based on factors such as location, availability, and estimated time of arrival. This real-time optimization ensures efficient utilization of drivers and reduces customer wait times. Furthermore, Uber employs AI for dynamic pricing, which adjusts fares based on demand and supply conditions. This helps to balance rider demand, optimize driver earnings, and maximize overall efficiency (Martins, 2024).

2.4.2 AI Adoption in SMEs in Developing Nations

While several studies suggest that artificial intelligence improves marketing performance, these findings are mostly based on developed markets and may not apply to SMEs in developing countries such as Zimbabwe. Studies indicate that AI can automate 40-50% of routine administrative tasks, freeing up human capital for more strategic work (Brynjolfsson & McAfee, 2017). In countries like India, China, Brazil, Mexico, and South Africa, there has been a noticeable increase in AI adoption among small businesses in recent years. These countries have seen a rise in the use of AI applications such as chatbots for customer service, predictive analytics for business insights, and automation of repetitive tasks. SMEs in developing countries encounter several challenges that stifle their growth, including poor infrastructure, a shortage of skilled workers, and restricted access to capital and technology (Nwagbala et al., 2025). A report by the International Telecommunication Union (ITU, 2021) states that only about 28% of individuals in Africa have access to the internet, severely limiting the ability of businesses to leverage AI tools that require stable connectivity. Furthermore, cultural resistance within organisations can impede the adoption of new technologies, as employees may fear job displacement or feel overwhelmed by the complexity of new systems (Davenport & Ronanki, 2018). Despite facing challenges such as high initial costs and skills shortages, small businesses in these developing countries are gradually integrating AI into their operations to stay competitive in the global market (Bengio et al., 2017).

2.4.3 The Digital Landscape for SMEs in Zimbabwe

Digital transformation pertains to the restructuring/integration of an organisation to align its operations with technological breakthroughs in the digital domain (Widnyani et al., 2021). Since gaining independence in 1980, Zimbabwe has prioritized the development and growth of SMEs, which represent about 90% of all businesses. Its MSME Policy and Strategy Framework 2020–2024 and the National Development Strategy 2021–2025 recognizes the importance of SMEs in driving the country's progress and inclusive economic growth. According to the International Trade Centre (2023), Digitalization is a driver of productivity growth for small businesses in Zimbabwe. Social media, accessed via mobile phones, is popular among Zimbabwean SMEs, with 70% using it for advertising. Survey findings show that SMEs benefit from online advertising in terms of access to new customers and increased sales compared to those that do not advertise online. However, limited internet access, mainly due to high costs and inadequate infrastructure hinder the use of more sophisticated technologies for business promotion. According to the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ), rural 2G and 3G coverage is around 70% compared to only 2.85% 4G coverage; yet 61.8% of the population resides in rural areas. This contrasts starkly with urban areas, where 4G coverage is 92.87%.64 The poor 4G coverage in rural areas reflects the low return on investment in this service, further limiting economic opportunities and national competitiveness. According to the SME Competitiveness Survey (2022 and 2023), about 85% of the businesses surveyed had no online presence through a dedicated website. Limited broadband services and high costs were major factors contributing to the low number of websites maintained by Zimbabwean SMEs.

2.5 Summary

This chapter has established global perspective on the impact of AI on SME's as well as a localised perspective in terms of the impact of AI on SMEs in developing countries as well as the dynamic context of Zimbabwe. The combined TOE and TAM theoretical framework have been presented as a comprehensive model to guide this research. It provides the structure that identify what factors influence AI adoption as well as explain how this adoption can translate into tangible benefits to the SMEs. The next chapter will illustrate the research methodology that will be used to apply this framework.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that will be used to investigate the impact of AI on Zimbabwean SMEs. It will outline in detail the research design, the population and sampling strategy, data collection instruments and procedures, data analysis techniques and ethical considerations. The methodology is designed to adequately answer the research questions and meet the research objectives.

3.2 The Research Design

The study will employ a mixed methods research design approach i.e. a qualitative and quantitative research design approach. The mixed methods which allow for a comprehensive analysis approach will involve a Quantitative Component where a survey will be conducted to collect numerical data from a broad sample of SMEs. This phase will establish the levels of AI adoption, the key factors influencing it (using the TOE framework), and the statistical relationships between AI use and marketing performance metrics. Following the quantitative phase, a qualitative component comprising of in-depth interviews will be conducted with a subset of the survey respondents. This phase will explain the "why" and "how" behind the quantitative results. It will provide insights into the challenges, decision-making processes, and the ways AI impacts marketing performance. This approach is grounded in pragmatism, which prioritizes the research question and values practical, workable solutions derived from multiple sources of data.

3.3 Population and Sampling

The target population comprises formally registered SMEs operating in Zimbabwe. For practical purposes, the study will be geographically delimited to retail SMEs in Harare, a major hub for retail activity. According to the City of Harare Small and Medium Enterprises Policy (2023, p. 7), there were approximately 15,298 formally registered and licence paying SMEs operating in Harare as of 2020. This figure serves as a target population for this study as it focuses on formally registered SMEs. A multi-stage sampling technique will be used as indicated below:

a. **Purposive Sampling for Identification**: A list of potential SME participants will be compiled from databases from the Ministry of Industry and Commerce registry, City of Harare, Ministry of Women Affairs, Community, Small to Medium Enterprises development and online directories (e.g., Zim Trade) to target formally registered entities.
b. **Stratified Random Sampling for Quantitative Phase**: The identified pool will be stratified by retail sub-sector (clothing and accessories, food and groceries and electronic gadgets) to ensure representation. To determine the appropriate sample size for the quantitative survey, the standard sample size formula for proportions (Adam, 2020) will be applied as follows:

Step A: Calculating sample size for an infinite population (*N*o)

$$No = \frac{z^2 \, x \, p(1-p)}{e^2}$$

Step B: Adjusting for a finite population (*n*)

$$n = \frac{No}{1 + \frac{No - 1}{N}}$$

Z – The z-score (1.96 for a 95% confidence level)

p – The estimated proportion of the population (0.5)

e – margin of error (0.05)

N – Total population size

Step A : $No = \frac{z^2 \, x \, p(1-p)}{e^2} = \; No = \frac{1.96^2 \, x \, 0.5(1-0.5)}{0.05^2} = 384$

Step B : $n = \frac{No}{1+\frac{No-1}{N}} = = \frac{384}{1+\frac{384-1}{15298}} = 375$

Therefore, the statistically recommended sample size for this study assuming a 95% confidence level and 5% margin of error is 375 formally registered SMEs.

c. **Purposive Sampling for Interviews**: From the survey respondents, a sub-sample of 5 – 10 SMEs (a mix of AI adopters and non-adopters) will be selected for in-depth interviews.

3.4 Data Collection Instruments

Two data collection instruments will be used for the study:

a. **Questionnaire:** A structured questionnaire with closed-ended questions and Likert scales will be administered electronically to SME

owners/managers to measure awareness, adoption rates, perceived value, and the perceived impact on marketing performance.

b. **Interview Guide:** An interview guide will be used for the qualitative section of data collection. It will contain open-ended questions exploring the decision-making process for AI adoption, the integration into business processes, specific examples of its impact on marketing performance, and a detailed discussion of challenges faced by the SMEs.

3.5 Data Collection Procedure

a. **Permissions:** Clearance will be obtained from Africa University Graduate Studies Committee.

b. **Quantitative Data:** The questionnaire will be administered electronically via email and Google Forms to the owners/managers of the selected 375 SMEs formally registered in Harare.

c. **Qualitative Data:** After analysis of the data from the questionnaire, 15-20 SME owners/managers will be contacted to schedule in-depth interviews. Interviews will be conducted face-to-face via telephone or virtually via platforms such as ZOOM and Google Meet. Interviews will be audio recorded with consent from participants.

3.6 Data Analysis and Organization

The data from the questionnaires will be coded and analysed using the Statistical Package for Social Sciences (SPSS). The data will be summarized using descriptive statistics such as frequencies, means and standard deviations. Inferential statistics such

as correlation analysis will be used to test relationships between variables. Interview recordings will be transcribed. Thematic analysis will be employed, which involves familiarizing oneself with the data, searching for themes, reviewing themes, and defining and naming themes. The themes will be guided by the theoretical frameworks. The raw data supporting the findings of this study are available from the corresponding author upon reasonable request. The results from both datasets will be used during the interpretation phase to provide a comprehensive answer to the research questions.

3.7 Ethical Considerations

The study will follow ethical guidelines, including informed consent and confidentiality, which will be followed throughout the research process. Participants will be informed about the purpose, nature, and voluntary nature of their participation, and their identities will be anonymized in the reporting of findings.

3.8 Summary

This chapter highlights the methodology for conducting the research. The mixed methods and case study approach as well as the sampling, data collection and data analysis procedures that have been chosen to ensure reliable findings that address the research objectives and contribute to the body of knowledge.

CHAPTER 4: DATA ANALYSIS PRESENTATION, AND INTERPRETATION

4.1 Introduction

In this Chapter the researcher will present, analyse and interpret the results of the research carried out. The researcher sought to engage 375 formally registered SME's operating in Harare within the food, clothes and electronic gadgets retail sub-sectors for the questionnaire survey and conduct interviews with at least 5-10 SMEs for the qualitative section of data collection. An official request was submitted by the researcher to the Ministry for Women Affairs, Community, Small and Medium Enterprise Development for access to an SME Database containing formally registered SME's operating in Harare for the electronic administration of the questionnaire survey via email and Google Forms for the quantitative section of data collection.

4.2 Challenges faced and observations made during Data Collection

The data collection phase of the research, which relied on a self-administered questionnaire survey targeting SMEs, encountered significant obstacles that ultimately resulted in a response rate lower than initially anticipated. While statistical calculations recommended a sample of approximately 375 SMEs, the study achieved a response rate of 38 SMEs because of practical constraints faced during data collection. The sample size achieved while smaller, than statistically desired, is consistent with exploratory studies in challenging research environments and provides rich qualitative and quantitative data sufficient to address the research objectives. The mixed-methods design which combines quantitative survey data with qualitative feedback from interviews partially mitigates the limitations of the smaller sample size by providing empirical evidence and in-depth insights directly from the SMEs. The findings provide

valid and rich insights from 38 SMEs and establish foundational evidence and real patterns that can guide future research with larger more representative samples. The challenges faced during data collection that resulted in a smaller sample size are explained in detail below:

a. **Absence of centralised information Databases from responsible Ministry and Legal Instruments restricting organisations from sharing information**

After formally requesting for access to an SME Database from the Ministry, approval was granted to the researcher by the Secretary of the Ministry for Women Affairs, Community, Small and Medium Enterprise Development to conduct the research however the Ministry itself did not have a centralised database containing information of formally registered SMEs. The researcher was then directed to other organisations that work with and under the Ministry with the Ministry approval letter for assistance with the requested information. The researcher was directed to the Small to Medium Enterprises Association of Zimbabwe (SMEAZ), Small & Medium Enterprises Development Corporation (SMEDCO), Confederation of Zimbabwe Industries (CZI) and Ministry of Industry & Commerce. SMEDCO indicated that as a registered Development Finance Institution, they were bound by strict confidentiality and non-disclosure obligations in terms of the Banking Act [Chapter 24:20], as well as the Data Protection Act [Chapter 11:22]. These statutes require that all client and beneficiary information including names, contact details, and business identifiers be processed lawfully, for specified purposes, and not disclosed to third parties without the explicit, informed consent of the data subjects or a

statutory directive and referred the researcher back to the Ministry. The Ministry of Industry and Commerce and CZI also referred the researcher back to Ministry again as they also did not possess any SME information Databases. SMEAZ could also not provide a database of registered SME information to the researcher due to data sharing restriction agreements they have with the SMEs despite being in possession of the AUREC Research approval letter from Africa University and an approval letter to conduct the research from the Ministry of SMEs. Although the city of Harare SME Policy (2023) mandates the establishment of a centralized database of SME activities, the researcher discovered that such a database was not accessible during data collection. Upon realising that there were no centralised information databases available from the Ministry and other related organisations, the researcher sought SME information from online webpages, online directories (however these were outdated and mostly inaccurate) and physically distributing the questionnaire survey to SME's operating within the CBD of Harare.

b. Prevalent scepticism and reluctance to participate

A common challenge encountered during physical data collection was the deep-seated scepticism displayed by potential respondents when approached with the survey despite formal introductions as a research student accompanied by presentation of the AUREC research approval letter and the letter of research approval from the Ministry of Women Affairs, Community, SME Development clearly outlining the academic purpose of the research. A significant portion of the approached SME's remained reluctant and displayed

a general distrust of strangers requesting information regardless of the research work evidence produced.

c. Suspicions regarding the Researcher's true Motives

Many potential respondents displayed suspicions and voiced concerns over the researcher's identity and intent. Respondents indicated that the researcher might be an agent of a regulatory body such as the Harare City Council or a Zimbabwe Revenue Authority (ZIMRA) agent conducting an inspection under the guise of an academic study gathering data on their business operations for taxation or compliance purposes. Another concern was the fear of industrial espionage, with some business owners and managers suspecting the researcher might be a competitor attempting to gather sensitive information from them. These suspicions created a barrier to the data collection process as the survey was perceived as a potential threat to the business operations, privacy and security rather than an actual academic research study.

d. Organisational hierarchy and lack of employee empowerment

The internal organisational structure of many SME's presented another challenge to data collection. In numerous cases, the first point of contact was a lower-level employee usually a sales, marketing or administrative staff. These individuals often stated that they were not authorised to make decisions regarding participating in external non-sales related enquiries let alone complete a questionnaire on behalf of the company. The decision-making

authority in SME's is usually concentrated at the owner level and consequently the low-level employees were unwilling to participate. Access to the SME owners often proved difficult to secure often requiring multiple follow-up visits or calls that were ultimately sometimes unsuccessful.

e. Literacy and comprehension barriers

The self-administered nature of the questionnaire assumed a certain level of literacy and familiarity with survey formats however during data collection it became clear that most of the employees who were the primary points of contact struggled with comprehending the survey questionnaire as they found the questions or response scales difficult to understand. This is because most SME's usually hire non-skilled employees with low levels of education with the intention of providing on the job training.

4.3 Data Presentation and Analysis

A total of 38 SME's responded to the questionnaire and 6 SMEs were interviewed for the in-depth qualitative analysis section of the research. Data collected from the participants is presented in tables and graphs below for the various questionnaire questions.

4.3.1 Questionnaire Survey Findings

Section A: Demographics and Business Profile

Section A of the survey gathered data on the demographic and business profile of the participating SMEs. It covered four key areas: the primary role of the respondent within the business (e.g., owner, manager), the retail sub-sector in which the SME operates (e.g., clothing, food, electronics), the size of the business as measured by employee count, and the number of years of business operations of the SME. This section provides a foundation for understanding the characteristics of the sample.

Question A1: What is your primary role in the business?

Table 1: Roles of Participants

	Owner	Manager	Marketing Staff	Lecturer	Business Development	Total
Roles	20	10	6	1	1	38
Frequency %	52.63	26.32	15.79	2.63	2.63	100

Figure 2 is a pie chart which shows the distribution of the respondent roles for data in the table above

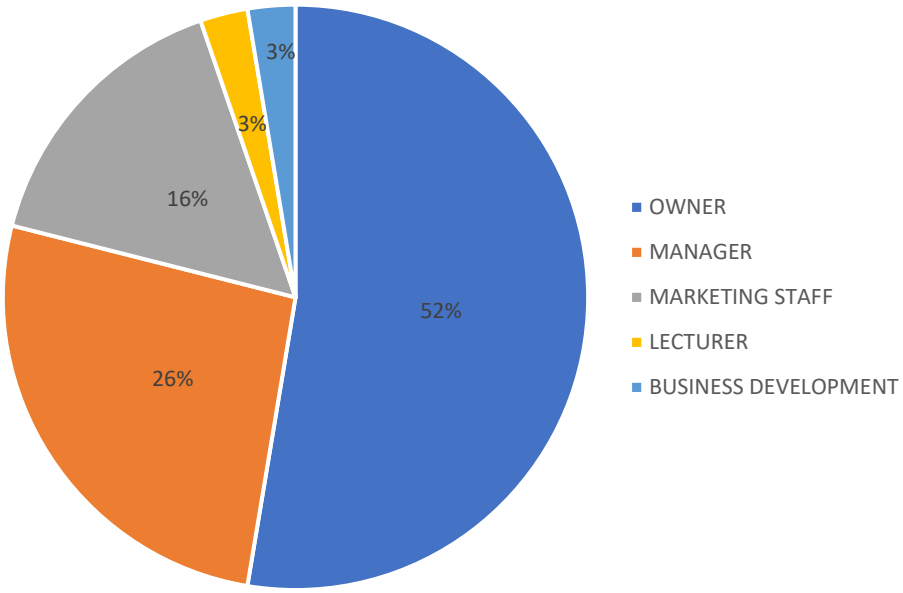

Figure 2: Distribution of respondents by roles in SME's

Analysis: Respondent roles in Businesses

The data presented in Table 1 and Figure 2 shows the distribution of respondent roles and positions within their respective SME's. The results show most respondents were business owners accounting for 20 out of 38 participants representing 52% of the total sample. This was followed by 10 managers which constituted 26% and 6 marketing staff which made up 16% of the sample. Two respondents fell into the "other" category; one identified as a lecturer and the other as a business development officer each making 3% of the total sample.

