

BINDURA UNIVERSITY OF SCIENCE EDUCATION



FACULTY OF COMMERCE

DEPARTMENT OF ECONOMICS

**THE IMPACT OF TECHNOLOGY IN THE PROCUREMENT PROCESSES, A CASE OF
BAKERS INN ZIMBABWE**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
A BACHELOR OF COMMERCE (HONOURS) DEGREE IN PURCHASING AND SUPPLY
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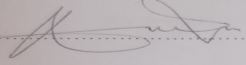
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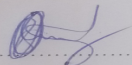
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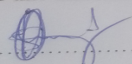
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iii

DECLARATION FORM

I, Allen Zvikomborero Gova, verify that all of the work on this project is completely original with no prior publication or submission to another university or organization.

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DEDICATION

I offer my dedication to the Almighty, who has given me the courage and tenacity to start and finish this academic endeavor. I would also like to express my sincere gratitude to my family for their unwavering love and support during my academic career. My parents have always inspired me to set higher goals. I am grateful to my friend Kudakwashe for always being there to support me and make me laugh, even in the most trying circumstances.

I would also like to dedicate this work to my siblings, Arnold and Ryan who believed in me and offered words of encouragement when I needed them the most. Thank you for reminding me that difficult roads often lead to beautiful destinations. Lastly, I dedicate this dissertation to all the students who face challenges in pursuit of their academic goals. May this work remind you that with hard work, dedication, and an unbreakable spirit, anything is possible.

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ABSTRACT

The present study employed a qualitative research design in conjunction with a descriptive research design to examine the effects of technology on procurement procedures within the bakery industry. The study's conclusions imply that technology generally improves procurement procedures. To guarantee a successful procurement process, the study did point out that more effective hardware and software are also required, in addition to appropriate training for procurement personnel. This study offers insightful information about the benefits and challenges of technology in the bakery industry's procurement procedures, as well as recommended directions for further investigation and application.

The study also showed that while technology has been successful in lowering transaction costs, it has not been able to decrease the amount of time spent on the procurement process because of a number of issues, including limited funding and budgetary restrictions. In order to enhance employees' abilities to carry out their daily responsibilities and make better use of contemporary online procurement technologies such as Enterprise Resource Planning (ERP), the study suggests staff training and development. To guarantee their ultimate objectivity, accountability, and nondiscrimination, appointed tendering committee members are provided with ethics education and good corporate governance.

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LIST OF ACRONYMY

RFP.....	request for payment
RFQ.....	Request for quotation
PO.....	Purchase order
ICT.....	information communication technology
ERP.....	Enterprise resource planning
AR&VR.....	Augmented reality and Virtual reality
PU.....	Perceived usefulness
PEOU.....	Perceived ease of use
TRM.....	Technology acceptance measures
CRM.....	Customer relationship management
SAP.....	System application products
RFID.....	Radio frequency identification

CHAPTER ONE

1.0 Introduction

Advancements in technology have freed procurement specialists to focus on strategic decisions and actions. According to Bienhaus and Haddud (2018), procurement procedures can now take on a more strategic role in obtaining, assessing, and processing big data to support the technological initiatives that have attracted efficiency, effectiveness, and profitability. Traditional procurement process has significantly impacted by the rapid advancement of technology. These supply chain procedures include buying, managing bids, sourcing, vendor management, and controlling goods and services. The study's outline, goals, background information, research questions, and rationale for the inquiry are all included in the first chapter, which also acts as the study's cornerstone. This section talks about the limitations and boundaries of the study.

1.1 Background study

Emerging procurement technologies have proliferated in recent years and are completely changing how businesses handle their procurement procedures. These technologies, which range from blockchain to artificial intelligence, are decreasing costs, increasing efficiency, and optimizing procurement procedures (Baran Konya, 2023).

For the procurement process to be sustainable, a wide range of competencies and skills were needed (Glas & Kleemann, 2016). However, most procurement technologies are still in the conceptual stage of development, and organizations continue to have insufficient knowledge about technology. Reluctance to move away from current systems and resistance to change can be attributed to fear of the unknown (Rejeb, Sle, & G Keogh, 2018). Difficulties were caused by barriers arising from the capacities, capabilities, protocols, and processes that are presently in use (Bienhaus & Haddud, 2018). Regular updates are necessary for data analytics procedures and technologies, which can be expensive (G. Wang, Gunasekaran, Ngai, & Papadopoulos, 2016). Procurement-specific issues were less of a challenge for information technologies than

they were for procurement technologies. Procurement professionals had doubts about procurement technologies because of the high investment costs, high expectations, transparency, security, and data ownership (Glas & Kleemann, 2016). Inadequate technology results in inadequate vendor management in the private industry.

Furthermore, labor-intensive and error-prone manual procurement processes frequently involve a lot of paperwork, manual data entry, and manual communication. It is now possible to automate some tasks, eliminating the need for human error and human intervention. For instance, by automating purchase orders, invoices, and requisitions, electronic procurement systems improve efficiency and transparency throughout the procurement cycle. But because these systems require a large outlay of cash, businesses can no longer afford them. In comparison to their counterparts who rely on traditional procurement methods, companies that use technology in their procurement processes see an average 35% reduction in manual effort and 15% decrease in cost.

But, carrying out procurement processes by hand can also lead to financial mismanagement, which can result in low-quality raw materials, supplier bias, delays in the procurement process, and a lack of transparency. The use of manual techniques led to poor quality work and reputational damage. costs (Arden Partners, 2020).

1.2 Problem statement

The Bakers Inn bakery's revenue is being negatively impacted by improper handling of funds during the procurement processes. This makes it possible for the gap between technology and procurement procedures to exist because it leads to lower-quality products, increased costs, poor supplier management, and lower customer satisfaction. If these issues are not resolved appropriately, they increase the risk of continuity, high sales returns, and revenue constraint by allowing customers to be dissatisfied with subpar quality. Furthermore, because technology relies on electrical devices, a high rate of inefficiency results in subpar order fulfillment.

1.3 Purpose of the study

The aim of the research is to examine how technology has affected Bakers Inn bakery's procurement process while taking supply chain technology into account. This includes issues with transparency, risk reduction, product quality, and final product pricing.

1.4 Research objectives

1. To assess the function of technology in the procurement processes at Bakers Inn bakery
2. To examine the impact of vendor management in the procurement processes at Bakers inn bakery.
3. To investigate the influence of technology in the overall success of Bakers Inn bakery.
4. To evaluate risk of technology in the procurement processes at Bakers Inn bakery.

1.5 Research Questions

1. How can technology be integrated into the procurement processes at Bakers Inn bakery?
2. What is the impact of vendor management in procurement processes, at Bakers Inn bakery?
3. How does technology influence procurement processes at Bakers Inn bakery?
4. What are the risk factors associated with technology in procurement processes at Bakers Inn bakery?

1.6 Significance of the Study

Other researchers may use the study as a scholarly reference to improve related future research on the effect of technology in private enterprise procurement processes. The study's conclusions may improve the industry's competitiveness and assist it in

becoming a more streamlined, less expensive sector. Through the use of technology, it may also assist private businesses in increasing their profitability through increased operational efficiency. The study's conclusions and recommendations may also be useful to small business owners, the government, procurement specialists, and supply chain participants in understanding how these technologies improve operational efficiency and help make better logistics management decisions, especially in difficult economic times, particularly in developing nations.

Researchers, universities, the government, and other stakeholder groups are expected to gain from the study. Furthermore, a comprehensive analysis of the challenges faced by private sector companies in Zimbabwe is lacking in the literature. This investigation focused on the particular challenges encountered during the modernization of the economy.

1.7 Assumptions of the study

1. The responders would fully cooperate and provide accurate information to the best of their knowledge.
2. The researcher would be allowed entry to the study institution.
3. In order to provide accurate and trustworthy information, the target respondents were expected to comprehend the necessity of this study and willingly participate.

1.8 Delimitations of the study

This study set out to evaluate the influence of technology on private sector procurement procedures. For the purpose of convenience and speedy information gathering, the study was limited to Bakers Inn Zimbabwe in Harare. The research will concentrate on the

1. Role, importance and benefits of technology in procurement processes
2. Measures that can be used to curb fraudulent practices in procurement processes
3. Methods used in the procurement processes

The researcher strongly feels that the above delimitation will bring out an in depth assessment of how technology in procurement processes aiding to the success of Bakers inn Zimbabwe

1.9 Limitations

Respondents were too busy to be interviewed because the research was done during a period of economic downturn that affected the entire country. The fact that some research participants thought the economy would never recover also prevented them from understanding the project's goal, which delayed its completion. Because they felt political agendas were driving the project, some respondents were reluctant to participate. Employees withheld some information as well because it was confidential. But the researcher showed them a Letter of Authority and gave them genuine assurances that the information was kept confidential and wouldn't be published.

1.10 Definition of terms

Procurement

Is the process of obtaining products, services, or labour from outside vendors? The procedure entails several steps and covers procurement, logistics, negotiation, and sourcing. Obtaining the resources required to support the operations or projects of your organization is the aim. (Burner, Sarah, 2024)

Block chain

It is a distributed database or ledger that is shared by all of the nodes in a computer network.. Though they have applications outside of cryptocurrencies, they are most recognized for playing a critical part in cryptocurrency systems that preserve a safe and decentralized record of transactions. Any industry can use block chains to make data immutable—a term used to describe something that cannot be changed (Adam's Hayes, 2023)

Vendor management

It describes the protocols that companies employ to manage their suppliers, or vendors. Vendor management includes selection of vendors, contract negotiations, expense management, risk reduction for vendors, and service delivery assurance. [taulia.com](https://www.taulia.com)

Artificial Intelligence

It is drastically changing the landscape of procurement. Businesses can increase productivity by automating tasks and gaining deep operational insights with AI-powered procurement solutions ([gep.com](https://www.gep.com), 2023).

sourcing

Lora Arbuzova (2021) defines as the process of determining, selecting, and managing suppliers in order to procure the necessary goods and services from them.

1.11 Summary

This chapter emphasized the key elements that define the entire research project. The study provided valuable insights into procurement procedures, background data, research questions, assumptions, and objectives, as well as a problem statement, definitions of key terms, and limitations that may impede the study process from proceeding as intended. The entire next chapter will be devoted to reviewing relevant books, theories, and other schools of thought on the topic that have been written about by reputable authors.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

When examining concepts of technology's impact and how it affects the procurement process, it is essential to assess secondary data derived from earlier research projects. This highlights the important elements that have an impact on the study and identifies current trends in the field. Additionally, it focuses on how technology has transformed procurement procedures, bringing about significant improvements in areas like sustainability, supplier relations, risk management, efficiency, and compliance and governance. In order to further synthesize the important factors of the research, two theories are also discussed in the following chapter, which examines these factors based primarily on the research objectives.

2.1 Conceptual framework

Illustrates the relationship between the research major variables. The procurement process is the dependent variable in this study, and technology is the independent variable influencing it. Diagrammatic representation of this is given.

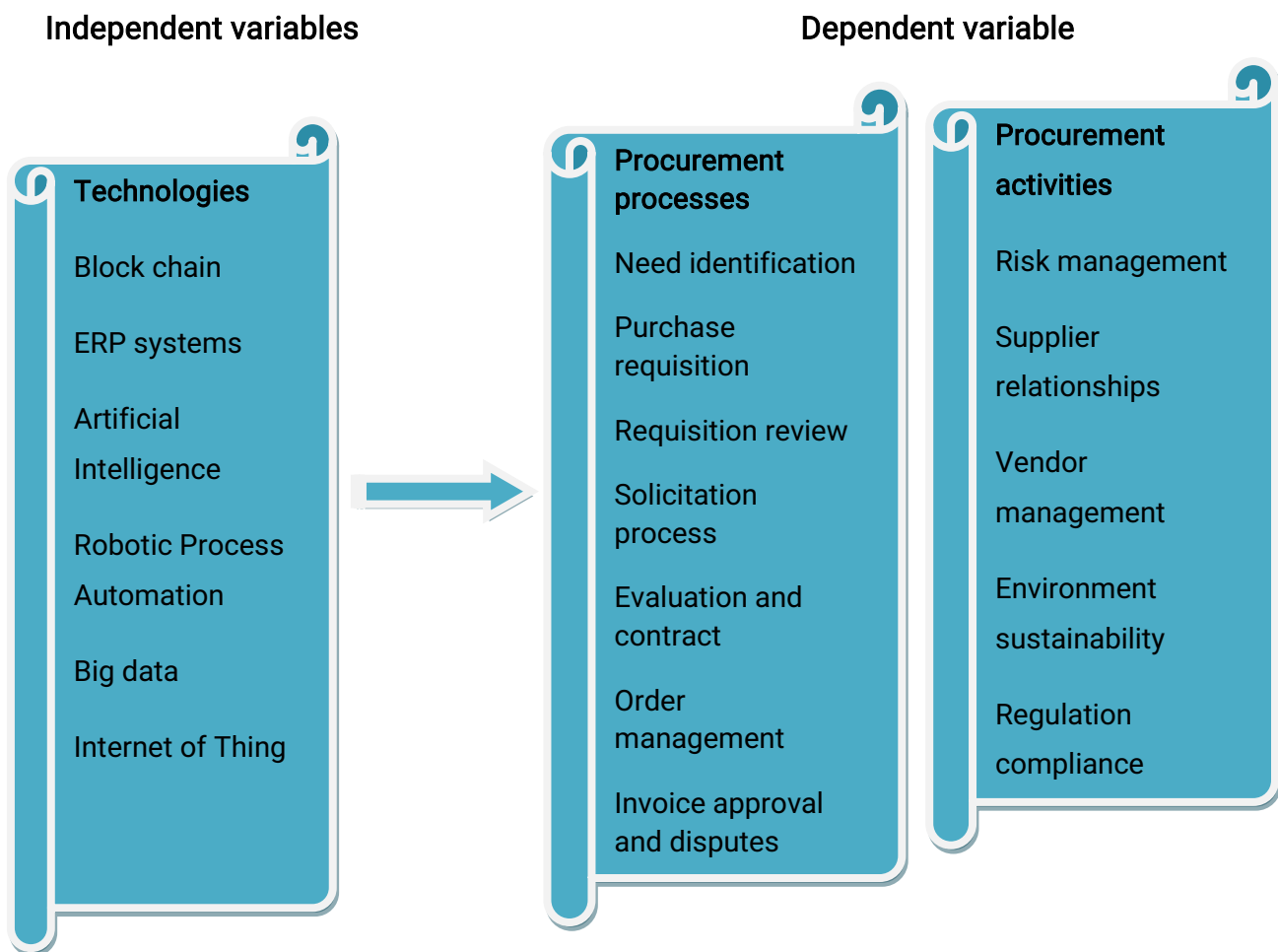


Fig 2.1. researcher 2024.

2.2 Theoretical Framework

The Technology Acceptance Model (TAM) and Rogers' Diffusion of Innovation theory serve as the study's guiding theories. Since both theories could sufficiently explain all of the study's objectives, they were applied. We go into more detail about these below.

2.2.1 Technology acceptance model (TAM)

This model, which was proposed by Davis (1989), is the most popular paradigm for understanding how people accept and utilize technology (Venkatesh, 2000). TAM substitutes the two technology acceptance measures (usefulness and simplicity of use) for several of TRA's attitude measures. The fundamental tenet of both the highly behaviorally oriented TAM and TRA is that an individual will have unfettered freedom to act once they make the decision to perform. There will be many limitations in the real world, like restricted freedom of action. is a theory of information systems that simulates how consumers adopt and use technology during the purchase process?

Increased productivity, time and cost savings, convenience, and other benefits can be obtained by organizations and individuals through the adoption and use of information technology (Foley Curley, 1984; Sharda, Barr & McDonnell, 1988). There has always been motivation for the potential benefits of technology. investigates whether people are ready to adopt new technologies through management research (Davis, 1989). When it comes to new technology, users make decisions about how and when to use it based on a range of factors, which the model suggests include the following:

Perceived usefulness (PU),

The degree to which a person believes that using a particular system would enhance

their job performance" is the definition from Fred Davis. It refers to whether or not a person believes they can use that technology to accomplish their goals.

perceived ease-of-use (PEOU).

According to Davis, the extent to which an individual believes that utilizing a specific system would be free from effort and increase efficiency in the buyer's profession. The barrier is broken down if the technology is user-friendly. When something is difficult to use and has a complex interface, nobody is fond of it.

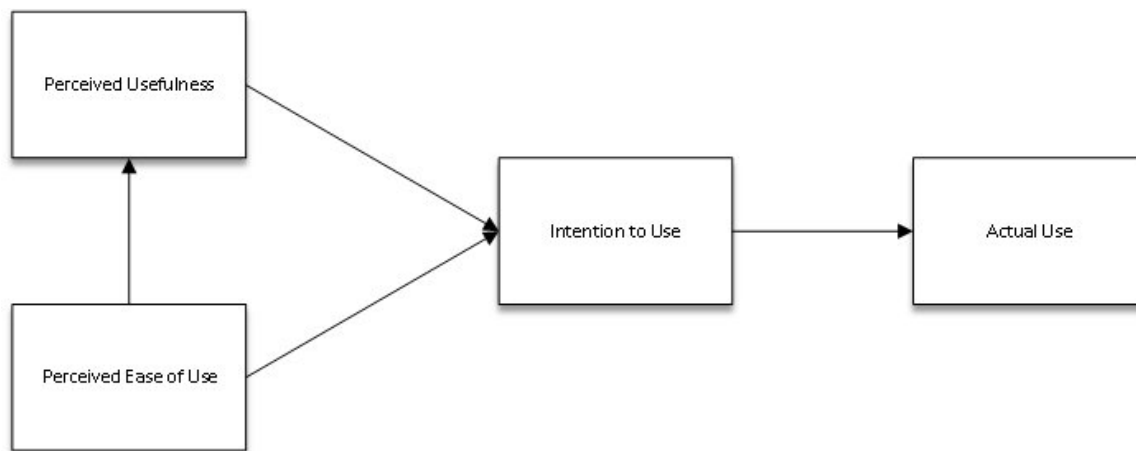


Fig 2.2.1 Davis, 1989

Bagozzi, Davis, et al. claim that before making any attempts to use new technologies, people develop attitudes and intentions toward attempting to learn how to use them. Like any other system, personal computers are new and complex, so decision-makers are unsure if they will be successfully incorporated into the procurement process. It is plausible that attitudes and intentions toward the use of technology may be naive or unconvinced, or that they may emerge only after preliminary efforts to master its use.

2.2.2 Diffusion of Innovations Theory

This theory aims to explain the how, why, and rate at which new ideas and inventions proliferate. Everett Rogers popularized the theory with his 1962 book *Diffusion of Innovations*. According to Rogers, diffusion is the process through which an innovation progressively spreads over time among members of a social system via specific channels. The theory of diffusion of innovations is derived from multiple academic domains. According to Rogers, adopters, communication channels, time, a social structure, and the innovation itself are the five main factors that affect how quickly a new idea spread. Social capital is essential to this process. The innovation must be widely accepted in order for the procurement process to be self-sustaining. An innovation reaches critical mass within the adoption rate at some point. Theoretically, at this point, the early majority and early adopters diverge, according to management consultants working for Regis Mckenna Inc. It was first defined as the distinction between niche appeal and mass (self-sustaining) adoption.

There are various types of adopters: innovators, early adopters, early majority, late majority, and laggards. The types of adopters and the innovation-decision-making process have a significant impact on diffusion, which can take many different forms. Adopters are classified based on innovativeness, which is defined as the degree to which an individual accepts a novel concept.