The combination of owners and managers representing a total of 78% of the sample size is significant because it shows that the data collected reflects the perspectives of high authority individuals with decision making powers in their SMEs. This is

important as SME owners and managers are usually the decision makers regarding technology investment and implementation in their organisations. The low representation of marketing staff may be attributed to the organizational hierarchy challenges discussed under the challenges faced and observations made section of this chapter. The inclusion of the lecturer and business development officer indicate that although the initial target population was retail SME's, the sample included individuals from other SME sectors who nonetheless met the criteria of an SME formally registered and operating in Harare.

Question A2: In which retail sub-sector does your business primarily operate?

Table 2: SME Sub-sectors responses

	Clothing & Accessories	Food & Groceries	Electronic Gadgets	Education	Hospitality	Finance & Investment	Transport & Logistics	Farming	
Retail Sub-Sector	7	11	5	2	1	2	2	2	
Frequency %	18	29	13	5	3	5	5	5	
	Hardware	**Automotive**	**Health**	**Engineering**	**Media**	**Farming**	**Hardware**		**TOTAL**
Retail Sub-Sector	1	1	1	2	1	2	1		38
Frequency %	3	3	3	5	3	5	3		100

Below is a pie chart which shows the SME sub-sector responses

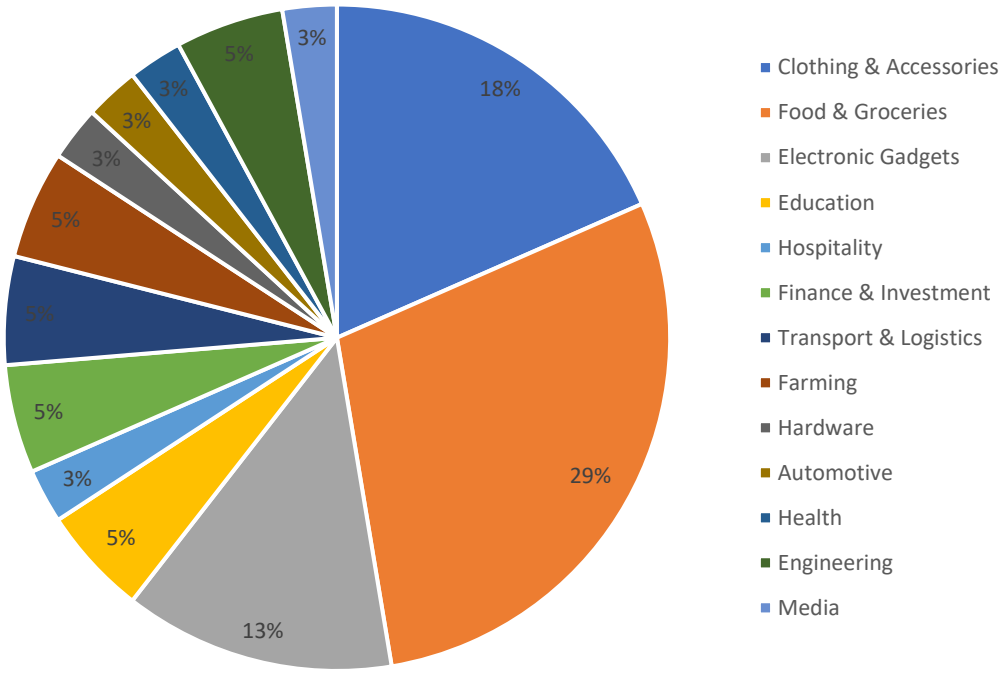

Figure 3: Distribution of SME sub-sector respondents

Analysis: Distribution of SME sub-sector

The data in Table 2 and Figure 3 illustrates the distribution of participating SMEs across various sub-sectors. The food and groceries sector had the highest with 11 participants representing 29% of the sample. This was followed by the clothing and accessories (7 respondents representing 18%) and electronic gadgets sector (5 participants representing 13%). The remaining participants were from a diverse range of sub-sectors including education (2 respondents, 5%), hospitality (1 participant, 3%), finance and investment (2 respondents, 5%), transport and logistics (2 respondents, 5%), farming (2 respondents, 5%), hardware (1 respondent, 3%), automotive (1 respondent, 3%), health (1 respondent, 3%), engineering (2 participants, 5%), and media (1 respondent, 3%).

The concentration of respondents in the food and groceries, clothing, and electronics sub-sectors which gives a total of 60% of the sample aligns with the study's original delimitation which initially targeted these 3 retail sub-sectors. However, during data collection, the researcher discovered that there were other responses coming from other sub-sectors meeting the other initial research conditions of being a formally registered SME operating in Harare. The inclusion of these SMEs adds to the diversity of the sample and enriches the study providing broader insights to AI adoption in other sector SMEs. This shows that AI adoption is a phenomenon which extends across multiple sectors of SMEs.

Question A3: How many employees does your business have?

Table 3: Number of employees in participating SMEs

	1_10	11_30	31_50	51_100	Total
Numbers	25	4	2	7	38
Frequency %	66	11	5	18	100

Below is a pie chart which shows the number of employees in the SME’s surveyed

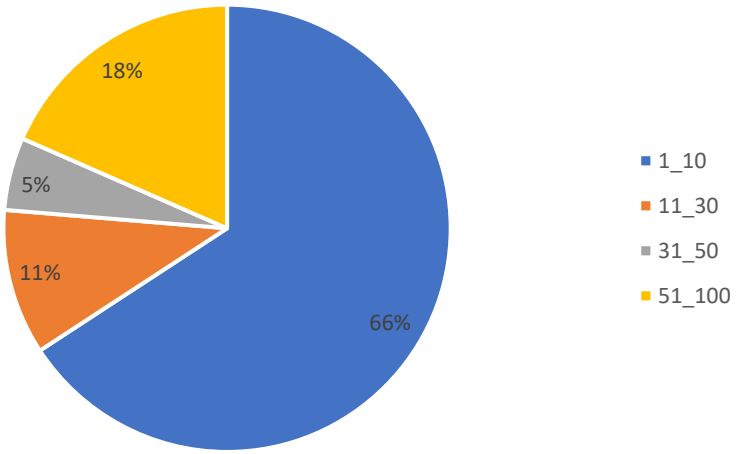

Figure 4: Distribution of number of employees participating SMEs

Analysis: Number of participating SME employees

The data presented in Table 3 and figure 4 represents the size of the participating SMEs based on the number of SME employees. This is critical to ensure that data is collected from an actual SME by one of the definitions of an SME that defines it as a firm that has not more than hundred employees. Most participants, 25 respondents representing 66% have between 1 – 10 employees followed by 7 respondents representing 18% with 51 – 100 employees. Four respondents representing 11% indicated they have 11 – 30 employees and 2 respondents representing 5% indicated that they have between 31 to 50 employees.

The large portion of the sample represented by the micro-SMEs is significant because it represents the smallest category of SMEs which usually operate with limited resources, limited capital and usually informal structures. These micro-SMEs represent many SMEs operating in Zimbabwe, and they face unique challenges and provide

unique insights to the study. The presence of 7 larger SMEs in terms of head count is also significant because it provides insights to the study from the perspective of well-established SMEs as these SMEs face their own unique challenges different to the micro-SMEs.

Question A4: How long has your business been operational?

Table 4: Years of Business Operations of participating SMEs

	Less than 2 years	2 - 5 years	6 - 10 years	Over 10 years	Totals
Numbers	7	14	7	10	38
Frequency %	18%	37%	18%	26%	100%

Figure 5 is a pie chart which shows the distribution of the number of years in operation

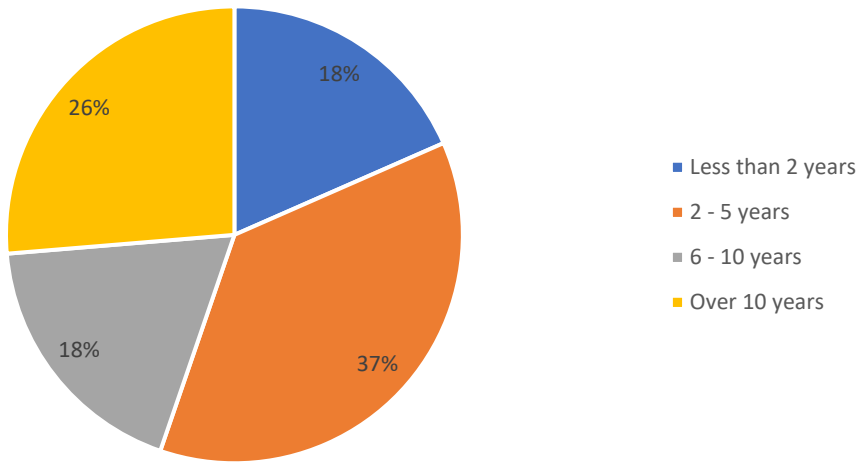

Figure 5: Distribution of years of Business Operations of participating SMEs

Analysis: Years of SME business operations

The data in Table 4 and Figure 5 illustrates the distribution of participating SMEs according to how long they have been operating. The largest group comprises of 14 respondents representing 37% that indicate that they have been in business for 2 to 5 years representing relatively new but established businesses followed by 10 participants representing 26% who have been operational for over 10 years representing well-established and experienced businesses. The “less than 2 years” and the “6 to 10 years” categories had 7 respondents each representing 18% each of the sample.

The results show that the sample includes businesses at various stages of operations. The portion of businesses operating over 5 years gives a combined total of 44% of the sample indicating that many respondents have sufficient business experience to provide informed perspectives on technology adoption in relation to marketing performance. Established businesses usually have established systems / processes / capital to ensure that they adopt new technologies that they see relevant in improving their operations however size of the organisation in terms of head count and hierarchical structures may also present challenges to technology adoption. The presence of newer business is also critical as it provides a perspective from businesses that face unique challenges to technology adoption that maybe capital related or process related but with more agility and openness to new technologies.

Section B: AI Awareness and Adoption

Section B focused on addressing the first research objective which focuses on the level of AI awareness and extent of AI adoption among SMEs. To ensure clarity, the section started by defining specific AI technologies under investigation in the research (AI-powered chatbots for customer service, content creation AI tools and marketing automation AI tools). Respondents were then asked to indicate their level of awareness of these specific technologies and finally a filter question established whether their business was currently using any of these AI technologies directing respondents to different sections of the questionnaire based on their adoption status (AI users to section C and non-AI users to section D).

Question B1: Before today, how aware were you of the AI technologies mentioned above for business use?

Table 5: AI Technologies awareness responses

	Not at all aware	Slightly aware	Moderately aware	Very aware	Extremely aware	Totals
Numbers	0	3	12	13	10	38
Frequency %	0	8	32	34	26	100

Figure 6 is a pie chart which shows the distribution of AI technology awareness in respondents.

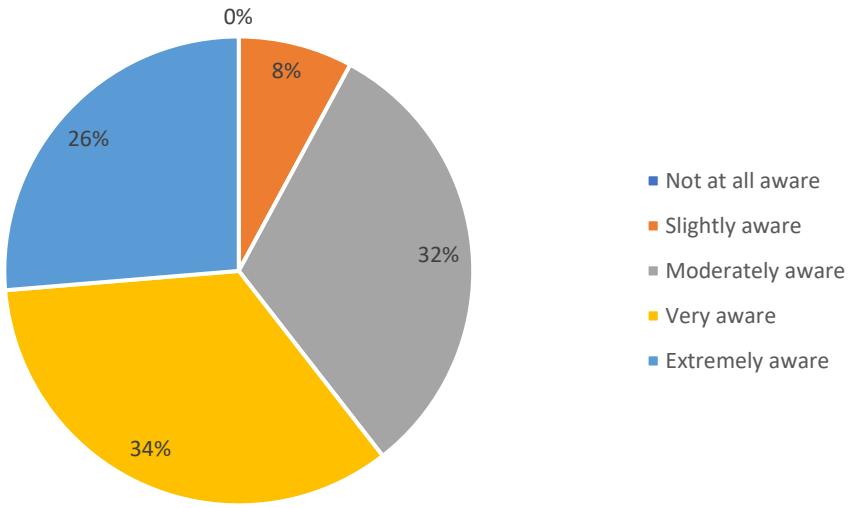

Figure 6 : Distribution of AI Technology awareness among respondents

Analysis: AI Technology awareness among respondents

The data presented in Table 5 and Figure 6 represents awareness levels to AI tools. Most of the respondents reported moderate to high levels of awareness; 13 respondents representing 34% of the sample indicated that they were “very aware”, 12 participants representing 32% reported being “moderately aware” and 10 participants representing 26% stated that they were “extremely aware.” Only 3 respondents representing 8% indicated they were slightly aware and no respondents (0%) indicated being “not at all aware” of AI technologies.

The results are significant because 92% of the participants (combining moderately aware, very aware, and extremely aware) demonstrated at least a moderate level of AI Technology awareness meaning that knowledge of the existence of AI technologies is

present among SMEs to a large extent. This may be attributed to the fact that the phenomenon of AI is widespread and prevalent amongst SMEs operating in Harare. The complete absence of respondents which indicated that they are not at all aware of AI is also significant because it shows that even among SMEs that have not adopted AI, there is still a level of awareness that exists of the existence of AI technologies. This finding addresses the first research objective by establishing that lack of awareness is not the primary barrier to adoption of AI technologies among surveyed SMEs.

Question B2: Is your Business currently using these AI technologies?

Table 6: Current use of AI Technologies amongst participating SMEs

	YES	NO	Totals
Numbers	23	15	38
Frequency %	61	39	100

Figure 7 is a pie chart showing distribution of AI technology use amongst respondents

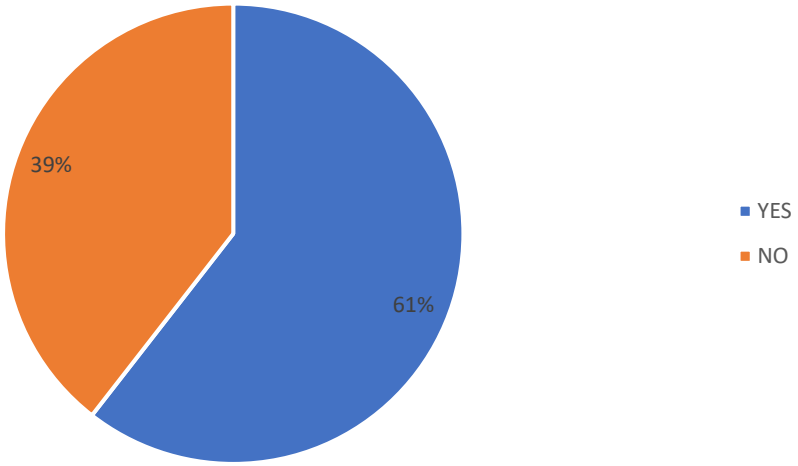

Figure 7: Distribution of AI Technology use amongst participating SMEs

Analysis: AI Technology use in participating SMEs

The data in Table 6 and Figure 7 represents the adoption rate of AI technologies among the participating SMEs. Out of the 38 respondents, 23 representing 61% of the sample indicated that their businesses are currently using AI technologies while 15 respondents representing 39% indicated that they were not using AI technologies.

The 61% respondents representing more than half of the sample indication of AI adoption is significant and indicates a relatively high adoption rate exceeding expectations given the challenges facing Zimbabwean SMEs discussed in Chapter 2: Literature Review. The 39% of non-adopters represents a significant minority of the sample. Investigating the reasons for non-adoption is critical as it has already been established in the study that all participants are aware of the existence of AI Technologies. Understanding the reasons why these SMEs have not adopted AI is also crucial in addressing the second research objective which is to identify the challenges to AI adoption for Zimbabwean SMEs. The subsequent sections of the questionnaire (section C for adopters and section D for non-adopters) are designed to investigate the factors that differentiate the 2 groups. The sections investigated the challenges faced by adopters and the barriers perceived by non-adopters while being guided by the TAM and TOE frameworks.