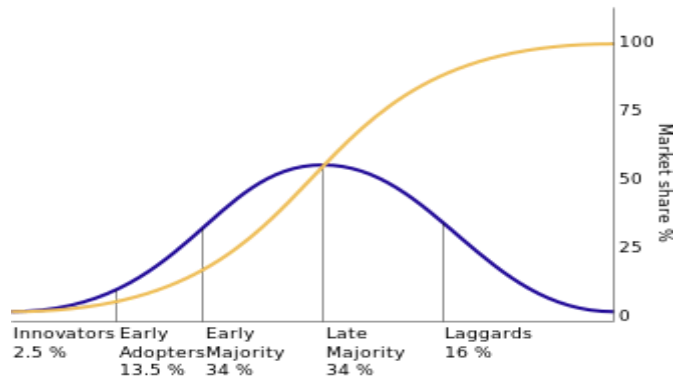


Fig 2.2.2 Rodger, 1989

Category	Definition
Innovators	Risk-takers, high social standing, financial flexibility, social nature, and the easiest access to scientific resources and other innovators are characteristics of innovators. They can adopt technologies that might ultimately fail because of their risk tolerance. These mistakes are reduced by financial muscles.
Early adopters	These individuals possess the highest degree of opinion leadership among the adopter categories. Compared to late adopters, early adopters are more socially forward, have higher social status, more advanced education, and are more financially stable. Their adoption decisions are more subdued than those of innovators. Their astute adoption choices enable them to maintain a central role in communication.
Early Majority	They take considerably longer than innovators and early adopters to adopt an innovation, to vary from degree to degree. Early Majority members typically have above-average social status, interact with early adopters, and are not in positions of opinion leadership within a system.

	(Rogers 1962, p. 283)
Late Majority	They take up innovations later than the typical participant. These people adopt an innovative approach only after the majority of society has done so, and with a great deal of scepticism. In general, the Late Majority is skeptical of innovations, has a lower social status than average, has less financial liquidity, engages in interactions with both the Early and Late Majorities, and doesn't show much opinion leadership.
Laggards	Innovations that are embraced tend to stick around. Compared to some of the other groups, individuals in this category show little to no opinion leadership. These folks are generally against change agents. Laggards tend to be the most devoted to "traditions," the oldest adopters, the lowest social standing, the ones with the fewest liquid assets, and the ones who spend most of their time with close friends and family.

Table 2.2.1 Rodger, 1989

the spread of innovations in Rogers' view. As new technology (blue) is adopted by successive consumer groups, its market share (yellow) will eventually approach saturation. There are segments of adopters on the blue curve.

Five stages of the adoption process	
Stage	Definition
Knowledge / Awareness	When the person first encounters an innovation, they don't know much about it. The purpose of doing this is to eliminate some risk. At this point, the person isn't feeling particularly motivated to learn more about the innovation.
Persuasion	The person actively searches for relevant information and details because they are interested in new changes.
Decision	The individual considers the concept of the change and assesses the benefits and drawbacks of implementing it before deciding whether to accept or reject the innovation. According to Rogers,

	this stage is the hardest to gather empirical data on due to its individualistic nature.
Implementation	Depending on the circumstance, the person uses the innovation to varying degrees. Also, at this point, the person assesses the innovation's usefulness and might look up more details about it.
Confirmation / Continuation	The decision to keep utilizing the innovation is made by the individual. This stage confirms the group has made the right decision and is both intrapersonal (may cause cognitive dissonance) and interpersonal. The adopter can now look for confirmation that the choice and course of action are wise. Without this last confirmation, adopters usually experience cognitive dissonance. Information that is unfavorable to the innovation may increase dissonance; if this happens, the innovation may be discounted in order to bring the system back into equilibrium. At this point, adopters need change agents to help them feel at ease with their choice.

Table 2.2.2 Stages of adoption by Rodger, 1962.

2.3 Technologies exist within digitalized procurement processes

Digitalization involves a wide range of technological advances. A list of a few of them is provided below, along with a brief synopsis.

2.3.1 Blockchain

A network platform based on cryptology that enables safe peer-to-peer transactions without the need for peer trust (Christidis and Devetsikiotis, 2016). Furthermore, the technology increases network transparency by enabling transactions to be traced back to the network's original source. All transaction data is stored in the decentralized distributed ledger, which is accessible to all network users. These days, supply chain management accounts for the majority of its applications.

2.3.2 Artificial Intelligence (AI)

utilizing algorithms to help computers recognize relevant data and use that information to make decisions on their own. Sub technologies like natural language processing, deep learning, and machine learning are included in the term artificial. These allow a computer to comprehend things like written text and voice. Although the terms "cognitive computing" and "AI" are sometimes used interchangeably, cognitive computing is actually an IBM project aimed at creating a computer with human-like thought and behavior (Kelly, 2015).

2.3.3 Robot Process Automation (RPA)

Through algorithms, computers are able to carry out tasks that previously required human labor skills on their own. While AI and RPA are similar, AI is more widely used because it can learn on its own, whereas RPA is limited to routine tasks (Accenture Operations, 2017).

2.3.4 The Internet of Things

This technology makes it possible to connect computers to real-world objects. To accomplish this, sensors are attached to the actual objects in order to retrieve data (Gubbi et al., 2013). For instance, these sensors might offer details about an item that is beginning to show signs of wear and tear. By giving this information, the production will be aware of the issue before it arises, allowing for a replacement to be made before it happens.

2.3.5 Big Data

New functions and opportunities for automation are made possible by the growing

amount of data that digitization and the Internet of Things provide (Gartner, 2018). Analyzing the data that is required and the true quality of the incoming data is also crucial.

2.3.6 Augmented reality and virtual reality(AR and VR)

AR essentially involves integrating virtual objects into the physical world (Gartner, 2018d). You can move around in a completely virtual world when using virtual reality (Gartner, 2018e). For instance, in a factory, AR can be used to place a virtual model of a machine and see how it fits, while VR can be used to explore a pre-construction virtual model of the factory.

2.3.7 5G

The mobile network's fifth generation. Most likely capable of sending data at speeds of up to 10–20 gigabits per second (Thors, 2017). The primary benefit is that a greater number of mobile network frequencies will be available, allowing for the connection of a greater number of devices. This will be necessary for the internet of things to be fully implemented.

2.3.8 Printing with 3D

Three-dimensional models can be printed from CAD files using 3D printing. The way that supply chains operate now may be altered by this technology. For instance, in order to allow SKF to manufacture the product independently, suppliers may decide to stop selling components and instead offer CAD files (Magnusson, 2018).

2.4 Technologies in procurement process

Procurement specialists are continuously looking for new ways to streamline processes using new technologies like block chains, ERP systems, artificial intelligence, robotic process automation, big data, and the Internet of Things, according to (Abolo Journal, 2024) posited. This is because procurement is a fast-paced field. Each of these maximizes efficiency and lowers supply chain expenses. It should also come as no surprise that technology has altered the nature of competition in this field. The impact of technology on procurement is undeniable; this includes automated workflows and

data analytics tools. When buying anything in the bakery industry, there are four things to think about: what the business needs, how much it needs, where it can get it for the best price, and who has the best quality. The other four contracting factors are what the customer wants, how much they want to pay, who has the best price/quality ratio, and when they need it.

A purchase order must be created, the need for a good or service must be determined, the best supplier must be found, terms must be negotiated, and the order must be received. It is also known as the procurement life cycle or, informally, the procurement process. By implementing an efficient procurement strategy, businesses can reduce delivery times, ensure they are paying the right price for goods and services, and build a strong supplier network through technological advancement. Enhancing the efficiency of procurement can be achieved primarily through process of optimization.

Procurement team in the bakery industry they are in charge of planning and implementing procedures during the procurement process. However, the size and nature of the business completely determines the appearance of the procurement process. Since there is no one-size-fits-all method, purchasers should modify the procurement procedure to fit the particular needs of each bakery business. Nonetheless, a general template for the procurement process exists, outlining the key phases in the cycle (Taulia journal, 2024).

The requirements process, supplier research, value analysis, submitting a purchase request, the review phase, the conversion to a purchase order, contract administration, monitoring and assessment of the received order, three-way matching, payment fulfillment, and record keeping are some of the components that make up the procurement process. (Kissflow.com, 2024)

2.4.1 Needs Recognition

Businesses can create a thorough plan for quickly and affordably acquiring goods and services during the need identification stage of the procurement process. This is possible through the use of advance technologies in the warehouses which signifies shortages and stock control such organization will acquire right product at right time.

2.4.2 Request for Purchase

Purchase requisitions are official written or electronic requests from clients or internal users for immediate assistance to the procurement team. It includes all of the necessary information to get the right goods, services, or projects. Technology can be used to distribute RFPs (Requests for Proposals), find suppliers, and conduct market research. This procedure can be made more efficient with the use of supplier databases, e-procurement tools, and online sourcing platforms (kissflow.com,2024).

2.4.3 Requisition review

The procurement procedure will not begin until the purchase request has been approved and verified to be within the budget. In the review stage, department heads or functional managers look over the request package, verify that the products or services are actually needed, and check to see if the necessary funds are available. Pro approved purchase requests become purchase orders (POs), and requisitioners get rejection letters with their rationale. You can manage all of these with a simple purchase order program.

2.4.4 Solicitation process

After a request is approved, the procurement team will customize the plan and draft the appropriate solicitation procedure; the extent of each individual solicitation plan will depend on how complex the requirement is. After the budget is approved, the procurement team sends out multiple requests for quotations (RFQ) to vendors so they can compare and obtain bids and choose the best vendor; technology can help with this step by automating background checks, tracking and comparing supplier performance, and evaluating and scoring vendors; systems for vendor management and e-sourcing can help with this step.

2.4.5 Evaluation and contract

The procurement team and the evaluation committee will examine and assess supplier quotations and delivery schedules after the formal solicitation process concludes in order to ascertain which supplier will be most qualified to meet the current need. The purchase order is issued to the chosen supplier after the contract is finalized and signed. A PO is enforceable as soon as a supplier acknowledges and accepts it. Electronic signatures, automated bidding procedures, contract management, and price comparisons can all benefit from technology. Platforms for online bidding and negotiations can help with successful bargaining.

2.4.6 Order management

Based on the standing agreement, the recently executed contract, or the list price, a purchase order is issued to the selected supplier. The supplier delivers the goods or services by the deadline. The buyer checks the order upon delivery and notifies the supplier of any issues. Automated inventory level updates, quality control, and receiving goods are all made easier by technology. Radio-frequency identification (RFID), barcode scanning, and mobile devices are a few examples of this technology. The procurement system and this data can be synchronized in real time.

2.4.7 Invoice approvals and disputes

Acquisition software, like Kiss flow at this crucial point in the process, Procurement Cloud gives you an advantage over rivals. Three-way matching between the GRN, Supplier Invoice, and PO can be done using Kiss flow to ensures accurate receiving of the order correctly and that there are no discrepancies. The invoice is approved and forwarded to the payment processor once three-way matching is complete. Automated invoicing, electronic payments, and three-way matching (PO, receipt, and invoice) are all made possible by technology. Electronic invoicing services and payment methods are widely used for efficiency.

2.4.8 Record Keeping

Following payment, buyers keep track of all documentation for bookkeeping and auditing purposes. Everything that is pertinent is stored in one location, including purchase requests and approved invoices. Customer Relationship Management (CRM) systems and supplier portals can assist in efficiently managing performance,

monitoring communication, and upholding strong supplier relationships. There are still a ton of options to consider when it comes to the procurement process's potential future technology adoption. Artificial intelligence (AI) is being tested by some businesses to enhance their processes for selecting products and automating bidding. Some are looking into blockchain technology to create an electronic marketplace for goods and services or to expedite the supplier management process.

2.5 Benefits of Using Technology in Procurement processes

Over time, technology's place in procurement has grown, making it a vital tool for companies. In the current business climate, technology can expedite the procurement process, enhance departmental communication within an organization, and shorten the time required to locate and approve vendor proposals.

2.5.1 Save time

One of the primary benefits of utilizing technology in procurement is the reduction of the time required to find and accept vendor proposals. With today's digital bidding platforms, companies can quickly search through a variety of bids from different vendors and select which proposal to award. Additionally, these platforms can automatically produce reports that show how well each vendor performed during the procurement process. Managers who use this information to guide their future purchase decisions can save time and money.

2.5.2 Quality communication

Is the ability of technology to improve communication between different departments within an organization another benefit in the procurement process. When businesses use digital messaging tools, they can easily send and receive messages across different groups within their organization. This keeps things moving along on schedule and makes it simpler to ensure that everyone involved in the procurement process is informed. Additionally, pertinent parties can be kept informed of noteworthy developments throughout the procurement process by means of automated email alerts.

2.5.3 Streamline process

All things considered, technology has shown to be a useful tool for streamlining the procedure and saving money and time. Businesses and vendors can communicate more effectively by utilizing digital bidding platforms or messaging tools, which guarantee that all requests are handled promptly and efficiently. On the other hand, in recent times, technology has transformed procurement, facilitating businesses' search for and communication with suitable suppliers. It can be hard to know where to begin when searching for a new supplier because they have so many new tools at their disposal. Alternatively, you can save costs and meet your supplier's stringent quality requirements by using technology and following specific procurement best practices.

2.5.4 Limitations of Technology in Procurement

There are some intrinsic limitations with technology when it comes to procurement. Modern technology can be complex and slow to update. This could slow down the adoption of new technologies into the procurement process and make it more difficult

to adjust to changes in the market. Furthermore, a company that uses antiquated or outdated technology may find it harder to get suppliers to work with it.

Furthermore, in-person interactions cannot always be replaced by technology. In fact, a lot of businesses discover that these interactions are essential to fostering trust and comprehending the demands of their clientele. In the end, technology can expedite the procurement process, but it cannot replace interpersonal communication.

2.5.5 Improving the procurement process with technology

Although buyer-supplier relationships have always included the procurement process flow mentioned above, recent advancements in supply chain technology have allowed for improved management of this process. You can incorporate a variety of software programs into the procurement process to increase productivity, automate labor-intensive tasks, and simplify tasks like supplier selection. Among them are. Inventory management systems that guarantee access to safety stocks, improve your visibility into the location of goods in the supply chain, and give you advantages over vendor-owned inventory strategies. Platforms for managing suppliers that simplify communication channels, centralize the storage of supplier data, and facilitate the development and maintenance of supplier relationships. Working capital financing options that can be applied to the payables process to accelerate cash flow and enable you to reinvest in expansion more quickly include supply chain financing and dynamic discounting. Regardless of your business objectives, you can create and oversee a procurement life cycle that is perfectly in line with them by utilizing procurement technology.

2.6 The role of technology in a business's overall success

About five years ago, Bakers Inn's internal operations were altered by technology. Information technology (IT), with its constantly changing landscape, is transforming every facet of business in the current digital era. These are a few examples of how IT has significantly impacted businesses (Steven Scheck, 2023).

2.6.1 Increased Productivity

IT has made it possible for bakery businesses to automate numerous manual procurement processes by bringing automation into the workplace. Automating routine tasks boosts a company's overall productivity and frees up staff time for more important work. Process simplification: Cutting-edge technologies such as artificial intelligence (AI) are assisting businesses in further streamlining their operations, which maximizes resource utilization and profit.

2.6.2 Improved Communication

Has facilitated teams' ability to stay in touch and communicate with one another—and with suppliers—in times of need. Businesses can now quickly and easily access information thanks to the development of cloud-based communication tools. Long meetings are not necessary as a result, and overall productivity is increased.

2.6.3 Improved Customer Experiences

Through a number of methods, it has made it possible for businesses to interact with customers more effectively. Businesses are able to create individualized customer experiences that retain customers through email campaigns, online forums, customer loyalty programs, and more. Furthermore, businesses can provide better services by using big data to obtain insightful knowledge about the needs of their clients.

2.6.4 Cost Reduction

Companies have been able to significantly lower overhead costs by using automated processes, which also save costs associated with obsolescence and delays. Businesses can reduce labour and supply costs by doing away with unnecessary tasks. Lower prices for consumers and higher profits for the company may result from this. But, technology doesn't always benefit the company; it can also be expensive. For all technological applications, businesses must invest in the appropriate hardware, software, and other resources. This can be highly costly, particularly for small businesses with limited resources for technology purchases.

2.6.5 Human error

Furthermore, is only as good as the users who utilize it, and errors do occur. Human error can be extremely expensive for businesses, ranging from wrong data entry to clicking on the wrong link or downloading a malicious application.

2.6.6 Security Risks

This is the biggest negative because security threats increase in tandem with every technological advancement. In recent years, there have been several malevolent attacks on businesses, some of which have resulted in significant financial losses for the impacted companies.

2.7 Vendor management in procurement processes

Gep.com defines vendor management as a structured program created to improve supplier management and raise the suppliers' impact on the buyer's business. It comprises supervising vendor deliverables, working together to create new procedures, maintaining compliance, and paying invoices. By managing vendors well throughout their life cycle, businesses can lower operational risk, enhance customer satisfaction, and keep costs under control. Furthermore, vendor management aids in obtaining long-term value from suppliers. The first step in the vendor management process is to identify suitable vendors for the company. At this point, details regarding the price and quality of the work are gathered and reviewed. An organization maintains relationships, evaluates performance, and ensures that its vendors are paid on schedule after this phase. However, if a business has a big supplier base or a complicated geographic footprint, it can be challenging to obtain a centralized view of the vendors it uses. It is also a complicated procedure to evaluate risk and get accurate documentation from suppliers. Reputational risk for businesses stems from the caliber of products and services provided by suppliers.

2.8. Risk of technology in the procurement processes

One of the main concerns with using technology in procurement processes is data

security. Organizations are more susceptible to cyberattacks and data breaches as a result of their growing reliance on digital tools and platforms to handle their procurement operations. Hackers can obtain sensitive procurement data, including supplier details, pricing information, and contract terms, by taking advantage of flaws in software and networks. For the company, this may have detrimental effects that include monetary losses, legal ramifications, and harm to its reputation (Hecklau, F. et al., 2016). Potential for errors and inaccuracy- this is the other risk of technology in procurement processes. Digital tools are not perfect, even though their design aims to increase accuracy and efficiency.

Errors in the procurement process, such as ordering the wrong quantity of goods, choosing the wrong supplier, or overlooking crucial contract terms, can be caused by software bugs, inaccurate data entry, or human error. By resulting in delays, cost overruns, and operational disruptions, these errors have the potential to reduce the effectiveness of the procurement function.

Furthermore, the procurement process's reliance on technology may lead to a lack of accountability and transparency. Digital tools and automated processes may make it more difficult to monitor and keep track of procurement activities, which may allow unethical behavior—such as fraud and corruption—to go unreported. Organizations run the risk of breaking rules and policies without adequate oversight and controls in place, which could result in fines and other legal repercussions.

Procurement professionals also face a challenge from the quickening pace of technological innovation, since they must constantly adjust to new tools and technologies. This may result in a shortage of skills and a need for training within the procurement function, which would reduce the team's efficiency in performing its tasks. Furthermore, employees used to traditional methods may become resistant to the introduction of new technology in procurement processes, which will impede the organization's ability to adopt and integrate digital tools. In order to lessen the risks that come with using technology in procurement processes, companies must put strong cybersecurity measures in place to shield sensitive data from online threats. To secure digital platforms and networks, this can involve multi-factor authentication, firewalls,

and encryption. To educate staff members about cybersecurity best practices, organizations should also regularly conduct security audits and training sessions.