Section C: Adopters of AI Technologies - Perceived Value & Usefulness of AI Technologies

Section C was designed for SME's who are currently using AI technologies. This section aimed to gather data from actual adopters of AI to address the second and third research objectives, which focused on the factors influencing adoption and the impact on marketing performance. The section was structured around the Technology Acceptance Model (TAM) framework and the Technology-Organization-Environment (TOE) framework.

C1: Perceived Value and Usefulness of AI Technologies

Using a five-point Likert scale (from strongly disagree to strongly agree) this section measures the extent to which AI adopters perceived AI technologies as beneficial to their marketing activities. SMEs were asked to respond to statements addressing AI's impact on job performance, marketing productivity, time it takes to complete tasks, efficiency and ease of conducting marketing activities using AI. This data provides insight into the perceived practical benefits of AI adoption among the surveyed SMEs. The respondents feedback is captured in the table below:

Table 7: AI Adopters perceived value and usefulness of AI technologies

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
C1_1: Using AI improves our marketing team's job performance	2	0	2	8	11
C1_2: Using AI enables us to accomplish marketing tasks more quickly	2	0	2	7	12
C1_3: Using AI increases our marketing productivity	2	0	3	6	12
C1_4: Using AI enhances our effectiveness in reaching our marketing goals	2	0	2	5	14
C1_5: Using AI makes it easier to do our marketing job	2	0	3	6	12
C1_6: Overall, we find AI useful for our marketing activities	2	0	2	4	15

Figure 8 is a bar graph showing distribution of participant responses

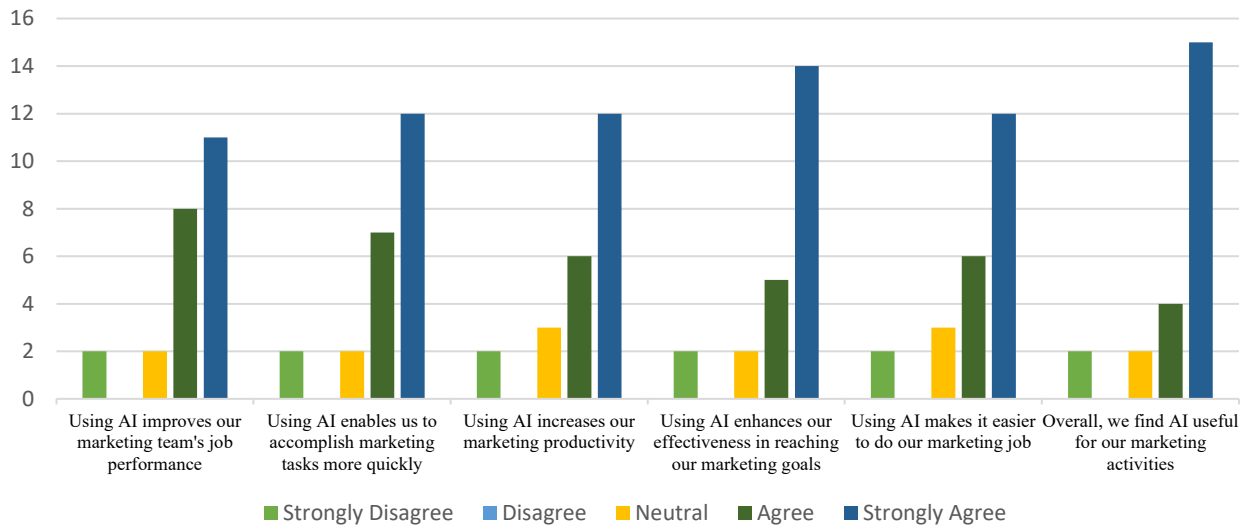

Figure 8 : Distribution of AI perceived value and usefulness among AI Adopters

Analysis: Perceived Value and Usefulness of AI Technologies among AI adopters

The data in Table 7 and Figure 8 captures the perceptions of AI adopters regarding the value and usefulness of AI tools in marketing activities. When asked "Using AI improves our marketing team's job performance", 8 respondents representing 35% agreed and 11 SMEs representing 48% strongly agreed giving a total of 19 participants representing 83% who at least agreed that using AI improves their marketing team's performance.

On using AI to enable completion of marketing tasks more quickly, 7 respondents representing 30% agreed and 12 participants representing 52% strongly agreed. This gives a total of 19 participants or 82% of the sample acknowledging that using AI saves time. On the use of AI to increase marketing productivity, 6 participants representing 26% agreed and 12 participants representing 52% strongly agree giving a total of 18 participants or 78% of the sample highlighting that AI increases marketing

productivity. When asked if AI enhances effectiveness in reaching marketing goals, 5 respondents or 22% agreed and 14 participants or 61% strongly agreed giving a total of 19 respondents representing 83% of the participants agreeing that AI enhances effectiveness in reaching marketing goals. When asked if AI makes it easier for participants to do their marketing jobs, 78% of the sample from 18 respondents at least agreed to that. When asked if overall they find AI useful for marketing activities, 15 participants representing 65% strongly agreed and 4 respondents or 17% agreed totalling 19 participants representing 83% of the sample who support the overall usefulness of AI.

Conclusion: Perceived Value and Usefulness of AI Technologies among AI adopters

The analysis of responses from AI adopters provides evidence that there is a significant perceived value and usefulness of AI technologies. Across all the questions posed to participants, the combined agreement (agree and strongly agree) ranged from 78% to 83% showing a high consensus regarding AI's positive contributions to marketing activities. This finding aligns with the TAM model which stipulates that perceived usefulness is a key factor in technology adoption and use. The results show that for the 23 AI adopting SMEs, there are realised and visible results of improved performance, efficiency and effectiveness.

C2: Perceived Ease of Use of AI Technologies

Using a five-point Likert scale (from strongly disagree to strongly agree) this section measures the perceived ease of use of AI technologies. It covers aspects such as the staff learning process of using AI, clarity and understanding of AI tools and flexibility in interaction with AI tools. The respondents feedback is shown in the table 8:

Table 8: AI Adopters Perceived Ease of Use of AI Technologies

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
C2-1: Learning to operate our AI tools was easy for our staff		10	9	2	2
C2-2: Our interaction with the AI tools is clear and understandable	1	4	9	7	2
C2-3: We find it easy to get the AI tools to do what we want them to do	1	9	4	8	1
C2-4: We find the AI tools to be flexible to interact with	2	1	10	7	3
C2-5: It was easy for our staff to become skilful at using the AI tools	1	12	6	2	2
C2-6: Overall, we find the AI tools easy to use	2	4	10	4	3

Figure 9 is a bar graph showing the distribution of Perceived ease of use of AI

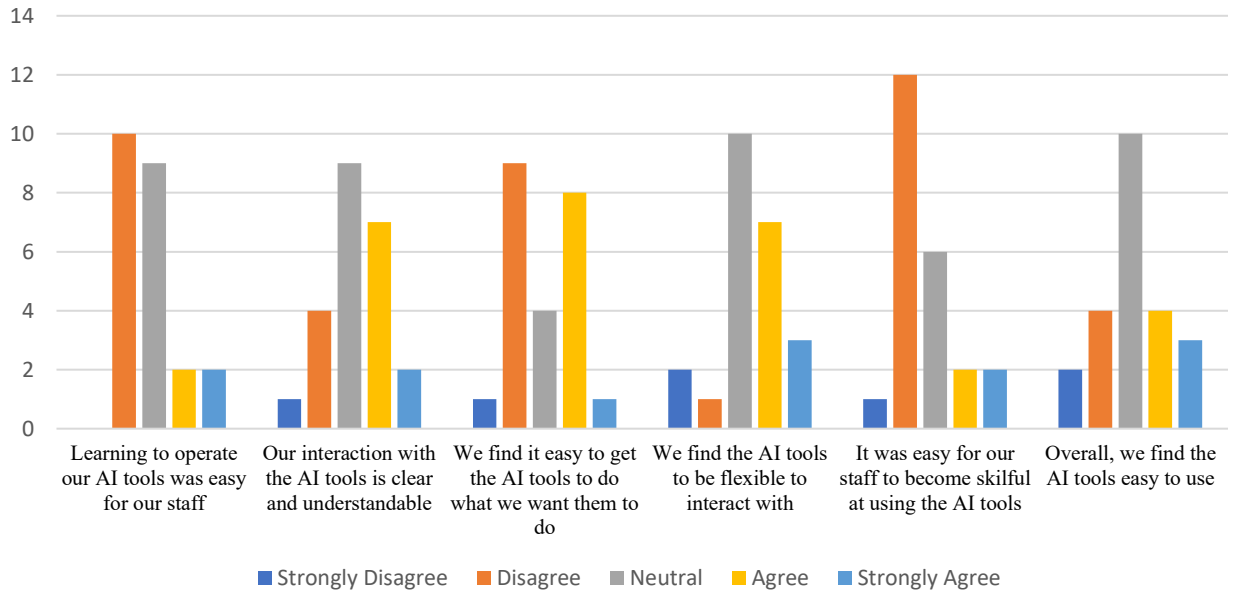

Figure 9 : Distribution of AI perceived ease of use by AI Adopters

Analysis: Perceived Ease of Use of AI among adopters

The data in Table 8 and Figure 9 represent the perceived ease of use of AI tools among adopters. When asked if learning to operate AI tools was easy for staff, majority of the responses were negative. Ten participants or 43% disagreed and 2 participants or 9% strongly disagreed meaning 12 participants or 52% of the sample found the AI learning process to be difficult. Only 2 respondents or 9% agreed and 2 participants or 9% strongly agreed that learning was easy, while 9 or 39% of the sample were neutral. This suggests that for the majority of adopting SMEs, the initial learning curve for AI tools use presents a significant challenge. On clarity and understanding the interaction with AI tools, 9 participants or 39% at least agreed or strongly agreed that their interaction with AI tools was clear and understandable and 5 participants or 21% of the sample at least disagreed or strongly disagreed while 9 participants or 39% were neutral. This shows a balanced response regarding clarity of interaction indicating that while some users find it easy to use AI, some users struggle with clarity and understanding when interacting with AI tools. For the statement "We find it easy to get the AI tools to do what we want them to do," 9 respondents or 39% at least agreed or strongly agreed. However, 10 respondents or 43% at least disagreed or strongly disagreed, with 4 participants or 17% neutral. This almost even split between those who find AI tools easy to use and those who do not reveals a significant usability challenge with AI.

The statement "We find the AI tools to be flexible to interact with" received slightly more positive responses, with 10 respondents 43% at least agreeing or strongly agreeing and two respondents or 9% strongly disagreed and 1 participant or 4% disagreed, while 10 SMEs or 43% were neutral. The statement "It was easy for our staff to become skilful at using the AI tools," received many negative responses. 13

respondents or 56% at least disagreed or strongly disagreed. Only 2 respondents or 9% agreed and 2 participants or 9% strongly agreed, while 6 participants or 26% were neutral. This reinforces the finding that proficiency with AI tools is a significant challenge for many SMEs. Finally, for "Overall, we find the AI tools easy to use," 7 respondents or 30% at least agreed or strongly agreed. However, 6 respondents 0r 26% disagreed or strongly disagreed, while 10 (43%) were neutral. The high proportion of neutral responses suggests mixed experiences with AI use.

Conclusion: Perceived Ease of Use of AI among adopters

The data revealed above provides a critical insight. While AI adopters find AI technologies to be highly useful as revealed in the previous analysis, they do not generally find them easy to use. The difference between perceived usefulness and perceived ease of use is significant within the TAM framework. According to the TAM framework model, perceived usefulness and perceived ease of use both influence the use of technology and its acceptance, but the data suggests that although SMEs continue using AI, there are usability challenges that they are facing. The high levels of disagreement concerning ease of learning and becoming skilful indicate that SMEs face significant end-user challenges in AI adoption. This finding is significant to AI vendors and policy makers because it reveals the need for training and technical support to help SMEs overcome the AI ease of use barrier.

C3: Challenges to adoption of AI Technologies

This subsection gathers data on the challenges faced by SME's in adopting AI. It addresses the second objective of the research and is guided by the TOE framework. The challenge factors are categorised into the technological context, organisational context and environmental context according to the TOE framework. A five-point Likert scale (from not a challenge to very significant challenge) was used with the results shown in the table 9.

Table 9: Challenges to AI adoption faced by AI adopters

Challenge Factor	Not a Challenge	Slight Challenge	Moderate Challenge	Significant Challenge	Very Significant Challenge
C3-1: High cost of AI software purchase and subscriptions	2	4	3	6	7
C3-2: Complexity of AI tools	1	6	8	4	3
C3-3: Difficulty integrating AI with our existing systems	2	3	7	5	5
C3-4: Lack of internal technical skills	2	5	4	9	2
C3-5: Lack of management support	5	2	10	3	1
C3-6: Employee resistance to using new technology	4	5	5	6	2
C3-7: Unreliable internet connectivity	4	4	2	6	6
C3-8: Unstable electricity supply	4	5	1	4	8
C3-9: Lack of local AI vendor support and training	2	4	4	3	9

Figure 10 is a bar graph showing distribution of Challenges to AI adoption amongst respondents

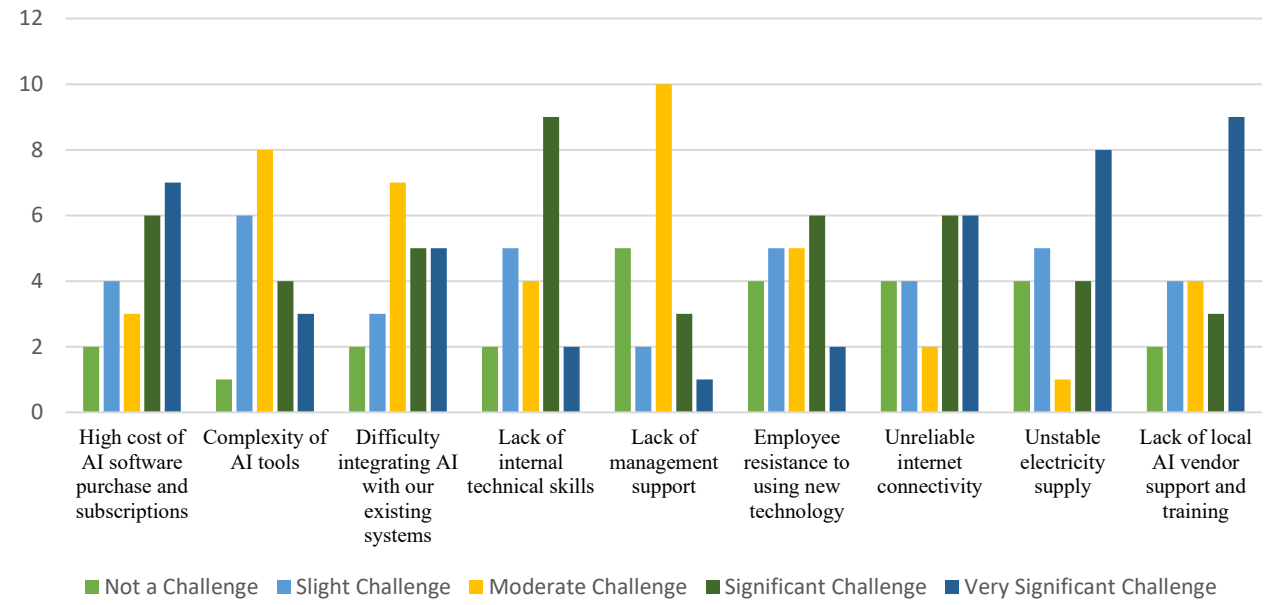

Figure 10 : Distribution of Challenges to AI Technology adoption faced by AI adopters

Analysis: Challenges to AI Technology adoption

The data in Table 9 and Figure 10 presents the challenges faced by AI adopters, categorized according to the Technology-Organization-Environment (TOE) framework.

- **Technological Context:** The high cost of AI software purchase and subscriptions came out as the most significant technological challenge with 13 participants representing 56% of the sample indicating that cost and subscriptions were either a significant challenge or a very significant challenge. Only 2 respondents or 9% indicated it was not a challenge. On complexity of AI tools, 15 respondents or 65% viewed complexity as at least a moderate challenge, significant challenge or very significant challenge while 6 respondents or 26% considered it a slight challenge or not a challenge. On difficulty integrating AI tools with existing systems, this challenge was rated to be at least moderately challenging, significantly challenging or very

significantly challenging by 17 participants representing 74% of the sample while only 2 respondents or 9% indicated it was not a challenge.