Organizations should also spend money on cutting-edge data analytics tools so they can track and examine procurement processes and spot trends and abnormalities that might point to fraud or non-compliance. Organizations can optimize their procurement strategy and make informed decisions by utilizing data analytics to gain valuable insights into their procurement processes.

Additionally, it is imperative for organizations to guarantee that procurement professionals receive sufficient training and support to facilitate their adaptation to novel technologies and tools. This may entail giving people access to workshops, training courses, and other materials in order to equip them with the know-how and abilities needed to use digital platforms in the procurement process. Organizations can optimize the benefits of technology in procurement processes and improve the capabilities of their procurement team by allocating resources towards employee development.

2.9 Challenges of Procurement Technologies

Procurement technologies required a wide range of competencies (Glas & Kleemann, 2016). The majority of procurement technologies, however, they are still in the conceptual stage of development due to lack of adequate technological awareness. It is difficult to move away from the current systems and there is resistance to change (Rejeb, Súle, & G Keogh, 2018). Barriers resulting from the capacities, capabilities, procedures, and processes that are currently in place created difficulties (Bienhaus & Haddud, 2018). Data analytics technologies and procedures must be updated on a regular basis (G. Wang, Gunasekaran, Ngai, & Papadopoulos, 2016).

2.9.1 Resistance to change

Amemba et al. (2013) identified several obstacles to e-procurement, such as employee resistance to change, a lack of management support, and the presence of outdated IT equipment. Information technologies posed greater challenges to procurement

technologies than did procurement-specific problems. This is because of high startup costs, high expectations, transparency, security, and data ownership, procurement professionals were skeptical of procurement technologies (Glas & Kleemann, 2016). For various businesses using the same service, the shared database architecture of service providers poses a significant risk. It is possible that the service provider does not build distinct databases for various businesses. According to Glas and Kleemann (2016), the majority of users were unsure about the processes for reporting security breaches and how crucial it was to keep passwords secure.

2.9.2 Connection and integration complexity

One of the challenges was that there was no direct integration or connection between the users' organization network and the service provider. (Valverde & Stephens, 2013). The process of transferring was complicated by problems with data security and long-distance wireless network capacity (Szozda, 2017). In addition to security, privacy and confidentiality issues with information sharing were among the information challenges facing e-procurement (Abu-ELSamen, Chakraborty, & Warren, 2010). Furthermore, there was the issue of "data silos," which refers to data that is only accessible by one department and makes functional cross-referencing unfeasible (Zagorin, 2019). Thirty thousand government suppliers in Malaysia faced numerous obstacles due to inadequate infrastructure when attempting to access the e-government system. E-procurement faced a number of challenges, including inadequate broadband coverage, incompatible software packages, protracted internal system design processes, budgetary constraints, security concerns, and a lack of standards for system development (Nawi et al., 2016). It also faced resistance from upper management.

2.9.3 The challenges associated with system specifications

Specification encompassed legal and administrative procedures, IT infrastructure, data management, and software integration. IT expertise and outsourcing presented implementation management challenges (Aman & Kasimin, 2011). Instead of sending purchase orders electronically through electronic data interchange, for example, scanned copies were sent to suppliers via email. According to Loo and Seow (2018), suppliers who are private companies have not yet fully adopted e-procurement.

This promotes further research into the challenges posed by incomplete e-procurement implementation. The 9th International Conference on Operations and Supply Chain Management will take place in Vietnam in 2019. The prospect of AI becoming a decision-making machine raises concerns about control, accountability, and trust. The machine's training and data acquisition are expensive (Ng, 2019). When it comes to leadership, skills, and tools, business executives in Malaysia who have adopted AI encounter challenges (Asia, 2019).

Limited data availability, poor data quality, a lack of standardized procurement procedures, a lack of talent, change management constraints, a lack of reliable solutions for legacy systems, and a lack of reliable references are some of the difficulties associated with cognitive procurement, which is connected to AI (Pai, 2019). But there is still a dearth of research to examine the adoption of AI for procurement professionals in Malaysia.

Scalability is a problem for blockchain because each node must process and validate each transaction, requiring a lot of processing power and a high-bandwidth internet connection (Banerjee, 2018; Min, 2019).

2.9.4 Law enforcement policies

Another challenge is government regulation and limitations to oversee the blockchain's implementation (Banerjee, 2018; Hackius & Petersen, 2017; Min, 2019). Additional problems could include a lack of blockchain experience and organizational resistance (Min, 2019). Additional challenges include unclear benefits, industry acceptance, a lack of technological maturity, and data security concerns (Hackius & Petersen, 2017). Supply chain participants may become unclear as a result of blockchain technology's lack of an intermediary (Y. Wang, Han, & Beynon-Davies, 2019). Blockchain regulation that strikes a balance between productivity innovation and public safety (Yussof & Al-Harthi, 2018). A study conducted on SMEs in Malaysia found that one of the main barriers to the adoption of blockchain technology is its complexity. This includes complexity related to system functionality, usage, and process efficiency (Wong et al., 2019). However, because only 10% of participants were employed in the procurement function, the study did not specifically focus on procurement professionals. Research

on the difficulties posed by big data, IoT, and 3D printing is scarce.

2.10 Review of Empirical Literature

The investigator obtained secondary data from recent research conducted on and related to the subject matter being examined. The empirical literature on the study's primary findings is covered in the section that follows.

2.10.1 Varma and Khan (2014)

Many academics have supported paperless transactions in procurement by implementing System Applications and Products (SAP) in data processing through the use of Enterprise Resource Planning (ERP) systems, Automatic Identification, and Electronic Data Interchange modules, according to their study on Information Technology in Supply Chain. Users and companies can be guaranteed system security and transparency with these systems.

2.10.2 Nair (2012)

According to respondents in a study titled RFID for supply chain management, information exchange within important business functions, products, and internal and external financial resources could be easily controlled and managed by ICT-based procurement. Additionally, by enhancing quality, reducing trading risks, and saving coordination expenses, it increases business profitability. One of the many analysts who have examined the use of ICT tools in procurement is Nair (2013), who published a study titled E-Supply chain management using software agents. They all arrived at the same conclusion regarding ICT: it enhances information sharing, increases performance, and removes supply chain risks by enabling system- and procedure-based task execution and supplying information to decision makers in formats they require.

2.10.3 Moon (2007)

According to research on enterprise resource planning (ERP), information and communication technology (ICT) is essential to the integration of suppliers and customers, ensuring that the proper quantity and quality of products are supplied. According to Auramo et al. (2005), information and communication technology (ICT) is being used for data entry, real-time processing, and transaction regularization—all of which are expected to help participants in the procurement chain balance supply and

demand. The advantages of IT in supply chain management for Finnish businesses were the subject of the research. In their study on enterprise systems and the supply chain, Brooks and Davenport (2004) discovered that information and communication technology (ICT) was essential to managing and controlling the procurement process.

Bertschek, Cerquera, and Klein (2013) looked at how broadband internet affected business performance and concluded that e-procurement, among other things, has become a hot topic in supply chain management and will completely change purchasing practices in the future. Craig, Carter, and Washispack (2018) state that both developed and developing nations have embraced ICT. These adoptions have enhanced the provision of public services, broadened public access to information, and raised civil society engagement in political and economic matters. After examining the Kenyan context, Chebii (2016) discovered that most nations are moving in a way that offers opportunities for all vendors to improve public service delivery and have realized the value of public participation in government bidding procedures.

2.10.4 Ambe (2016)

Studies on public procurement trends and developments in South Africa suggest that most global economies have adopted e-procurement as a means of mitigating information acquisition challenges. The software application that manages bid or tender preparations is called indemt management, according to Cheptora's (2018) study on the impact of ICT on procurement performance in Kenyan manufacturing firms. She also learned that electronic auctioning, e-tendering, invoice management, contract management, and vendor management comprise the e-procurement system. Brooks (2004) observed in a study on supply chain management and enterprise systems that inventory management facilitates online ordering, tracking of products ordered, and managing inventories.

2.10.5 Waigwa and Njeru (2016)

By eliminating face-to-face interactions with service providers and enjoying advantages like shortened procurement cycles, enhanced accountability, and increased efficiency and cost savings, public sector organizations can use e-procurement to lessen

procurement process corruption. This study examined the factors influencing public security agencies' procurement contract management practices. The public sector has embraced e-procurement, and its utilization graph has expanded exponentially, per a 2016 study by Adebajo, Tickle, Lin, and Bourlakis on e-business capabilities in developed and developing nations. Chimberengwa et al. (2015) found that the Zimbabwean public sector has not yet fully adopted e-procurement after conducting a study on the procurement processes at Gwanda Provincial Hospital in Matabeleland South Province.

2.9.6 Chigudu (2014)

According to research on public procurement in Zimbabwe, organizations that implement and make use of e-procurement networks and systems stand to gain a great deal. In their study on the problems affecting Zimbabwe's operational procurement process, Dzuke and Naude (2017) noted that in order to improve service delivery, local authorities must establish ICT frameworks. Apart from the use of emails and the acceptance of mobile payments by urban councils, it is unknown what applications local governments in Zimbabwe have selected for procurement. To find out how much local government uses ICT applications in their procurement procedures, more research is needed. It is unclear how these applications will impact the local council's procurement procedure, so more research is required.

2.11 Research Gap

Several research studies have been carried out to investigate the effects of e-procurement in a range of industries, particularly in the public sector. The aforementioned studies make it evident that the majority of research on the subject of the impact of technology on procurement procedures has been carried out in Kenya, South Africa, and Zimbabwe, with relatively few studies being done in Northern African nations. The authors' main concern was how technology interacted with every step of the procurement process. The impact of technology on public procurement procedures has been studied by a few writers.