- **Organisational Context:** The lack of internal technical skills emerged as a major organisational challenge with 11 participants or 48% rating it as either a significant challenge or a very significant challenge. 17% of the sample viewed it as a moderate challenge while 5% and 2% viewed it as a slight challenge and not a challenge respectively. On Lack of management support 10 respondents or 43% rated it as a moderate challenge and 17 % rated it as either a significant or very significant challenge. Five participants or 22% indicated that it was not a challenge suggesting that management support on AI use is present among adopters. On employee resistance to using new technology, 57% or 13 respondents rated it at least moderately challenging to significantly challenging and very significantly challenging. Four respondents or 17% indicated it was not a challenge. The results show that more than half of the employees in the sample face at least a moderate resistance to using new technology.

- **Environmental Context:** Unreliable internet connectivity as an infrastructure challenge had 12 respondents or 52% rating it as a significant or very significant challenge while 17% of the sample rated it as moderate and 17% considered it not a challenge. The most severe environmental challenge recorded from the participants was unstable electricity supply with 12 respondents or 52% rating it as either a significant or very significant challenge. Of that category, 35% rated unstable electricity supply as a very significant challenge. 22% of the participants rated it as a moderate challenge and 17%

considered it not a challenge. Lack of local AI vendor support and training was rated as a very significant challenge by 9 respondents or 39% and significant by 13%. Four respondents or 17% rated it as moderate while only 9% considered it not a challenge.

Conclusion: Challenges to AI Technology adoption

The data from challenges to AI adoption reveal that AI adopters in Zimbabwe face various challenges that are influenced by both internal and external factors. In the technological context, AI investment and subscription cost and AI integration to existing systems are they key challenges. In the organisational context it has been revealed that there is a lack of technical skills capable of using AI effectively and there is also employee resistance to new technologies. In the environmental context, infrastructure challenges such as unreliable electricity, unstable internet and lack of vendor support present significant challenges to adoption. Unstable electricity and lack of vendor support—were rated as "very significant" by the highest proportions of respondents (35% and 39% respectively), suggesting that external factors beyond the control of the SME present the biggest barriers to effective AI utilization. These findings address the second research objective by providing empirical evidence to the specific challenges to AI adoption in Zimbabwe confronted by SMEs that have already adopted AI.

C4: Impact of AI Technologies on Marketing Performance

This section gathers data on the direct impact of AI Technologies on marketing performance amongst the SME AI adopters. This section addresses the third objective of the research. Six key marketing performance metrics have been considered namely Customer Acquisition Cost, Customer Conversion Rate, Customer Satisfaction levels, Return On Investment (ROI) on marketing campaigns using AI, overall Sales Revenue and Brand Awareness. A five-point Likert scale (from strongly disagree to strongly agree) was used and the results are shown in the table below:

Table 10 : Impact of AI on Marketing Performance

Marketing Performance Metric	Significant Decrease	Slight Decrease	No Change	Slight Increase	Significant Increase
C4-1: Customer Acquisition Cost	4	5	2	10	1
C4-2: Customer Conversion Rate		2	1	11	8
C4-3: Customer Satisfaction Levels			2	13	7
C4-4: Return On Investment (ROI) of Marketing Campaigns			4	14	4
C4-5: Overall Sales Revenue			1	12	9
C4-6: Brand Awareness			3	6	13

Figure 11 is a bar graph showing distribution of the impact of AI on marketing performance metrics

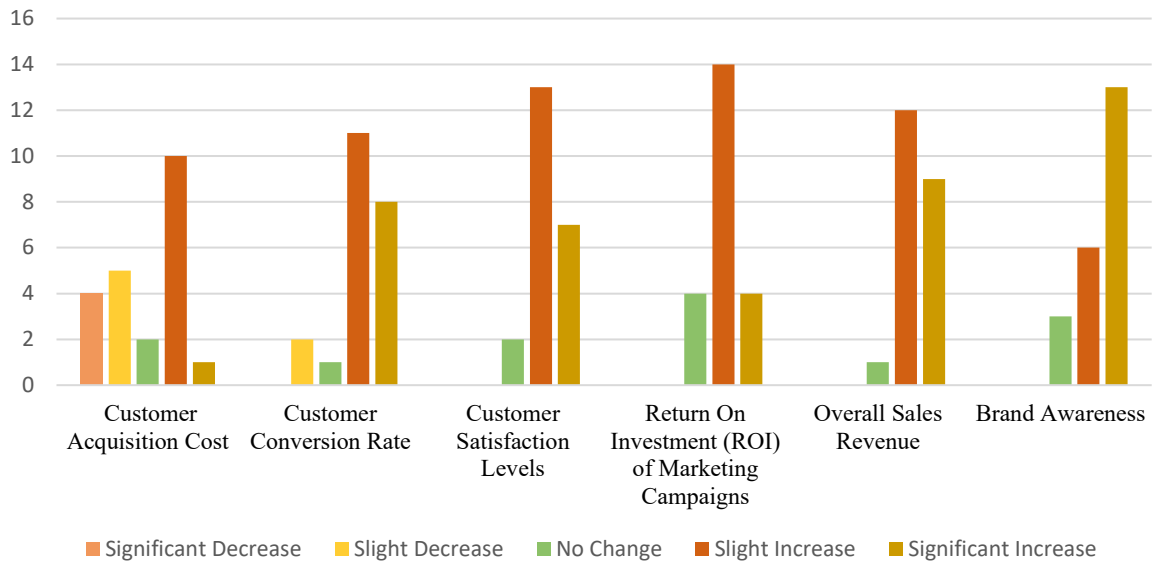

Figure 11 : Distribution of Impact of AI on Marketing Performance

Analysis: Impact of AI on Marketing Performance

The data in Table 10 and Figure 11 presents the perceived impact of AI adoption on 6 key marketing performance metrics.

- **Customer acquisition cost**: Ten respondents (43%) reported a slight increase in customer acquisition cost while 1 participant representing 4% reported a significant increase. A total of 9 respondents or 39% reported either a slight decrease or significant decrease and 2 respondents or 9% reported no change.
- **Customer conversion rate**: This metric showed positive results with 11 or 48% of the respondents reporting a slight increase and 8 or 35% of the respondents reporting a significant increase giving a total of 19 respondents or 83% of the sample reporting they experienced improved conversion rates. Only 2 respondents (9%) reported a slight decrease, and 1 (4%) reported no change.

- **Customer Satisfaction Levels**: The results were similarly positive as above with 20 respondents or 87% reporting at least a slight increase or significant increase in customer satisfaction. No respondents indicated any decrease in customer satisfaction with 2 participants or 9% reporting no change.
- **Return On Investment (ROI) of Marketing Campaigns**: Fourteen respondents or 61% reported a slight increase and 4 respondents or 17% reported a significant increase giving a total of 18 respondents or 78% of the sample reporting an increase in the ROI on marketing campaigns. Four respondents or 17% reported no change, and none reported a decrease.
- **Overall Sales Revenue**: Twelve respondents or 52% reported a slight increase and 9 participants or 39% reported a significant increase in sales revenue after AI adoption, giving a total of 21 respondents or 91% reporting an increase. One respondent representing 4% reported no change, and there was no report of a decrease.
- **Brand Awareness**: This metric received the most positive responses. 13 participants or 57% reported a significant increase and 6 participants or 26% reported a slight increase bringing the total to 19 responses or 83% of the participants reporting an increase in brand awareness after using AI. Three respondents or 13% reported no change and there was no report of a decrease in brand awareness.

Conclusion: Impact of AI on Marketing Performance

The data analysis on impact of AI on marketing performance provides evidence that supports the alternative hypothesis: H1 - AI has impact on Marketing Performance in

formally registered SMEs operating in Harare, Zimbabwe. On analysing 5 of the 6 metrics - customer conversion rate, customer satisfaction, ROI, sales revenue, and brand awareness—most adopters reported increases across all five metrics. There are high proportions of significant increase responses for brand awareness (57%), customer satisfaction (30%) and sales revenue (39%). The only outlier metric is the customer acquisition cost which reported a 43% increase after using AI. This might be because of the initial capital investment required to procure, train staff and start using AI and other associated costs such as subscriptions before benefits are realised. There would be need for further research to prove if initial capital investment in AI and training causes an increase in customer acquisition cost. In summary the results show that AI adoption has a direct impact on marketing performance on SMEs in Zimbabwe.

QUESTION C5

At the end of section C, the AI adopters were asked to briefly describe a specific example of how an AI tool had positively or negatively affected their marketing efforts and 19 responses were received. The responses offer qualitative insights regarding the practical implications of AI adoption in their marketing activities. The responses have been categorised into positive and negative impacts of AI adoption.

Positive impacts of AI tools on respondent marketing efforts

Several respondents highlighted the improved effectiveness of their marketing efforts because of using AI tools. One respondent noted that AI enabled them to reach “more customers than other marketing ways that they previously used,” while another

highlighted that AI tools had “widened reach and brand awareness.” There was also mention of a new ability to target specific customer segments more precisely and one respondent highlighted that they now have “enhanced and efficient market segmentation.”

A recurring theme in the responses was of an improvement in efficiency with respondents noting an increased speed in completing marketing tasks, experiencing a “quick turnaround time in the development of marketing plans and strategies” and the ability to “easily cut the adverts development time and reduce the overall marketing cost.” One respondent specifically mentioned an AI tool that they use to generate social media content, stating, “I normally use AI to do my captions with the use of ChatGPT.” Another highlighted the value of AI automated processes, noting that “automated responses have reduced the need to reply to all clients, and AI tools ensure quick responses.”

A particular response from a healthcare provider showed that there can be some cases where we need to combine the use of AI and humans; “At HupeNew Clinics, we implemented an AI-driven patient outreach tool to automate appointment reminders and follow-up messages. The tool improved response rates and reduced missed appointments by delivering timely, personalized messages. However, we also learned that over-automation could feel impersonal to some patients, so we adjusted the messaging tone and added human follow-ups for sensitive communications.” This shows that there are some instances where a hybrid situation is required that combines both the use of AI and human intervention. Another respondent provided a comprehensive view of AI use in their organisation; "We have heavily integrated with

AI in almost all aspects of the marketing stages. Our creative processes for campaign blueprints carry a significant part that is polished with AI. The graphic design team has incorporated AI enabled tools that have seen a sharp increase in output in terms of both volume and quality. Our basic day to day possibly carries a 60% component of AI work."

Additional positive observations included improved marketing insights and data analytics, the ability to develop technically sound proposals with ease in the shortest time possible hence enhanced customer satisfaction.

Negative impacts of AI tools on respondent marketing efforts and challenges encountered

While most responses were positive, there were also negative responses to the questions. One respondent shared how an AI advertising tool misdirected their marketing efforts: “An AI ad tool hurt our new catering startup by targeting the wrong clients. We needed small events (under 150 guests) but the AI pushed our ads to planners of large weddings and corporate functions (200+ guests). We got many inquiries but had to turn them all down because we lacked the equipment. It wasted our ad budget and time managing disappointment. The lesson: AI doesn't know your business limits. We now set strict audience rules manually and only use AI for tasks like testing ad headlines."

Another respondent highlighted the learning curve associated with AI tools as a constraint for smaller teams, they indicated "AI tools have improved our marketing

effectiveness, the somewhat steep learning curve makes it difficult for a small team to get enough time and become highly skilled users and fully benefit." A separate respondent mentioned "faulty numerical data compilation" as a challenge encountered, while another noted that AI tools were helpful in "processing redundant orders and repetitive functions." This indicates the value seen in AI adoption in SMEs in handling routine tasks.

Summary of Key Themes

Overall, the responses from AI adopters indicated that AI tools have a positive impact on marketing efforts for SME's specifically in terms of time and cost reduction in terms of designing and executing marketing campaigns, AI tools ensure precision in terms of reaching the required target audience and they enhance the creative output of the marketing efforts. However further analysis of the responses illustrates the need for careful human oversight when using AI tools. It has been revealed that it is not just about using AI tools but how they are used, for instance a correct tool used in the wrong manner or using the wrong parameters can yield results different from the expected ones. Another revelation has also been the learning curve associated with AI tools and how this can be a barrier for small teams with limited time and resources.

Section D: Non adopters of AI Technologies - Perceptions and Barriers to AI Adoption

This section was directed at respondents who indicated that they had not adopted AI Technologies in their business in the survey. The purpose of this section is to capture

the perspectives on non-adopters of AI, thereby addressing the second research objective which addresses barriers to AI adoption.

D1: Perceived Value of AI among non-adopters

This sub-section assessed the perceived usefulness and value of AI Technologies among SME's that have not yet adopted AI. Using a five-point Likert scale (from strongly disagree to strongly agree), respondents were asked to indicate their level of agreement with statements regarding whether adopting AI would improve on their marketing performance, make their marketing teams more productive and if in general they believed AI tools would be useful if they adopted them. Results from this section are shown in the table below:

Table 11: AI Perceived Value and Usefulness among AI Non-Adopters

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
D1-1: Using AI would improve our Marketing Performance			4	5	10
D1-2: Using AI would make our marketing team more productive			4	9	6
D1-3: I would find AI useful for our marketing if we adopted it			2	8	10

Figure 12 is a bar graph showing distribution of Perceived Value and Usefulness of AI Technologies among respondents:

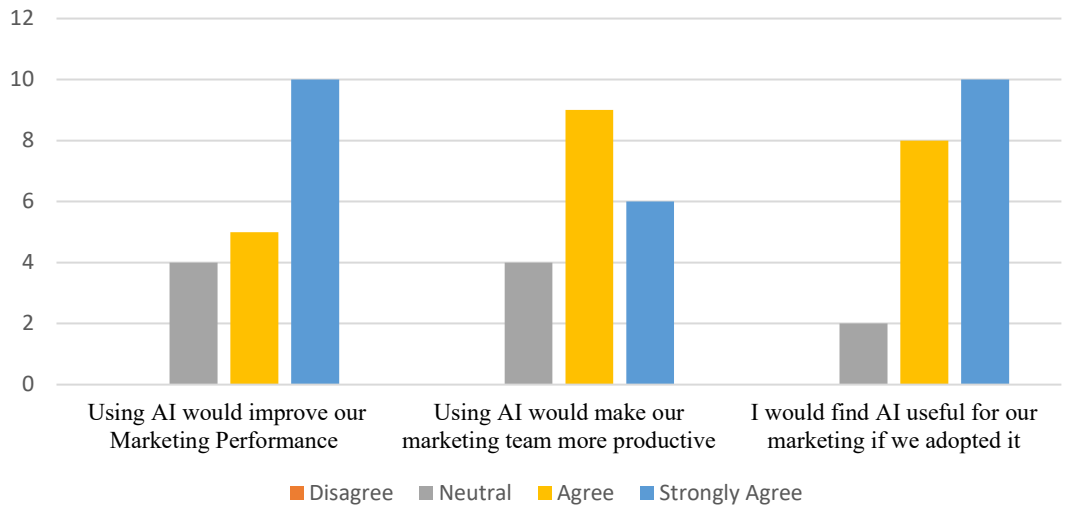

Figure 12 : Distribution of AI Perceived Value and Usefulness among Non-Adopters

Analysis: Perceived value of AI among non-adopters

The data in Table 11 and Figure 12 shows the perceptions on the value of AI of non-adopters of the technology. Despite not using AI in their businesses, participants expressed positive views on its usefulness. On using AI to improve marketing performance, 5 respondents or 33% agreed and 10 respondents or 67% strongly agreed. This gives a total of 15 respondents representing 100% of the non-adopters of AI confirming that AI has the potential to improve their marketing performance. No participants disagreed or were neutral. On using AI to make marketing teams more productive, 9 participants or 60% agreed and 6 participants or 40% strongly agreed again making 100% of the non-adopters agreeing. There were no neutral responses or disagreeing participants. On the statement “I would find AI useful for our marketing if we adopted it," 8 participants or 53% agreed and 7 participants or 47% strongly agreed, giving a total of 15 respondents representing 100% of the sample agreeing that they believe AI would be useful in their marketing activities.

Conclusion on Perceived value of AI among non-adopters

The data analysis shows that despite not adopting AI themselves, non-adopters have positive perceptions of AI's potential value. All respondents either agreed or strongly agreed to the statements indicating that they have not adopted AI because of a lack of perceived value and usefulness but rather there might be some other barriers restricting them from adopting AI. This is significant because it directs the study to investigating these specific barriers to AI adoption.

D2: Barriers to adoption of AI Technologies

This subsection addresses the second research objective which seeks to identify the challenges faced by SMEs in adoption of AI and is guided by the TOE framework. Respondents are asked to rate the extent to which various factors under the technological context (implementation cost and technology complexity), organisational context (lack of skills, no perceived need of AI, preference to current methods) and environmental context (unreliable internet and electricity, lack of information on AI). This data highlights the specific barriers to AI uptake in SMEs. The results are shown in the table below:

Table 12: Barriers to AI adoption faced by AI Non-Adopters

Barrier Factor	Not a Barrier	Slight Barrier	Moderate Barrier	Significant Barrier	Very Significant Barrier
D2-1: AI tools are too expensive	4	1	7	5	3
D2-2: AI seems too complex to implement and use	4	4	9	3	
D2-3: We lack the technical skills to use AI	5	5	2	3	5
D2-4: We do not see a clear need for AI in our business	10	2		6	2

D2-5: Prefer to stick to the familiar current methods	9	3	4	4	
D2-6: Unreliable internet connectivity	4	1	1	6	5
D2-7: Unstable electricity supply	7	2	3	4	4
D2-8: Lack of Information about suitable AI tools	5	1	4	4	6

Figure 13 is a bar graph showing distribution of Barriers to AI adoption among respondents:

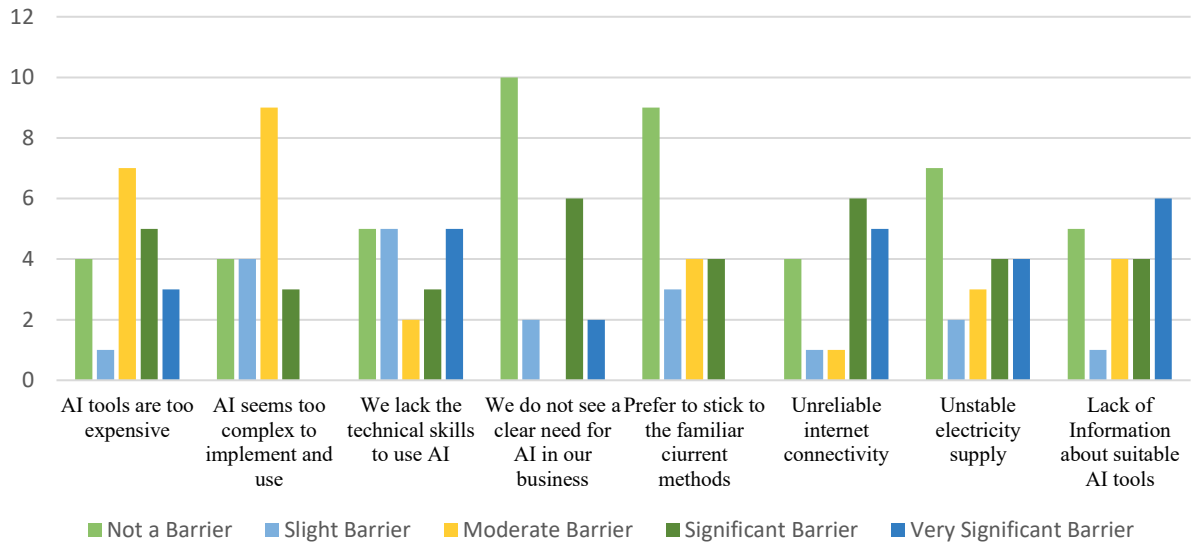

Figure 13 : Distribution of Barriers to AI adoption faced by AI Non-Adopters

Analysis Barriers to AI adoption

The data in Table 12 and Figure 13 presents barriers to AI adoption as perceived by non-adopters within the TOE framework:

- **Technological Context**: on the cost of AI tools, 8 participants or 53% reported it as at least a significant or very significant barrier with 7 respondents or 47% reporting it to be moderate barrier. This brings the total of 15 respondents representing 100% of the sample viewing cost as at least a moderate barrier.

No participants indicated cost as not being a barrier to adoption. On AI technology implementation and complexity, 9 respondents or 60% rated it as a moderate barrier and 3 respondents or 20% rating it as a significant barrier. Four participants or 27% responded as slight barrier or not a barrier. This shows that while complexity and implementation are issues, they are less prohibitive to adoption than cost.

- **Organisational context**: On having the technical skills to use AI, non-adopters; 10 respondents or 67% view the skills gap as at least a moderate barrier to a significant barrier. Five participants or 33% considered it a slight barrier and the same portion also considered it as not a barrier. On not seeing a clear need for AI in their businesses, 10 participants or 67% rated this as not a barrier and 2 respondents or 13% rated it as a slight barrier. Only 6 respondents or 40% viewed it as a significant barrier and 2 respondents or 13% viewed it as a very significant barrier. This distribution suggests that for most non-adopters, a lack of perceived need for AI is not a major barrier which is consistent with previous findings. On non-adopters' preference to stick with current tools and technologies, 9 participants or 60% rated it as not a barrier and 3 participants or 20% rated it as a slight barrier. Four respondents or 27% viewed it as a moderate barrier or significant barrier. This indicates that resistance to change is not a major cause for non-adoption among non-adopters of AI.

- **Environmental context:** On unreliable internet connectivity as a barrier, 6 respondents or 40% rated this as a very significant barrier and 1 respondent viewed it as a moderate barrier giving a total of 87% or 13 respondents viewing unreliable internet as at least a moderate barrier. Only 4 respondents or 27%

considered it as a slight barrier or not a barrier. On unstable electricity supply, a total of 11 respondents or 73% viewed electricity instability as least a moderate barrier, significant barrier or very significant barrier. Seven respondents or 47% considered it a slight barrier or not a barrier. On lack of information about suitable AI tools, 14 respondents or 93% of the sample viewed it as least a moderate barrier, significant barrier or very significant barrier with 40% of the sample viewing it as a very significant barrier. Only 1 respondent representing 7% viewed it as a slight barrier.

Conclusion on Barriers to AI Adoption

The data reveals that non-adopters face a different set of barriers compared to adopters of AI. The cost of adoption is viewed as a major concern by both adopters and non-adopters with non-adopters viewing it as at least a moderate barrier. Environmental factors such as unreliable internet representing 87% as at least a moderate barrier and lack of information about suitable AI tools representing 93% as at least a moderate barrier are also critical barrier factors. In summary key barriers identified are external factors such as cost, infrastructure and lack of information. This provides vital information to government, policy makers and AI vendors on the current state of barriers to adoption, and they can implement strategies to increase adoption rates guided by the findings.

At the end of section D, the non-adopters of AI were asked a question on what they felt would need to change for their businesses to consider adopting AI in the future and the following options were given; lower costs, better infrastructure (internet &

electricity) and training. There were 21 responses to the question, and they are shown in the table 13 and figure 14.:

Table 13: Factors for non-adopters of AI to consider AI adoption

	Lower Costs	Better Infrastructure	Training	Easier Access	Change in target market	Total
Numbers	3	6	9	1	2	21
Frequency %	14	29	43	5	10	100

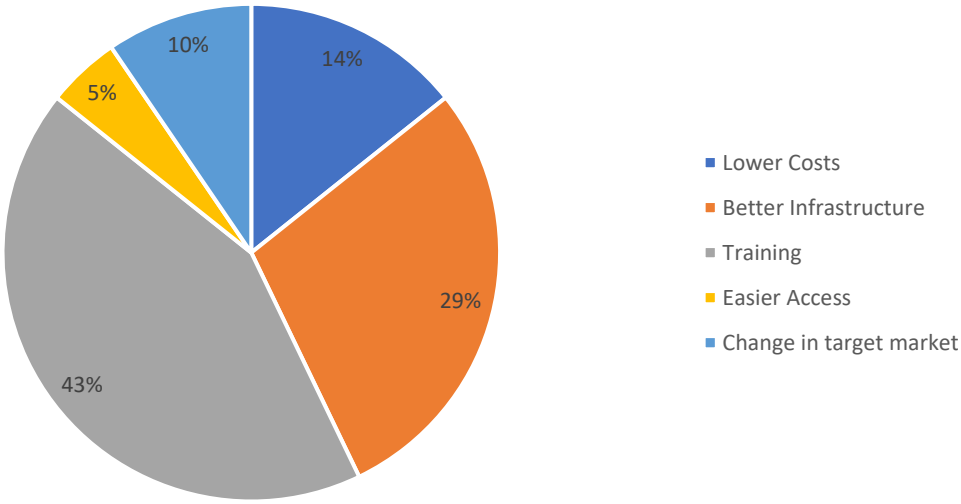

Figure 14 : Distribution of Factors for non-adopters of AI to consider AI adoption

Analysis Factors for non-adopters of AI to consider AI adoption

The data in Table 13 and Figure 14 presents the factors that non-adopters indicated would need to change for them to consider adopting AI. The responses are categorised as follows:

- **Training:** This was the most frequently cited factor with 9 participants or 43% of the sample indicating that training would enable them to consider AI adoption.
- **Better Infrastructure:** 29% of the sample or 6 respondents highlighted that reliable internet and stable electricity are conditions that would enable them to consider AI adoption.
- **Lower Costs:** 14% or 3 participants indicated that reduced AI costs would enable adoption.
- **Change in target market:** 10% or 2 participants cited a change in target market as a factor to adoption.
- **Easier Access:** One respondent representing 5% mentioned easier access to AI tools would enable adoption.

Conclusion on factors that enable non-adopters to adopt AI

Training has been identified as the most cited factor with 43% participants expressing it a factor that would enable adoption. This relates to previous results from non-adopters that show that lack of information about suitable AI tools is a major barrier This shows that in addition of having costs and infrastructure as barriers, non-adopters also lack the right knowledge, information and skills to use AI. Better infrastructure and AI lower costs are also significant, and they align with the TOE framework's environmental and technological contexts. These findings indicate that to convert non-adopters of AI to adopters, several factors must be addresses from skills development, improvement of infrastructure and cost reduction of AI tools.

4.3.2 Interview Guide Findings

For the qualitative section of the research, data was collected through an in-depth interview guide from 6 SME's operating in Harare representing a combination of three AI adopters and three non-AI adopters. The interview guide was divided into 3 sections with Section A focusing on the nature of the business, role of interviewee and a summary of the current marketing strategy at the SME. The second section is divided into 2 parts, one part for AI adopters, and it focuses on the SME AI adoption journey, experience and impact of AI. The other part of the second section is for non-AI adopters and focuses on the reasons why the SME has not considered AI adoption, how the SME is currently handling marketing tasks that AI would normally support and if the interviewee feels that not using AI puts them at a competitive disadvantage. The third section of the guide both for AI adopters and non-adopters focuses on the external environmental factors affecting AI adoption in relation to the SME and the outlook of the SME in relation to AI. The closing section of the guide poses a question to the interviewee on their opinion on Technology adoption in Zimbabwean SMEs.

AI Adopters

Three out of six of the SMEs interviewed were AI adopters that were in the groceries, electronic gadgets and healthcare services business in Harare. The healthcare services SME was represented by the manager with the 2 other SMEs represented by the business owners. On how they summarised their current marketing strategies, all the SMEs indicated that they used Social Media platforms such as Facebook, X and Instagram for marketing with the Healthcare Services manager indicating that in addition to social media they also use Google Search Engine Optimisation. On their

AI adoption journey, experience and impact, the SMEs in some cases had similar views and, in some cases, different views. On what prompted them to use AI, the Healthcare SME described a process of research and testing stating, "We researched AI in the early days and saw the benefits, then we started trial runs until we finally adopted full AI use." For the grocery SME, the motivation came because of business demand noting "There were too many tasks to be done that could be done quickly using AI." The electronic gadgets SME cited the "ability to design posters and marketing material easily, quickly, and at a very low cost" highlighting effectiveness and cost saving as factors in driving AI adoption. On how they chose the AI tools they are currently using, there were different responses. The healthcare SME described a methodical approach stating, "We started using the tools available at that time and started filtering according to the need, use, and cost of the tool." The electronic gadgets SME owner used a trial-and-error approach stating I started trying the popular AI tools and tried a few more until we settled for ChatGPT." The grocery store owner indicated that they researched the AI tools on Google and chose the ones that I felt solved the problem.

On AI implementation into current marketing activities, the healthcare SME invested in the process stating that after selection of the AI tool required, they hired and paid for professional AI training of their staff. The grocery SME described their AI as an independently operating support system noting "It acts as a middleman when I am not available, and it gives analytical feedback on products." The electronic gadgets SME owner described that they first taught themselves on how to use AI then teaching their staff before designing and uploading posters.

On the benefits of AI for marketing, all SMEs indicated improvements in efficiency, cost savings and creativity. The grocery SME noted "there is less need for engaging professionals like graphic designers because graphic designing is part of the AI tool package" and the electronic gadgets SME shared similar sentiments stating "Before AI, we would pay graphic designers for posters and flyers, and they would take days. Now with AI, we design on our own at no cost, and it takes minutes." The healthcare SME indicated that it takes less time to go from a marketing idea to a final document or implementing the idea and at a low cost. They also indicated that AI allows them to try out as many strategies as they want.

On the impact of AI on customer engagement and sales, all participants reported positive outcomes. The healthcare SME indicated that customer engagement had increased because they were now able to develop marketing packages for all customer segments and sales had gone up since using AI. The grocery SME also confirmed a boost in customer engagement. The electronic gadget SME highlighted on AI's ability to target audiences noting "Customer engagement and sales have increased because we can make many designs that speak to all customer segments, children, older people, and so on." On challenges encountered, key issues centred around the cost of AI, the learning curve and infrastructure issues. The healthcare SME stated "continuously changing subscription models. The tools will not give you access to certain features unless you pay" highlighting the cost component of AI. The electronics SME highlighted "You need time to learn how to use AI and to understand how to use it initially. The best AI tools are expensive and need monthly subscriptions." The grocery SME did not report any challenges with using AI.

On infrastructure challenges such as internet and electricity reliability, the grocery and healthcare SME representatives indicated that internet in Zimbabwe was a challenge as it was slow and expensive but had however responded to the electricity challenge by installing solar backup at their businesses. The electronic gadget SME owner noted a technical advantage citing that the AI tool they used for customer engagements could operate from its own server ensuring continuous customer engagements even in the absence of electricity or an internet connection. When asked what sort of support was needed for greater AI adoption, the healthcare SME manager noted that government support was needed in training users on AI use and local technology companies also needed to design cheaper local AI tools in local languages. The grocery SME owner indicated local training of end users and lower subscription costs would accelerate AI adoption. The electronics gadget SME owner indicated financial support for on expensive AI tools would increase adoption. When asked where they saw AI in their businesses and the retail sector in 5 years, the grocery and electronic gadgets SME had a similar view that AI would replace most hired labour taking over tasks with the potential of lowering the cost of doing business. The healthcare manager indicated that not just marketing tasks will be done by AI but also legal, accounting and inventory management tasks. When asked to share their thoughts on technology adoption in Zimbabwe, the healthcare SME manager and grocery store owner noted that it is generally slow or lagging in Zimbabwe because of slow and expensive internet and an unreliable supply of electricity. The grocery store owner indicated that if internet costs are lowered, technology adoption will be accelerated because gadgets such as cell phones and tablets are cheaper now and more available.

Non-AI Adopters

Three out of six of the SMEs interviewed were non-AI adopters represented by the owners of a clothing boutique, candy shop and Mobile phone shop. On how they summarised their current marketing strategies, the candy store and mobile shop owners indicated that they use social media pages for product marketing and advertising. The clothing boutique owner noted “we use WhatsApp Groups and WhatsApp channels for direct marketing to clients of clothing products.”

When asked whether their business had ever considered using AI, the clothing boutique owner cited cost as a factor noting "No, AI seems too expensive to use. It is not a priority expense right now." The candy shop owner acknowledged that they had considered using it but had not fully adopted it. The mobile phone owner gave a positive view although they had not fully adopted it citing AI as "a promising technology which is able to turn thoughts into reality quickly and easily." Participants highlighted several obstacles preventing them from integrating AI into their businesses with cost and lack of knowledge coming out as the significant barriers. The clothing boutique owner stated, “we do not know how to use AI." The candy shop owner highlighted that most AI tools needed payment and now it seemed more of an expense than a benefit. The mobile phone store owner indicated “We are a small business. Investing in AI seems like a waste of resources. We do not have the financial capacity to invest in AI."

On how they were currently handling tasks that AI could support, all three participants described manual or traditional methods for handling marketing related tasks. The clothing boutique owner explained, "We do everything manually and outsource for any services or tasks that we cannot do in-house." The candy shop owner indicated that they did the tasks on their own or hired professionals when need arose. The Mobile

Phone Store owner indicated they used basic digital tools, saying, "We handle all tasks manually. We use less advanced digital tools such as MS Excel, MS PowerPoint, and Photoshop for designs." When asked whether they felt not using AI put their businesses at a competitive disadvantage, the mobile phone owner acknowledged it put them at a disadvantage however the clothing boutique owner did not think it put them at a disadvantage. The candy shop owner highlighted that not using AI did not put them at a disadvantage because of their target market.