It is noteworthy that there has never been a study done in Zimbabwe on how technology affects procurement procedures in the private sector bakery industry. Thus, there is a dearth of research on the role of technology in business performance and sustainability in Zimbabwe's bakery sector. However, studies conducted by other companies and industries show that e-procurement strategically aids in the accomplishment of organizational objectives. for supervisors and employees working in the bakery industry. Consequently, there is a deficiency in the current studies' research on procurement procedures. By investigating the effects of technology on the procurement procedures in Zimbabwean bakeries in light of the increasing adoption of digitalized systems by various industries and businesses, this research study aims to close a gap in earlier studies.

2.12 Summary

The previous research on the function of technology in the procurement process and its impact on overall business performance is compiled in this chapter. The goals and driving forces of the investigation were outlined and evaluated, examining the procurement processes and the technological barriers as highlighted and explained by earlier scholars. The project's goals have been examined and explained using two well-known theories. To determine the research gap, an empirical review of the literature was conducted.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Research methodology, according to Derek Jansen and Kerryn Warren (2020), is the "how" a research study is conducted in a practical sense. More specifically, it deals with the systematic ways in which a researcher designs a study to ensure reliable and accurate results that address the goals, objectives, and research questions. It includes information on the study population, research instruments, sampling strategies, and research design. As a result, the chapter examines everything mentioned above, focusing on the study's settings, the chosen methodology, and pertinent data collection instruments, analysis strategies, sample sizes, and sampling methods, along with their supporting arguments.

3.1 Research design

Is a technique for addressing the research question with empirical data? A well-planned

research design facilitates the process of ensuring that the methods employed align with the objectives of the research project and are capable of utilizing the right analysis for the available data. It is a thorough plan that specifies the criteria and procedures for obtaining and assessing the necessary data.

3.2 Qualitative research method

Prone to be more adaptable and inductive, enabling you to modify your strategy in light of the findings as you conduct your research. A sort of research methodology called qualitative research design is characterized by an emphasis on investigating and comprehending complex phenomena and the interpretations that people or groups make of them. According to Nick Jain (2023), it is frequently employed in the social sciences, psychology, anthropology, and other disciplines that are interested in subjective experiences and interpretations.

It is more crucial that the richness and diversity of human experiences, opinions, attitudes, and actions be captured. By extending beyond simple statistical analysis, it aims to uncover insights that quantitative research might overlook. The most common methods used to collect data are focus groups, observations, interviews, document or artifact analysis, and observational techniques. These methods provide researchers with thorough, illustrative data about the perspectives, experiences, and environments of participants.

3.3 Data Sources

3.3.1 Primary data

Using primary data is primarily justified by the researcher's ability to better understand the concept through direct questioning of respondents in in-person interviews and the use of questionnaires to collect current information. For a specific project or goal, a researcher or group of researchers will collect primary data straight from the source. It is first-hand information gleaned directly from the source or by using methods such as experiments, interviews, surveys, and observations to collect data. This is novel data that has never been released or studied before.

3.3.2 Case Studies

Case studies entail a comprehensive analysis of a single case, such as a person, group, company, or community. Scholars collect information from various sources, such as observations, interviews, and document analysis, in order to offer a thorough grasp of the case. Case studies are especially helpful for understanding complex and unusual phenomena in the context of real-world occurrences. (Jain, Nick, 2023)

3.3.3 Secondary Data

Before the study started, the researchers collected secondary data. Prior to gathering primary data, the researcher gathered secondary data to ascertain and catalog the corpus of existing knowledge regarding the phenomenon and in the relevant field. Published articles, newspapers, journals, organizational records, and data sources written by other researchers and writers who were looking into related subjects were the sources of documentary secondary data. This data was utilized because it allowed the researcher to conduct a longitudinal study using easily accessible pre-existing data sources, saving time and money by giving the basis for straightforward comparisons with the primary data.

3.4 Population

The term "research target populace" refers to an entire discrete grouping of individuals or things that share traits. What counts is how many participants in total match the researcher's inclusion requirements for the study. All Bakers Inn employees who work in departments directly involved in procurement operations or who have knowledge of them comprised the population of the Bakers Inn which served as the case study organization for this assignment. Among these are the departments of stores, Human resource, and Finance; these are further subdivided into the Accounting Services Section, Procurement Management Unit. Below is a summary of the total population of these departments:

Table 3.1: Sample size and population

Respondent group	Population
------------------	------------

Logistics	14
Stores and warehouse	27
IT department	14
Human Resource	10
Finance department	17
Total	79

Source: Researcher, 2024

3.5 Sample Population

The sample size is the fraction of the target population from which a researcher will try to gather data. The majority of respondents were selected from the procurement department, stores, finance and HR which houses the Procurement Management Unit, out of a total population of 79 Bakers Inn employees.

3.5.1 Sampling protocol

The main reasons for sampling are cost and time savings, but it's crucial to make sure the sample accurately represents the population and all of its features. For the purposes of the study, judgmental or deliberate sampling was the sample technique employed. This allowed the researcher to specifically select and identify the respondents who will be part of the study and provide the information for the data collection. The main justification for employing the sampling method is that there aren't many primary data sources that are rich in information because the phenomenon under study is distinct. Competent subjects were identified by the researcher, who carefully selected them based on their track record and familiarity with the phenomenon being studied. This category included end users, accounting officers, finance managers, graduate trainees, clerks, procurement officers, procurement managers, and procurement specialists in addition to managers and non-managerial staff.

3.6 Research Tools

Research instruments are the devices that the investigator uses to collect data from the population sample. In order to collect data from participants in this study, questionnaires and interviews were employed.

3.6.1 Survey Questionnaire

In order to learn the truths or opinions of respondents about a specific phenomenon, questionnaires are written collections of questions that are given to chosen respondents. Likert scale were used in order to measure attitude of respondents on level of agreeing or disagree with technological initiatives within procurement processes. This method can be used to gather quantitative or qualitative data, which is then further analyzed and presented in tabular or graphical form. There are two types of questionnaires, mostly distinguished by the manner in which they will be used. The respondent can self-administer the two categories at their convenience, even if the researcher is not present. The study's descriptive design and the use of self-administered delivery and collection questionnaires are in line with the previously mentioned claims. These comprised open-ended questions that used closed, opinion-based response or attitude, as well as yes/no questions, and closed-ended questions that let the researcher direct participants' thoughts about the study. Questionnaires were used because they ensured respondents' privacy and confidentiality and allowed them to respond honestly whenever it was most convenient for them. Furthermore, questionnaires were selected because they could enable the researcher to obtain data from respondents in a comparatively short amount of time, all while saving time and money.

3.6.2 Interviews

Asking a series of questions concerning a particular claim during an interview helps the researcher gain a more qualitative and in-depth understanding of the concept. Open-ended questions can be used in structured or semi-structured interviews to ask these. In this way, the investigator supplemented information from interviews with data collected through questionnaires. The interview was conducted with a deliberately

selected sample of few people from different departments. In order to help manage the interviews in a semi-structured manner, an interview guide was developed during the research phase. Open-ended interview questions were also utilized. This was better. Because of the process' flexibility, the researcher was able to gather more data without being constrained by the closed-ended questions on the questionnaire. Additionally, it made it possible for the researcher to go further and clarify significant points that were raised during the interview. The researcher was able to establish a better rapport with the respondents and obtain information that would not have been found in a structured setting by employing a semi-structured approach. As a result, the quality of the data collected and the researcher's understanding of the phenomenon both increased.

3.7 Moral Issues

This investigation considered ethical view point. Apart from following the regulations and relevant policies of Bindura University, all aspects of appropriate or correct behavior were maintained. Confidentiality, informed consent, and anonymity were all important factors. The researcher assured each respondent that the information collected would be kept confidential. To meet this requirement, questionnaires could be completed without requiring identification. In order to ensure that the study is based on volunteer participation, the researcher first obtained the participant's consent. The researcher accomplished this by stating the purpose of the study in this case, its academic goals and then asking the respondents if they would be willing to participate. Additionally, no social media platforms or the press were allowed access to the information that had been collected.

3.8 Chapter Summary

This chapter focused on general ethical considerations and guidelines to be followed throughout the study, as well as the criteria and methods used by the researcher for respondent identification and selection, data collection, analysis, and presentation. This can be classified as research methodology and design, sample methodology, data collection, analysis, and presentation techniques.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

The previous chapter covered the research techniques used to look into how technology affected Bakers Inn's procurement procedure in Zimbabwe. Additionally, the process and techniques for gathering the population sample were described in detail. This

chapter's goals are to analyze the information obtained from the distribution of questionnaires, as well as to present a discussion and interpretation of the results. This chapter will include a summary of the background data of the respondents and an analysis of the data in line with the goals of the study. We will conduct a thorough analysis of our findings and draw additional conclusions from them.