On how infrastructure challenges such as unreliable internet and electricity affected AI adoption, the clothing boutique and mobile phone shop owner indicated that these affected them to a greater extent citing the high cost of internet in Zimbabwe and the slow speeds. The candy shop owner indicated that their business was not affected by these infrastructure challenges. On the support needed for AI adoption in their businesses, the clothing boutique owner highlighted "We need workshops and seminars from the government to teach people what AI is. If the government does not lead, then nothing will happen." The candy shop owner stated that they would need financial support. The mobile phone shop owner indicated that that private public partnership would assist noting "The Ministry of ICT should develop local AI tools in partnership with tertiary institutions or private players and also provide free training."

When asked about the future of AI in their businesses and the retail sector, there were varying responses from the participants. The Clothing boutique owner stated that "Maybe we will use it if we get training and the AI tools are for free. At this moment, I do not see our business using AI in the next five years." The candy shop owner anticipated seeing most tasks being carried out by AI in the future thus reducing labour costs. The mobile phone shop owner tied AI use to business growth stating "We can only see ourselves using AI if our business grows. As long as we are a micro-SME

with low profits, we do not see ourselves using AI soon." When asked if they'd like to share anything on technology adoption in Zimbabwe, the candy shop owner had nothing to share, the boutique owner emphasized on education stating "Technologies such as AI should be taught in schools as part of the curriculum, so that future business owners are AI savvy. Most current business owners were not formally taught about AI; hence they are not equipped to use it." The mobile shop owner noted "It is slow because the private sector does not see any profits. Unless the government intervenes and partners with private players and offers incentives to them, the adoption will always be slow."

4.3.2.3 Analysis and Interpretation

The interview finding reveal a clear distinction between AI adopters and non-adopters in Zimbabwean SMEs. The AI adopters reported significant improvements in marketing performances, customer engagements and sales despite the existing infrastructure challenges such as unreliable internet and electricity supply. Two out of three AI adopters highlighted that they have resorted to the use of backup solar systems in response to the electricity supply challenge and one AI user has managed to solve the unreliable internet and electricity issue using an AI tool that runs on its own independent servers without the need for a local internet or electricity supply. In the event that there is no power or internet connection at the business, the AI tool can continue responding and engaging customers on its own and the SME owner can take over or continue whenever their local internet or power is restored. In contrast non-AI adopters indicated cost challenges, knowledge gaps and infrastructure challenges as major barriers to adoption. They identified traditional digital marketing tools such as

social media pages traditional software such as Microsoft Excel, Microsoft PowerPoint and Photoshop as reliable and cost effective. Both groups however agree that AI adoption in Zimbabwe requires government intervention whether through providing end-user training programs, financial support and development of cheaper local AI tools through public private partnerships.

4.3.3 Descriptive Statistics

The data collected was input in SPSS for descriptive statistical analysis and the results are in Table 14

Table 2 : SPSS Output: AI Adopters perceived value and usefulness of AI technology

AI Adopters perceived value and usefulness of AI technologies

		C1_1	C1_2	C1_3	C1_4	C1_5	C1_6
N	Valid	23	23	23	23	23	23
	Missing	15	15	15	15	15	15
Mean		4.13	4.17	4.13	4.26	4.13	4.30
Median		4.00	5.00	5.00	5.00	5.00	5.00
Mode		5	5	5	5	5	5
Std. Deviation		1.180	1.193	1.217	1.214	1.217	1.222
Skewness		-1.730	-1.773	-1.595	-1.885	-1.595	-1.953
Std. Error of Skewness		.481	.481	.481	.481	.481	.481
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	5

The data shows that the mean scores range from 4.13 to 4.30 showing that on average AI adopters agreed to the given statements on AI's usefulness in the questionnaire. The medians of 5.00 and the modes of 5 across all statements shows that "Strongly Agree" was the most frequent response. The negative skewness of less than -1.5 show that the responses are concentrated at the high end of the scale validating the finding that 83% of AI adopters at least agreed to the statements. These results strongly support the

TAM framework that perceived usefulness is a key factor in driving AI adoption in Zimbabwean SMEs.

Table 3 : SPSS Output: AI Adopters Perceived Ease of Use of AI technology

AI Adopters Perceived Ease of Use of AI Technologies

		C2_1	C2_2	C2_3	C2_4	C2_5	C2_6
N	Valid	23	23	23	23	23	23
	Missing	15	15	15	15	15	15
Mean		2.83	3.22	2.96	3.35	2.65	3.09
Median		3.00	3.00	3.00	3.00	2.00	3.00
Mode		2	3	2	3	2	3
Std. Deviation		.937	.998	1.065	1.071	1.027	1.125
Skewness		1.102	-.177	.093	-.539	1.065	.025
Std. Error of Skewness		.481	.481	.481	.481	.481	.481
Minimum		2	1	1	1	1	1
Maximum		5	5	5	5	5	5

The data shows the mean scores for perceived ease of use range from 2.65 to 3.35 indicating that on average participants were neutral to slightly disagreeing with positive statements on the ease of AI use. The median value of 3 (neutral) indicates that a significant number of participants neither agreed or disagreed with the ease-of-use statements. The mode values show a split with disagree (2) being selected in half of the statements by participants meaning that a significant portion of the respondents disagreed to the ease-of-use statements on AI technologies. The standard deviations from 0.937 to 1.125 show a narrow range indicating a similar level of dispersion. The minimum and maximum values show that some respondents strongly agreed and some strongly disagreed to AI's ease of use. The skewness values vary however the strongest positive skews C2_1 (1.102) AND C2_5 (1.065) show that most respondents disagreed that learning to operate AI tools was easy for staff or becoming skilful was easy. This aligns with previous findings that 56% of respondents disagreed that becoming skilful

with AI was easy. These findings show that SMEs face staff challenges in AI adoption and there is need for training and technical support in helping SME staff in using AI technology.

Table 16: SPSS Output: Challenges to AI adoption faced by AI adopters

Challenges to AI adoption faced by AI adopters

		C3_1	C3_2	C3_3	C3_4	C3_5	C3_6	C3_7	C3_8	C3_9
N	Valid	22	22	22	22	22	22	22	22	22
	Missing	16	16	16	16	16	16	16	16	16
Mean		3.55	3.09	3.36	3.18	2.73	2.86	3.27	3.32	3.59
Median		4.00	3.00	3.00	3.50	3.00	3.00	4.00	4.00	4.00
Mode		5	3	3	4	3	4	4[a]	5	5
Std. Deviation		1.371	1.109	1.255	1.181	1.162	1.283	1.518	1.615	1.436
Skewness		-.532	.267	-.295	-.385	-.212	-.020	-.330	-.273	-.466
Std. Error of Skewness		.491	.491	.491	.491	.491	.491	.491	.491	.491
Minimum		1	1	1	1	1	1	1	1	1
Maximum		5	5	5	5	5	5	5	5	5

The data shows that the mean scores range from 2.73 to 3.59 for the challenge faced by AI adopters. This shows that most challenges were grouped between moderate challenge to significant challenge. The median values range from 3.00 to 4.00 indicating responses from moderate challenge to significant challenge, the mode scores also show a similar trend ranging from 3.00, 4.00 and 5.00 indicating moderate challenge, significant challenge and very significant challenge respectively. The standard deviations range from 1.109 to 1.615 showing that respondent challenges varied considerably among adopters with some facing severe challenges and some facing minimum. Maximum and minimum values also showed some participants experienced challenges and some did not. The skewness values range from -0.020 to -0.532 indicating many responses are grouped at one end of significant to very significant challenges. The findings indicate that environmental challenges such as internet, electricity supply and vendor support present significant challenges followed

by technology challenges such as cost and lastly organisational challenges. The findings also revealed that some respondents have resorted to the use of solar back up to mitigate the electricity challenges.

Table 17: SPSS Output: Impact of AI on Marketing Performance

Impact of AI on Marketing Performance

		C4_1	C4_2	C4_3	C4_4	C4_5	C4_6
N	Valid	22	22	22	22	22	22
	Missing	16	16	16	16	16	16
Mean		2.95	4.14	4.23	4.00	4.36	4.45
Median		3.50	4.00	4.00	4.00	4.00	5.00
Mode		4	4	4	4	4	5
Std. Deviation		1.290	.889	.612	.617	.581	.739
Skewness		-.347	-1.182	-.142	.000	-.212	-.999
Std. Error of Skewness		.491	.491	.491	.491	.491	.491
Minimum		1	2	3	3	3	3
Maximum		5	5	5	5	5	5

The results show that the mean scores of five out of six of the marketing performance metrics range from 4.14 to 4.45 indicating that on average participants indicated that there was a slight increase to a significant increase in these metrics. The exception is customer acquisition cost with a low mean of 2.95 which falls between no change and slight decrease however this is a preferred situation as a decrease in customer acquisition cost is a good thing. Median values range from 4.00 to 5.00 indicating that half of participants reported a slight increase to significant increase on performance metrics. Only customer acquisition cost has a lower median of 3.50 indicating half reported no change in this metric. The mode for all metrics is 4.00 showing that a slight increase was the most frequent response including customer acquisition cost which is not a preferred situation. The standard deviations range from 0.581 to 1.290 indicating a high variability. The highest standard deviation (1.290) was observed for customer acquisition cost indicating some SMEs encountered high customer acquisition costs

and some experienced low customer acquisition costs because of AI use. This could be as result of the initial investment cost of AI technology and training costs encountered by SMEs in adopting AI before benefits are realised. The skewness values are negative ranging from 0.00 to -1.182 indicating most responses were towards the increase end of the scale for all metrics.

The SPSS findings on the impact of marketing performance provide strong evidence to reject the null hypothesis (Ho) which states that AI has no impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe and accept the alternative hypothesis (H1) which states that AI has impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe

Table 18: SPSS Output: AI Perceived Value and Usefulness among AI Non-adopters

AI Perceived Value and Usefulness among AI Non-adopters

		D1_1	D1_2	D1_3
N	Valid	15	15	15
	Missing	23	23	23
Mean		4.60	4.60	4.83
Median		5.00	5.00	5.00
Mode		5	5	5
Std. Deviation		.548	.548	.408
Skewness		-.609	-.609	-2.449
Std. Error of Skewness		.913	.913	.845
Minimum		4	4	4
Maximum		5	5	5

The data shows that the mean scores for non-adopters of AI range from4.60 to 4.83 indicating that on average, non-adopters of AI agreed to strongly agreed that AI would be valuable and useful to their marketing performance despite themselves not using

AI. The median of 5.00 indicates more than half of the respondents strongly agreed that AI would be valuable and useful. The mode is also 5.00 indicating that the most frequent response was strongly agreed on the perceived value and usefulness of AI. The standard deviations range from 0.408 to 0.548 showing a low variance in responses among non-adopters. The skewness values are all negative showing results are concentrated on the agree and strongly agree end. The findings show that perceived usefulness of AI is very high among non-adopters meaning that this is not a barrier to adoption. This shows that there are other barriers to adoption encountered by SMEs other than the perception of AI's value or usefulness.

Table 19: SPSS Output: Barriers to AI adoption faced by AI Non-adopters

Barriers to AI adoption face by AI non-adopters

		D2_1	D2_2	D2_3	D2_4	D2_5	D2_6	D2_7	D2_8
N	Valid	6	6	6	6	6	20	20	20
	Missing	32	32	32	32	32	18	18	18
Mean		3.83	3.17	3.50	2.17	2.17	4.15	3.95	4.20
Median		4.00	3.00	4.00	1.00	1.50	4.50	4.00	4.00
Mode		4	3	4	1	1	5	4	4[a]
Std. Deviation		1.472	.753	1.225	1.835	1.472	1.089	.999	.768
Skewness		-1.840	-.313	-.490	1.095	.711	-1.412	-1.301	-.372
Std. Error of Skewness		.845	.845	.845	.845	.845	.512	.512	.512
Minimum		1	2	2	1	1	1	1	3
Maximum		5	4	5	5	4	5	5	5

a. Multiple modes exist. The smallest value is shown

The data shows that the mean scores range from 2.17 to 4.20 for barriers faced revealing that respondents perceived barriers differently. The environmental barriers such as unreliable internet, unreliable electricity and lack of information of AI tools have the highest mean scores of 4.15, 3.95 and 4.20 respectively showing that environmental barriers are viewed as the most significant barriers to adoption by non-adopters of AI. The median values also show us that unreliable internet had the highest median 4.50 indicating it is either a significant or very significant barrier. Other

barriers such as cost of AI, lack of technical skills, unstable electricity and lack of information on AI tools also had a high median value of 4.00 indicating they are viewed as significant barriers. The mode values also show a similar trend as above. The standard deviations range from 0.753 to 1.835 indicating a difference in levels of agreement by respondents on the barriers to adoption. The skewness values also vary considerably showing a strong negative skew for D2_1, D2_6 and D2_7 (AI cost, unreliable internet and unstable electricity) as significant barriers.

The findings reveal that AI adoption by SMEs in Zimbabwe is majorly affected by external or environmental factors such as unreliable internet, unstable electricity and lack of adequate information on AI tools followed by technological factors such as the cost of AI adoption and lastly factors within the organisational context such as the preference of using current methods or tools and SMEs seeing no need for AI use.

Relationships between variables

The dataset was input in SPSS to run cross tabulations and identify relationships between variables specifically if AI adoption was determined by the number of years of operation of the SME or if AI adoption was also determined by the SME size and the results are shown below:

Table 20: Relationship between AI adoption and years of business operation

Adopter * Years of Operation Crosstabulation

		Year Groups								Total	
		1		2		3		4			
		N	%	N	%	N	%	N	%	N	%
Adopter	0	3	42.9%	6	43%	3	42.9%	3	30.0%	15	39.5%
	1	4	57.1%	8	57%	4	57.1%	7	70.0%	23	60.5%
Total		7	100.0%	14	10...	7	100.0%	10	100.0%	38	100.0%

The results reveal that SMEs that have been operating for over 10 years (year group 4) have the highest adoption rate of 70% compared to SMEs operating for less than 10 years who have an adoption rate of 57.1%. This shows us that established businesses are highly likely to adopt AI technologies. This can be because established businesses have greater financial resources and human resources that allow them to adopt AI as well as experience with technological innovations within their operations through the years.

Table 21: Relationship between AI adoption and Business size

Adopter * Number of employees Employees Crosstabulation

		Employee Size Groups								Total	
		1		2		3		4			
		N	%	N	%	N	%	N	%	N	%
Adopter	0	11	44.0%	2	50.0%	1	50.0%	1	14.3%	15	39.5%
	1	14	56.0%	2	50.0%	1	50.0%	6	85.7%	23	60.5%
Total		25	100.0%	4	100.0%	2	100.0%	7	100.0%	38	100.0%

The results show that larger SMEs with 51-100 employees (employee size group 4) adopt AI at a much higher rate than smaller SMEs. The larger SMEs have a high adoption rate of 85.7% whereas the smaller SMEs and micro-SMEs have a lower adoption rate of between 50-56%. This relationship can be because larger SMEs usually have the adequate financial resources that allow them to invest in AI regardless of the cost and larger SMEs are unlikely to be affected by external factors such as

unreliable internet or unstable electricity in their adoption of AI. Larger SMEs are also highly likely to have a technically capable workforce than understands the use of AI.

The findings above align with the organisational context of the TOE Framework that specifies that the organisation size and resources are key factors in influencing technology adoption in an organisation.

4.3.3.1 Correlation Analysis

Table *22 :* Correlation analysis between Perceived Usefulness of AI and Marketing Performance

Correlations

		Perceived Usefulness Score	Marketing Peformance Score
Perceived Usefulness	Pearson Correlation	1	.417*
	Sig. (2-tailed)		.048
	N	23	23
Marketing Performance	Pearson Correlation	.417*	1
	Sig. (2-tailed)	.048	
	N	23	23

*. Correlation is significant at the 0.05 level (2-tailed).

A correlation analysis was conducted to study the relationship between Perceived Usefulness of AI and Marketing Performance among the 23 AI adopters. The Pearson correlation coefficient (r=0.417) was observed indicating a moderate positive correlation between perceived usefulness and marketing performance. The p-value is 0.048 ($p<0.05$) meaning the correlation is significant. The findings support the TAM model within the context of Zimbabwean SMEs indicating that perceived usefulness of AI is related to better marketing performance results.

Table 23: Correlation analysis between Perceived Ease of use of AI and Marketing Performance

Correlations

		Perceived ease of use	Marketing Performance
Perceived Ease Of Use	Pearson Correlation	1	.329
	Sig. (2-tailed)		.125
	N	23	23
Marketing Performance	Pearson Correlation	.329	1
	Sig. (2-tailed)	.125	
	N	23	23

A correlation analysis was conducted to study the relationship between perceived ease of use of AI and Marketing Performance. The results showed r = 0.329, n = 23, p = 0.125 showing that there is a weak to moderate positive correlation between perceived ease of use of AI and marketing performance. The p-value is greater than 0.05 meaning that the correlation is not significant and the evidence is not strong enough to conclude that a relationship exists between perceived ease of AI use and marketing performance. Further research with a larger sample would help clarify the relationship between perceived ease of use of AI and marketing performance.

4.3.3.2 Anova

Table 24: SPSS Output Anova Table for group comparison between business size and marketing performance

ANOVA

MP_Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.792	3	.597	.769	.525
Within Groups	14.757	19	.777		
Total	16.550	22			

A one-way ANOVA test between groups was conducted to assess the impact of business size on marketing performance among adopters of AI technologies. The results show $p = 0.525 > 0.05$ meaning that there is no significant difference between marketing performance and different business size groups. The results show that business size does not significantly affect marketing performance among SMEs that have adopted AI in Zimbabwe

Table 25: SPSS Output Anova Table for group comparison between business years of operation and perceived usefulness

ANOVA

PU_Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.864	3	1.288	.936	.443
Within Groups	26.153	19	1.376		
Total	30.017	22			

A one-way ANOVA test was also conducted for group comparison between business years of operation and perceived usefulness, and the results are shown in table 25. The results show $p = 0.443 > 0.05$ revealing no significant difference in perceived usefulness among the groups of business operational years. The results show that the number of years in operation of the SMEs does not affect perceived usefulness among adopters of AI technology.

4.3.3.3 T-Test on Research Hypothesis

Table 26: SPSS Output; t-test on Research Hypothesis; AI has an impact on Marketing performance

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Customer acquisition cost	23	2.87	1.325	.276
Customer conversion rate	23	4.00	1.087	.227
Customer satisfaction levels	23	4.09	.900	.188
ROI on marketing campaigns	23	3.87	.869	.181
Overall sales revenue	23	4.22	.902	.188
Brand awareness	23	4.30	1.020	.213

One-Sample Test

Test Value = 3 (midpoint or No Change)

	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	95% Confidence Interval of the Difference Lower	95% Confidence Interval of the Difference Upper
Customer acquisition cost	-.472	22	.321	.641	-.130	-.70	.44
Customer Conversion rate	4.412	22	<.001	<.001	1.000	.53	1.47
Customer satisfaction levels	5.791	22	<.001	<.001	1.087	.70	1.48
ROI on marketing campaigns	4.800	22	<.001	<.001	.870	.49	1.25
Overall Sales Revenue	6.470	22	<.001	<.001	1.217	.83	1.61
Brand Awareness	6.135	22	<.001	<.001	1.304	.86	1.75

One-Sample Test: One-Sided p

The average difference is not significant for the variable(s): *Customer acquisition cost*

The average difference is significant for the variable(s): *Customer Conversion rate, Customer satisfaction levels, ROI on marketing campaigns, Overall Sales Revenue, Brand Awareness*

One-Sample Test: Two-Sided p

The average difference is not significant for the variable(s): *Customer acquisition cost*

The average difference is significant for the variable(s): *Customer Conversion rate, Customer satisfaction levels, ROI on marketing campaigns, Overall Sales Revenue, Brand Awareness*

A one-sample t-test was conducted to test the research hypothesis that AI has impact on Marketing Performance in formally registered SMEs operating in Harare,

Zimbabwe and the SPSS results are shown in the table above. The test was conducted to verify whether the marketing performance scores among AI adopters were significantly different from the midpoint value of 3 which represents “No Change” on the rating scale used to determine AI impact on marketing performance. Amongst the adopters of AI technology, the results on five key marketing metrics customer conversion rate, customer satisfaction levels, ROI on marketing campaigns, overall sales revenue and brand awareness showed that the means were all significantly higher than the midpoint or test value (3) and $p<0.001$ for all five metrics showing a significant difference strongly supporting that AI has an impact on marketing performance. The results for customer acquisition cost ($M=2.87$, $SD=1.325$, $p=0.641$) were not very different from the midpoint of 3 meaning that adoption of AI only led to a slight decrease in customer acquisition cost however this change is not large enough to give a concrete conclusion that adoption of AI definitely reduces customer acquisition cost.

Overall, the t-test results provide strong evidence to reject the null hypothesis (Ho) and accept the alternative hypothesis (H1) that AI has impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main purpose of the research was to study the impact of artificial intelligence on marketing performance amongst formally registered SMEs in Zimbabwe. This chapter presents a summary of the key findings from the study, draws conclusions from the data analysis findings based on the research objectives. The chapter also discusses the practical implications of the findings and also provides recommendations for affected stakeholders such as SME owners, managers, government or policy makers and AI technology vendors. The chapter concludes with suggestions for further research arising from the limitations of this study.

5.2 Discussion and Conclusions

The first objective of the study was to assess the current level of awareness, adoption and perceived value of AI technologies among SMEs in Zimbabwe. The study reveals high levels of AI technology awareness among Zimbabwean SMEs with 92% of SMEs demonstrating at least moderate awareness of AI and no respondents indicating that they are completely not aware of AI. AI technology adoption rates amongst SMEs were relatively high at 61% exceeding expectations given the challenging operating environment of the SMEs. 83% of AI adopters agreed that AI is a useful tool and all the non-adopters agreed that using AI would be useful to their marketing performance although they had not adopted AI themselves.

The second research objective was to identify the challenges to AI adoption for Zimbabwean SMEs and results obtained showed that AI adoption in Zimbabwe is greatly affected by environmental barriers beyond the control of the individual SMEs. Among adopters, these barriers were lack of local AI technology support, unstable electricity and unreliable internet. Among non-adopters, the biggest challenges to AI adoption identified were lack of information about suitable AI tools, unreliable internet and unstable electricity. Technological challenges came in second particularly the cost of AI adoption also presented significant challenges to both adopters and non-adopters. Organisational factors such as lack of technical skills within SMEs were identified as moderate challenges while resistance to change and lack of perceived need of AI were not identified as major challenges. 67% of non-adopters of AI scored “no clear need for AI” as not a barrier confirming that non-adopters recognise the potential value of AI but are prevented from adopting by external factors.

The final research objective was to analyse the impact of AI adoption on marketing performance, and the study concludes that AI adoption has a significant positive impact on the marketing performance among the 38 SMEs studied. One sample t-tests revealed high mean scores for five out of six key marketing performance metrics customer conversion rate (M=4.00), customer satisfaction (M=4.09), ROI (M=3.87), sales revenue (M=4.22), and brand awareness (M=4.30) ; all significantly higher than the "No Change" midpoint of 3 ($p < .001$ for all). Customer acquisition cost showed a slight decrease (M=2.87) which is favourable but did not reach statistical significance ($p=0.641$). The findings are summarised in the table 27

Table 27: Impact of AI on Marketing Performance

Marketing Performance Metric	**Mean (M)**	**Standard Deviation (SD)**	**p-value**	**AI Impact on metric**
Customer Conversion Rate	4.00	0.739	< .001	Significant Increase
Customer Satisfaction Levels	4.09	0.596	< .001	Significant Increase
ROI of Marketing Campaigns	3.87	0.626	< .001	Significant Increase
Overall Sales Revenue	4.22	0.736	< .001	Significant Increase
Brand Awareness	4.30	0.703	< .001	Significant Increase
Customer Acquisition Cost	2.87	1.325	0.641	No Significant Change

These findings above provide strong empirical evidence to reject the null hypothesis (Ho) and accept the alternative hypothesis (H1) that AI has impact on Marketing Performance in formally registered SMEs operating in Harare, Zimbabwe.

The study also concludes that there are other factors that influence AI adoption such as business size and the number of years an SME has been in operation. Larger SMEs with between 51-100 employees have higher adoption rates (87%) as compared to micro-SMEs with adoption rates of 56%. Similarly, businesses which are much established and have been operating for over 10 years have higher adoption rates of up to 70% than newer businesses with lower adoption rates of around 57.1%. The results align with the TOE frameworks organisational context that greater human and financial resources enable larger established SMEs to easily overcome adoption

barriers. However, once AI is adopted, the business size or years in operation does not affect marketing performance as showed by ANOVA. The TAM framework is supported by the finding that perceived usefulness significantly correlates with marketing performance while perceived ease of use shows a weaker, non-significant relationship.

5.3 Implications

The research has practical implications for SME owners, SME managers, Government and policy makers as well as AI technology vendors. The research results act as evidence to SME owners and managers that AI tools can actually deliver real positive outcomes for their businesses. The results also show that there are challenges to AI adoption as AI is a relatively new technology that requires users to have certain skills on how to use AI first before fully harnessing its benefits. The study further provides information on the type of infrastructure challenges such as unreliable internet availability and an unstable electric supply that can also affect AI adoption. A key insight from the research participants also gives details on specific AI tools that have been impactful in their business operations demonstrating that there are some tools that have a higher impact on marketing performance than others.

For policy makers and government institutions such as the Ministry of ICT, Ministry of Women Affairs, Community, Small and Medium Enterprises Development, the research reveals that there is a huge infrastructure gap that is affecting the rate of adoption of AI and there is little to no information available to SMEs on AI technologies. The research also implies that government or the responsible

stakeholders have not provided any training programs on AI. Evidence from the study also shows that there might be no incentives or subsidies available to AI technology vendors that can motivate development of affordable local AI technologies. The study findings suggest that currently there are no affordable local AI technology options available for SMEs and there is also an absence of local technical support for the current AI tools on the market.

5.4 Recommendations

5.4.1 Recommendations for SME owners and managers

a. The study provides strong evidence that AI improves marketing performance on several metrics, and that SME owners and managers should invest in AI as a strategic investment to their businesses.
b. Based on the research results, in addition to investing in AI, SME owners and managers should also equally invest in staff training of the AI and skills development programs or training programs before full benefits can be harnessed.
c. In their adoption process, SME owners should also carefully consider the specific AI tools they invest in first. SME owners should start with accessible, low-cost AI tools. Findings show that there are some AI tools with free options such as ChatGPT or Canvas that SMEs can start with as low cost readily available options.
d. Given the infrastructure challenges in Zimbabwe such as unreliable internet and an unstable electricity supply, SME owners should invest in solar for backup power and advanced AI tools that operate on their own independent

servers and can continue operating even in the event of a local power or internet outage

5.4.2 Recommendations for Government and policy makers

a. For policy makers and government institutions such as the Ministry of ICT, Ministry of Women Affairs, Community, Small and Medium Enterprises Development the most critical action would be addressing the infrastructure challenges faced by SMEs. Ensuring that there is reliable and affordable internet as well as an uninterrupted power supply will stimulate AI adoption.
b. Policy makers must ensure that information concerning AI technology and its benefits is easily available and accessible to SMEs. Comprehensive information on the type of different AI tools available on the market, how these different tools apply to different businesses, pricing models and guidelines on AI implementation should be made readily available and free to all Zimbabwean SMEs in order to accelerate AI adoption.
c. Government should develop and fund AI training programs specifically designed for SMEs. Trainings programs must be developed to suit local SMEs, and they can be conducted in partnership with local universities and similar educational institutions in order to maximise accessibility and reach as well as minimise on the cost of training SMEs.
d. Government must partner with AI technology developers and vendors in order to accelerate adoption of AI. Partnerships can be in the form of Public-Private Partnerships that provide incentives or subsidies to AI technology developers

and vendors to encourage rapid development of many AI tool options for SMEs as well as lower the cost of AI implementation and use to SMEs.

e. Ministry of Women Affairs, Community, Small and Medium Enterprises Development and other related government institutions must have databases of SMEs and SMEs information that can be accessed for research and academic purposes. Available and accessible databases can ensure that researchers have vital information ready and they can continuously research and add key knowledge and results to the body of knowledge that the ministry and government themselves can tap into.

5.4.3 Recommendations for AI technology vendors

a. The most important step for AI technology vendors is information dissemination of AI technologies within the Zimbabwean SME environment. Study results show that there is an information gap concerning AI technologies in general within Zimbabwean SMEs.
b. Secondly AI vendors need to provide training programs on AI tools to SME owners, managers and staff in general. An educated population will result in accelerated adoption and will also create more business for AI vendors resulting in a win-win scenario.
c. AI vendors must develop tailor-made products that are suitable for the Zimbabwean SME environment as well as ensure that the products are affordable to the general market with favourable pricing / subscription models. Tailor made AI tools can include tools that do not require internet (can work offline) as reliable internet is a major challenge in Zimbabwe.

5.4 Suggestions for Further Research

While the study findings contribute foundational knowledge for future research, the study was geographically delimited to retail SMEs in Harare as major hub for retail activity and involved 38 SMEs however further research can be conducted in other central business hubs in Zimbabwe such as Bulawayo, Gweru, Mutare etc with a more larger sample size. One marketing performance metric; customer acquisition cost produced results which were different from the other performance metrics in relation to AI adoption and this is an area for further research to investigate why AI adoption does not significantly reduce customer acquisition costs within the Zimbabwean context.

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APPENDICES

APPENDIX 1: AUREC Approval Letter

"Investing in Africa's future"
AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Old Mutare-Tel (+263-20) 60075/60026/61611 Fax: (+263 20) 61785 Website: www.africau.edu

Ref: AU4125/25

26 November, 2025

MUGUMBATE MUFARO
C/O Africa University
Box 1320
MUTARE

RE: **THE IMPACT OF ARTIFICIAL INTELLIGENCE (AI) ADOPTION ON MARKETING PERFORMANCE IN ZIMBABWEAN RETAIL SMALL TO MEDIUM ENTERPRISES (SMEs)**

Thank you for submitting the above-titled proposal to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

a) Research proposal

- **APPROVAL NUMBER** AUREC 4125/25
  This number should be used on all correspondence, consent forms, and appropriate documents
- **AUREC MEETING DATE** NA
- **APPROVAL DATE** November 26, 2025
- **EXPIRATION DATE** November 26, 2026
- **TYPE OF MEETING**: Expedited
  After the expiration date, this research may only continue upon renewal. A progress report on a standard AUREC form should be submitted a month before the expiration date for renewal purposes.
- **SERIOUS ADVERSE EVENTS** All serious problems concerning subject safety must be reported to AUREC within 3 working days on the standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

AFRICA UNIVERSITY
RESEARCH ETHICS COMMITTEE (AUREC)
APPROVED
P.O. BOX 1320, MUTARE, ZIMBABWE

Yours Faithfully

MARY CHINZOU
FOR CHAIRPERSON
AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE

APPENDIX 2: Data Collection Instrument 1: Questionnaire

Questionnaire Title: Survey on Artificial Intelligence technology Adoption and Marketing Performance in Zimbabwean Retail SMEs

Introduction and Informed Consent

Dear Participant,

My name is Mufaro Mugumbate, a student at Africa University conducting research for my Executive Master of Business Administration degree. You are invited to participate in a research study titled **"The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail SMEs." - Student No.213102 - Africa University Research Ethics Committee (AUREC) Approval No. AUREC 4125/25.**

This survey seeks to understand the awareness, adoption, and impact of AI technologies on the marketing performance of retail SMEs in Harare. The survey will take approximately 15-20 minutes to complete. Your participation is entirely voluntary, and you may withdraw at any time. All your responses will be kept strictly confidential and anonymous and will be used solely for academic purposes. The data will be reported in aggregate form, ensuring no individual or business can be identified. By proceeding with this survey, you indicate your voluntary consent to participate in this study.

Thank you for your valuable time and contribution.

Sincerely,

Mufaro Mugumbate

Section A: Demographic and Business Profile

Instructions: Please select the option that best describes you and your business.

A1. What is your primary role in the business?

- Owner
- Manager
- Marketing Staff
- Other (Please specify): _____

A2. In which retail sub-sector does your business primarily operate?

- Clothing , Fashion & Accessories
- Food and Groceries
- Electronic Gadgets
- Other (Please specify)……..

A3. How many employees does your business have?

- 1-10
- 11-30
- 31-50
- 51-100

A4. How long has your business been operational?