4.1 Demographic data presentation and analysis

4.1.1 Data response rate analysis.

In order to facilitate the presentation and interpretation of data, as well as the task of comparison and summarization, the researcher integrated the questionnaires with the interview guide. A total of 37 employees within the stated departments' worth of potential respondents received questionnaires out of 79 employees mentioned before. The response rate to the questionnaire is broken down by department below: Table 4.1

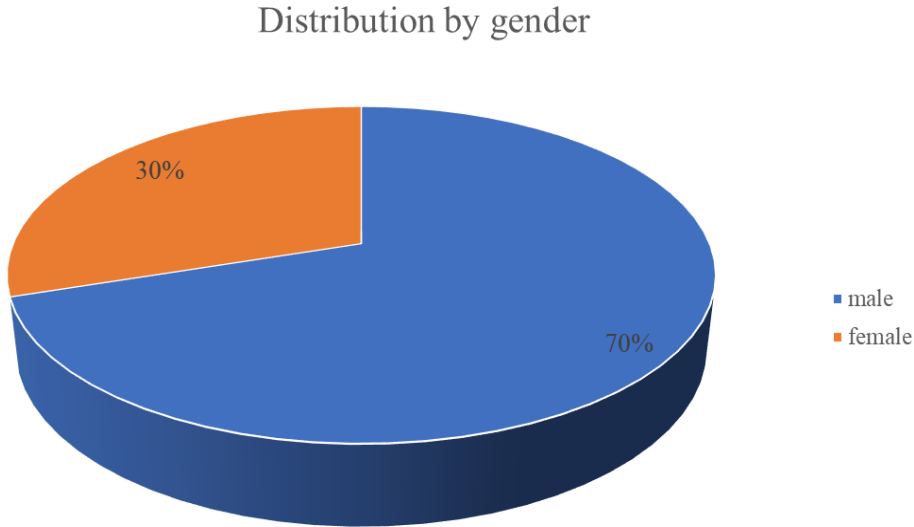
Respondents	Questionnaire administered	Questionnaire Respondents	Response Rate
Procurement	6	6	100%
Stores and warehousing	11	10	91%
IT	6	6	100%
Human resource	5	4	80%
Finance	9	6	67%
Total	37	32	86%

Origin: Primary data HR data base, 2024

The researcher improved the data analysis process by consolidating the questionnaires and interview guide. A high response rate of 86 % was achieved, with 32 out of 37 potential respondents from five departments completing the questionnaires. This response rate is considered significant, as it indicates the reliability of the research findings. Unanswered questionnaires were attributed to the respondents' out of office, illness and this was beyond the researcher's control.

4.1.2 Respondents' distribution by gender.

Figure. 4.1.1 Distribution of respondents by gender.

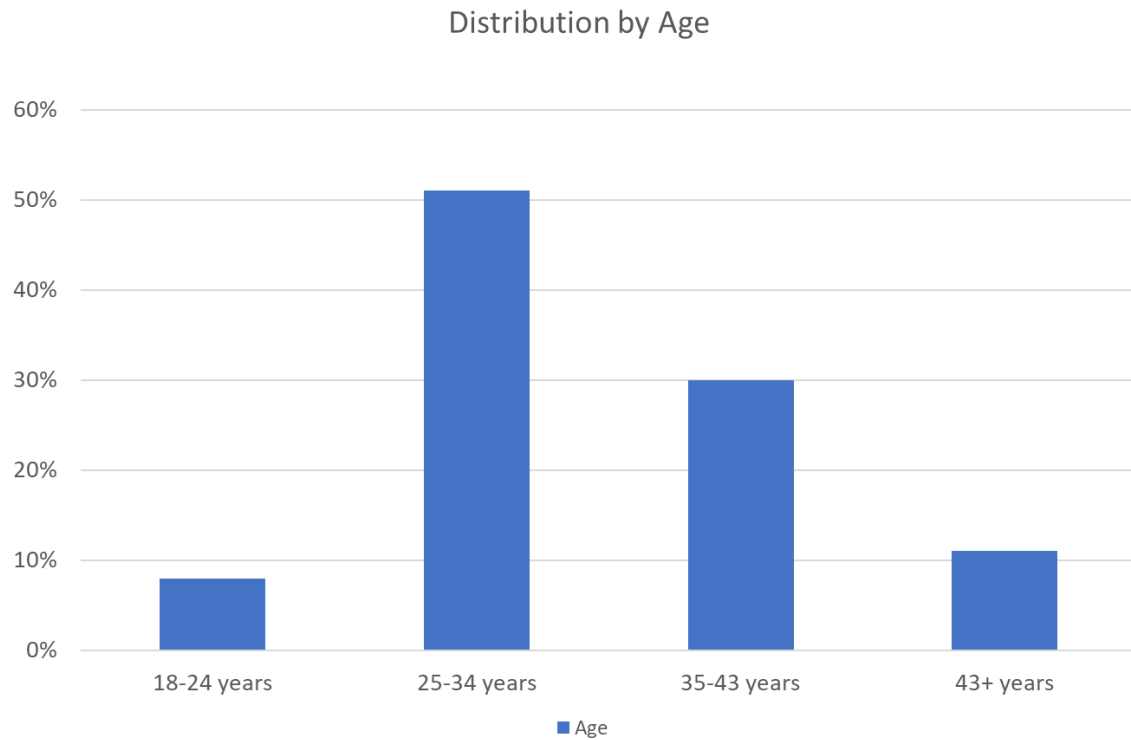


Source: Primary Data researcher,2024

According to the research, the workforce, particularly in the procurement sector, is mostly composed of men, with 70% of employees being male and 30% female. While this indicates a gender imbalance, the distribution is still considered fair and reasonable. It means that there is a good mix of male and female workers in this sector, even though men are more dominant. It is worth noting that gender diversity in the workplace is crucial for creating a fair and inclusive work environment that benefits both employees and employers.

4.1.3 Respondents' distribution by age groups.

Figure. 4.1.2 Distribution of respondents by age group

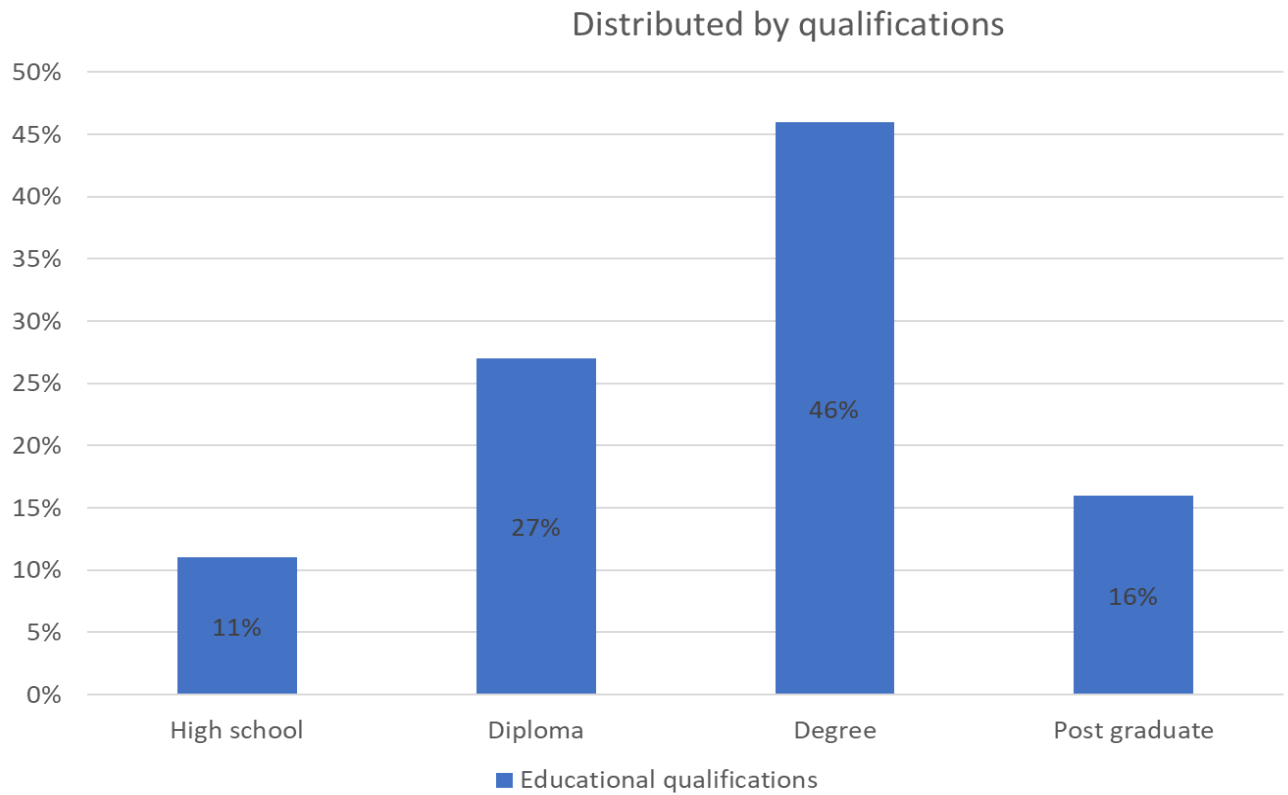


Source: Primary Data Researcher, 2024

Outcomes of the study disclosed that the greater proportion of the workforce fall within the economically active age group (25-50years) although a small portion constitutes those nearing retirement. Therefore, the findings clearly indicate a higher ratio of young professionals who are versatile with computerized business world as shown in the diagram above.

4.1.4 Respondents' distribution by qualifications.

Figure. 4.1.3 Distribution of respondents by level of qualification

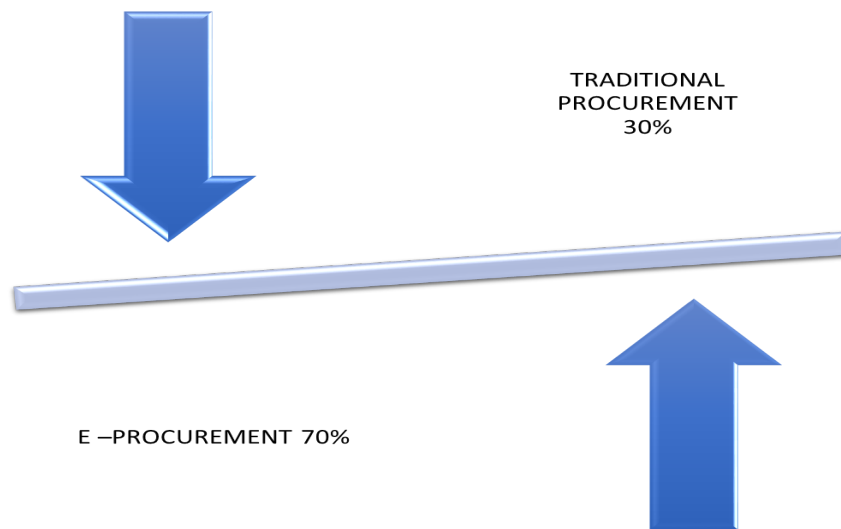


Source: Primary data researcher, 2024

It is clear from the graph analysis that 11% of the respondents had completed high school, 27% had a diploma, 46% had completed an undergraduate degree, and 16% had completed a postgraduate program. This indicates that the respondents had a range of educational backgrounds and had picked up a variety of skills and knowledge to help them perform their jobs in the company well.