- Less than 2 years
- 2 - 5 years

- 6 - 10 years
- Over 10 years

Section B: AI Awareness and Adoption

Instructions: For this survey, "AI technologies" refer to tools like AI-powered chatbots for 24-hour customer service, AI content creation tools (e.g., for creating visual media ,adverts, social media posts), and marketing automation tools (e.g., for email campaigns, custom emails to clients).

B1. Before today, how aware were you of the AI technologies mentioned above for business use?

- Not at all aware
- Slightly aware
- Moderately aware
- Very aware
- Extremely aware

B2. Is your business currently using any of these AI technologies?

- Yes (Please proceed to Section C)
- No (Please proceed to Section D)

Section C: For AI Adopters

This section is for businesses that are CURRENTLY USING AI technologies.

C1. Perceived Value of AI & Usefulness of AI
Instructions: Please indicate your level of agreement with the following statements regarding the AI tools your business uses.
(Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
C1.1 Using AI improves our marketing team's job performance.					
C1.2 Using AI enables us to accomplish marketing tasks more quickly.					
C1.3 Using AI increases our marketing productivity.					
C1.4 Using AI enhances our effectiveness in reaching our marketing goals.					
C1.5 Using AI makes it easier to do our marketing job.					
C1.6 Overall, we find AI useful for our marketing activities.					

C2. Perceived Ease of Use of AI

Instructions: Please indicate your level of agreement with the following statements.
(Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
C2.1 Learning to operate our AI tools was easy for our staff.					
C2.2 Our interaction with the AI tools is clear and understandable.					
C2.3 We find it easy to get the AI tools to do what we want them to do.					
C2.4 We find the AI tools to be flexible to interact with.					
C2.5 It was easy for our staff to become skilful at using the AI tools.					
C2.6 Overall, we find the AI tools easy to use.					

C3. Challenges to Adoption of AI

Instructions: To what extent have the following factors been a challenge in adopting or using AI in your business? (Scale: 1 = Not a Challenge, 2 = Slight Challenge, 3 = Moderate Challenge, 4 = Significant Challenge, 5 = Very Significant Challenge)

Challenge Factor	1	2	3	4	5
Technological Context					
C3.1 High cost of AI software purchase and subscriptions					
C3.2 Complexity of AI tools					
C3.3 Difficulty integrating AI with our existing systems					
Organizational Context					
C3.4 Lack of internal technical skills					
C3.5 Lack of management support					
C3.6 Employee resistance to using new technology					
Environmental Context					
C3.7 Unreliable internet connectivity					
C3.8 Unstable electricity supply					
C3.9 Lack of local AI vendor support and training					

C4. Impact of AI on Marketing Performance

Instructions: Compared to the period before adoption (or over the last 24 months), how has the adoption of AI impacted the following marketing metrics in your business?
(Scale: 1 = Significant Decrease, 2 = Slight Decrease, 3 = No Change, 4 = Slight Increase, 5 = Significant Increase)

Marketing Performance Metric	1	2	3	4	5
C4.1 Customer Acquisition Cost					
C4.2 Customer Conversion Rate					
C4.3 Customer Satisfaction Levels					
C4.4 Return on Investment (ROI) of Marketing Campaigns					
C4.5 Overall Sales Revenue					
C4.6 Brand Awareness					

C5. Please briefly describe a specific example of how an AI tool has positively or negatively affected your marketing efforts.

[Proceed to Section E]

Section D: For Non-Adopters of AI

This section is for businesses that are NOT CURRENTLY USING any AI technologies.

D1. Perceived Value of AI

Instructions: Based on your understanding, what is your perception of the potential value of AI for a business like yours?
(Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
D1.1 Using AI would improve our marketing performance.					
D1.2 Using AI would make our marketing team more productive.					
D1.3 I would find AI useful for our marketing if we adopted it.					

D2. Barriers / Challenges to AI Adoption

Instructions: To what extent are the following factors barriers to your business adopting AI technologies?
(Scale: 1 = Not a Barrier, 2 = Slight Barrier, 3 = Moderate Barrier, 4 = Significant Barrier, 5 = Very Significant Barrier)

Barrier Factor	1	2	3	4	5
Technological Context					
D2.1 AI tools are too expensive					
D2.2 AI seems too complex to implement and use					
Organizational Context					
D2.3 We lack the technical skills to use AI					
D2.4 We do not see a clear need for AI in our business					
D2.5 Prefer to stick with current, familiar methods					
Environmental Context					
D2.6 Unreliable internet connectivity					
D2.7 Unstable electricity supply					
D2.8 Lack of information about suitable AI tools					

D3. What, if anything would need to change for your business to consider adopting AI in the future? (e.g., lower costs, better infrastructure, training, etc.)

[Proceed to Section E]

Section E: Final Comments

E1. Do you have any other comments or insights regarding the use of technology and AI in Zimbabwean SMEs?

Thank you for your valuable participation! Your input is crucial to this research.

APPENDIX 3: Data Collection Instrument 2: Interview Guide

Interview Guide Title: In-Depth Perspectives on AI Adoption in Zimbabwean Retail SMEs

Introduction for Interviewee

"Thank you for participating in this interview about AI adoption in retail SMEs in Zimbabwe. Our conversation will help me understand real-world experiences and impacts of AI on marketing. This interview is confidential and will be audio-recorded for accuracy. It should take about 10 minutes. All your responses will be kept strictly confidential and anonymous and will be used solely for academic purposes. By proceeding with this interview, you indicate your voluntary consent to participate in this study. Do you have any questions before we begin?"

Part 1: Business Background

1. Briefly describe your business and your role.
2. How would you summarize your current marketing strategy?

Part 2: AI Adoption Journey & Experience and Impact

For AI Adopters:

3. What prompted you to start using AI in your business?
4. How did you choose the AI tool(s) you use now?
5. How was the AI tool implemented into your marketing activities?
6. What has been the biggest benefit of using AI for marketing? (Please give an example.)
7. Have you faced any challenges since adopting AI?
8. What changes have you noticed in customer engagement or sales?

For Non-Adopters:

3. Has your business ever considered using AI? Why or why not?
4. What are the main reasons you have not adopted AI so far?
5. How do you currently handle marketing tasks that AI could support?
6. Do you feel not using AI puts you at a competitive disadvantage?

Part 3: Environment and Future Outlook - *(For both Adopters and Non-Adopters)*

9. How do issues like internet reliability or electricity affect your use (or potential use) of AI?
10. What kind of support would make it easier for SMEs like yours to adopt AI?
11. Where do you see AI in your business and the retail sector in the next few years?

Closing

12. Is there anything else you'd like to share about technology adoption in Zimbabwean SMEs?

"Thank you for your valuable time and insights."

APPENDIX 4: Letter of SME Database Request: Ministry of Women Affairs, Community, Small and Medium Enterprises Development

Mufaro Mugumbate
Block 11 S01, Waneka Flats
Ardbernnie, Harare
Email: mugumbatem@africau.edu
Mobile: +263783846089 Student Number: 213102

27 November 2025

The Secretary
Ministry of Women Affairs, Community, Small and Medium Enterprises Development
8th Floor, Kaguvi Building
Corner Simon Muzenda & Central Avenue
Harare, Zimbabwe

RE: REQUEST FOR DATA ACCESS: RESEARCH ON AI ADOPTION IN RETAIL SMEs

Dear Sir/Madam,

My name is Mufaro Mugumbate, a student in the Executive Master in Business Administration program at Africa University. I am currently undertaking research for my dissertation titled: **"The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail Small to Medium Enterprises (SMEs)."**

Given your ministry's pivotal role in fostering the growth and development of SMEs in Zimbabwe, I am writing to respectfully request your assistance. I would be grateful if you could provide a database or relevant SME Contact information pertaining to SMEs operating in the retail sector in Harare.

This research is officially approved by the Africa University Research Ethics Committee (Approval Number: AUREC 4125/25) – see attached AUREC approval letter. The primary objective is to understand how AI tools can enhance marketing outcomes for SMEs. The results will ultimately empower SME owners and managers with practical information on AI adoption. Additionally, the findings will offer evidence-based insights that can guide your ministry and other policymakers in creating targeted interventions to support the digitalization of our vital SME community.

Any data shared with me will be used strictly for academic purposes and handled with complete confidentiality.

Your consideration of this request would be greatly appreciated and would significantly contribute to the success of this important study.

Yours faithfully,

Mufaro Mugumbate

APPENDIX 5: Research Approval - Ministry of Women Affairs, Community, Small and Medium Enterprises Development

From the Office of the Secretary for Women Affairs, Community, Small and Medium Enterprises Development

All correspondence should be addressed to
"THE SECRETARY"
Telephone: (0242) 708398, 735186/8
251559
E-mail: pswomenaffairs@gmail.com
7th Floor Kaguvi Building
Cnr Simon Muzenda/Central Ave

ZIMBABWE

Reference:
SECRETARY FOR WOMEN AFFAIRS, Community, Small and Medium Enterprises Development
Kaguvi Building
Simon Muzenda/Central Avenue
Harare, Zimbabwe

08 December 2025

Mufaro Mugumbate
Block 11 S01, Waneta Flats
Arbernnie, Harare

RE: PERMISSION TO CONDUCT A RESEARCH ON "THE IMPACT OF ARTIFICIAL INTELLIGENCE (AI) ADOPTION ON MARKETING PERFORMANCE IN ZIMBABWEAN RETAIL SMALL TO MEDIUM ENTERPRISES (SMEs)": MINISTRY OF WOMEN AFFAIRS, SMALL, MEDIUM AND ENTERPRISES DEVELOPMENT

Please be advised that your request to conduct a research on **"The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail Small to Medium Enterprises (SMEs)"**, is approved.

The approval is on the condition that the information obtained will be used strictly for academic purposes and you will be required to share your research project with the Ministry.

Min. of Women Affairs, Community, Small & Medium Enterprises Dev.
PERMANENT SECRETARY
08 DEC 2025
P. BAG 7726, CAUSEWAY
HARARE, ZIMBABWE

We wish you well in your studies.

Dr. Mavis Sibanda
SECRETARY FOR WOMEN AFFAIRS, COMMUNITY, SMALL AND MEDIUM ENTERPRISES DEVELOPMENT

www.mwacsmed.gov.zw /mwacsmed @mwacsmed

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APPENDIX 6: Ministry of Industry & Commerce Database request & response

Mufaro Mugumbate <mugumbatem@africau.edu>

Request for Information for Student Research

2 messages

Mufaro Mugumbate <mugumbatem@africau.edu> Thu, Nov 27, 2025 at 1:41 PM
To: info@mic.gov.zw

Good Day

My name is Mufaro Mugumbate, a student enrolled in the Executive Master in Business Administration program at Africa University.

I am currently conducting my academic research on the topic: "The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail Small to Medium Enterprises (SMEs)." I am writing to humbly request your assistance in providing a database or contact information for SMEs operating in the retail sector within Harare.

Access to this information is crucial for the successful execution of my research, as it will form the basis for my study's sample population. This research has been reviewed and approved by the Africa University Research Ethics Committee (Approval Number: AUREC 4125/25).

Please find attached letter of information request and Africa University Research Ethics Committee Approval form

Best regards

2 attachments

Ministry of Industry and Commerce Information Request.pdf
102K

MUGUMBATE MUFARO AFRICA UNIVERSITY AUREC APPROVAL.pdf
364K

info@mic.gov.zw <info@mic.gov.zw> Fri, Nov 28, 2025 at 8:40 AM
To: Mufaro Mugumbate <mugumbatem@africau.edu>

Good day

Thank you for your email. Kindly note that this matter falls under the Ministry of Women Affairs, Community, Small and Medium Enterprises. my you please consult them for guidance.

Regards
Communication and Advocacy Unit

From: "Mufaro Mugumbate" <mugumbatem@africau.edu>
To: info@mic.gov.zw
Sent: Thursday, November 27, 2025 1:41:25 PM
Subject: Request for Information for Student Research
[Quoted text hidden]

APPENDIX 7: Letter of SME Database Request SMEDCO

Mufaro Mugumbate
Block 11 S01, Waneka Flats
Ardbernnie, Harare
Email: mugumbatem@africau.edu
Mobile: +263783846089 Student Number: 213102

12 December 2025

The Chief Executive Officer
Small & Medium Enterprises Development Corporation- SMEDCO
12 Lawson Ave, Harare, Zimbabwe

RE: REQUEST FOR DATA ACCESS: RESEARCH ON AI ADOPTION IN RETAIL SMEs

Dear Sir/Madam,

My name is Mufaro Mugumbate, a student enrolled in the Executive Master in Business Administration program at Africa University. I am currently conducting my academic research on the topic: **"The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail Small to Medium Enterprises (SMEs)."**

I am writing to humbly request your assistance in providing a database of contact information for SMEs operating in the retail sector within Harare. Access to this information is crucial for the successful execution of my research, as it will form the basis for my study's sample population.

This research has been reviewed and approved by the Africa University Research Ethics Committee (Approval Number: AUREC 4125/25) and has also been approved by the Ministry of Women Affairs, Community Small and Medium Enterprises Development. Copies of the approval letters are attached to this letter.

The findings of this study are anticipated to be highly beneficial. They will provide valuable insights for SME owners and managers on the potential benefits and strategies for adopting AI in their marketing operations. Furthermore, the research findings can assist the government and policymakers in formulating relevant strategies and support systems to encourage digital transformation within the SME sector, a critical component of our national economy.

The information you provide would be treated with the utmost confidentiality and used solely for the purpose of this academic research. Research findings & insights will also be shared with you for the benefit of your members.

Your support would be instrumental in contributing to the body of knowledge on this pertinent subject in Zimbabwe.

Mufaro Mugumbate

APPENDIX 8: SMEDCO Response to SME Database information Request

Mufaro Mugumbate <mugumbatem@africau.edu>

Request for Information for Africa University MBA Student Research Work- Mufaro Mugumbate

[redacted] <[redacted]@smedco.co.zw> Wed, Jan 7, 2026 at 9:58 AM
To: Mufaro Mugumbate <mugumbatem@africau.edu>
Cc: [redacted] <[redacted]@smedco.co.zw>, [redacted] <[redacted]@smedco.co.zw>

Good Day,

Thank you for your correspondence and for considering SMEDCO as a potential stakeholder in your academic research. We acknowledge receipt of your request for access to a database of contact information for SMEs operating in the retail sector within Harare, as well as the accompanying research approvals and documentation.

While we commend your research topic and appreciate the relevance of your study to the SME and financial inclusion landscape in Zimbabwe, we regret to advise that SMEDCO is unable to provide SME client contact information as requested.

As a registered Development Finance Institution, we are bound by strict confidentiality and non-disclosure obligations in terms of the Banking Act [Chapter 24:20], as well as the Data Protection Act [Chapter 11:22]. These statutes require that all client and beneficiary information including names, contact details, and business identifiers be processed lawfully, for specified purposes, and not disclosed to third parties without the explicit, informed consent of the data subjects or a statutory directive. The information held by the institution is collected strictly for financing, monitoring, and regulatory purposes.

May we refer you back to the Ministry as they maintain a database that is not held to the same restrictions as well as the SME Associations which may be able to assist with outreach to the SMEs.

APPENDIX 9: Letter of SME Database Request SMEAZ

Mufaro Mugumbate
Block 11 S01, Waneka Flats
Ardbernnie, Harare
Email: mugumbatem@africau.edu
Mobile: +263783846089
Student Number: 213102

12 December 2025

The Director
Small to Medium Enterprises Association of Zimbabwe - SMEAZ
Harare, Zimbabwe

RE: REQUEST FOR DATA ACCESS: RESEARCH ON AI ADOPTION IN RETAIL SMEs

Dear Sir/Madam,

My name is Mufaro Mugumbate, a student enrolled in the Executive Master in Business Administration program at Africa University. I am currently conducting my academic research on the topic: **"The Impact of Artificial Intelligence (AI) Adoption on Marketing Performance in Zimbabwean Retail Small to Medium Enterprises (SMEs)."**

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This research has been reviewed and approved by the Africa University Research Ethics Committee (Approval Number: AUREC 4125/25) and has also been approved by the Ministry of Women Affairs, Community Small and Medium Enterprises Development. Copies of the approval letters are attached to this letter.

The findings of this study are anticipated to be highly beneficial. They will provide valuable insights for SME owners and managers on the potential benefits and strategies for adopting AI in their marketing operations. Furthermore, the research findings can assist the government and policymakers in formulating relevant strategies and support systems to encourage digital transformation within the SME sector, a critical component of our national economy.

The information you provide would be treated with the utmost confidentiality and used solely for the purpose of this academic research. Research findings & insights will also be shared with you for the benefit of your members.

Your support would be instrumental in contributing to the body of knowledge on this pertinent subject in Zimbabwe.

Mufaro Mugumbate

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