4.2 Research findings on the impact of technology in the procurement processes

Fig 4.2.1 Determining the mode of procurement mainly used.

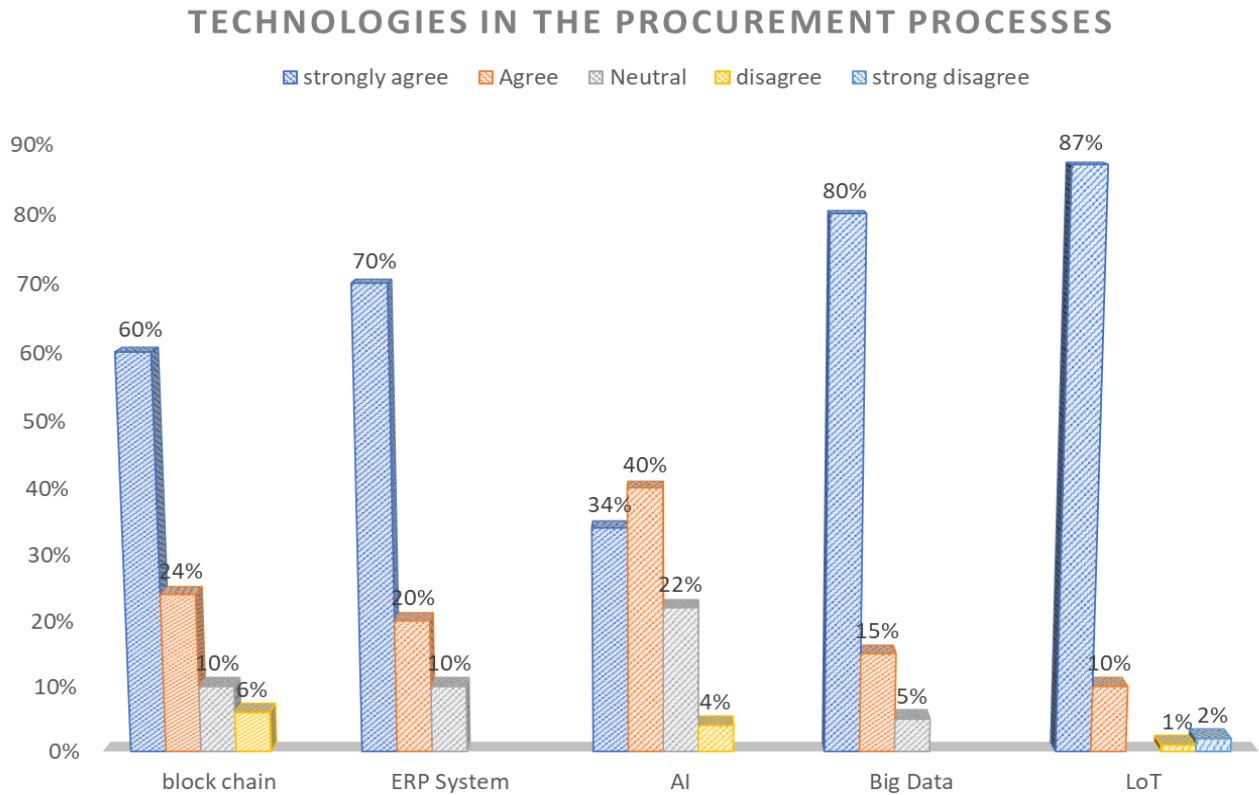


Source: Primary data researcher, 2024

According to the findings from respondents, Bakers inn is increasingly using technology against traditional means because, it streamlines buying processes and lure more value from the existing tools. With technology supplier performance became easier to range strategic supplier and their performance within the organization. Hence, they focus on maintaining good relations in-order to maximize profits.

4.2.2 Research findings on technology used in the procurement processes

Figure 4.2.2. technology used in the procurement processes



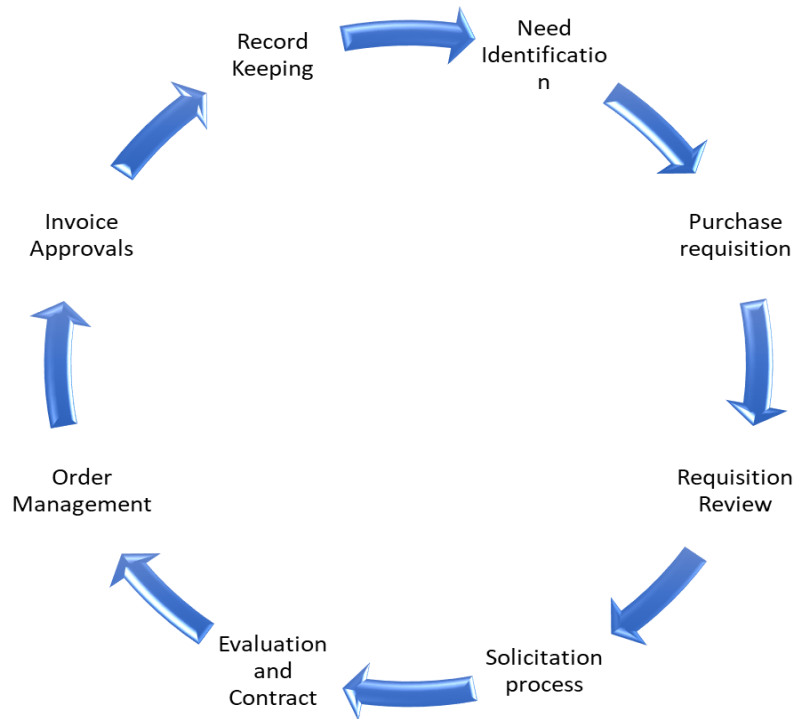
Source: Primary data researcher, 2024

Based on the outcome, respondents were totally agreeing on the use of these technology in order to maximize their profits. According to the respondent's technologies play a pivotal role in trying to improve efficiency, saving ordering time,

speeding up existing processes, aligning with the organizational strategies of profit maximization and bringing up sustainability into the society.

4.2.3 Research findings on aspects found in the procurement process

Figure 4.2.3 Procurement processes



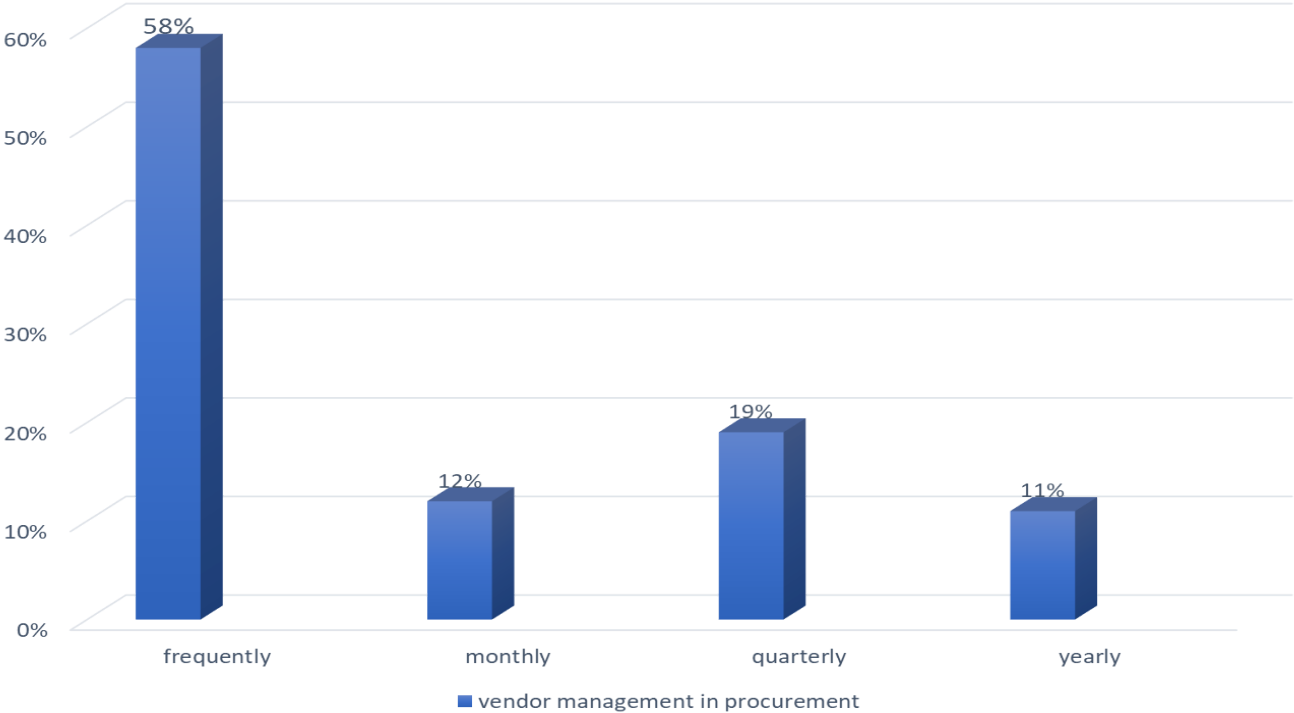
Source: Primary data researcher, 2024

Respondents from Procurement department acknowledge the procurement process using technology systems. They strongly agree that it brings up transparency and even risk mitigation such that it can be traceable in times of delays. Also, they emphasis the issue of monitoring and evaluation were all suppliers are being treated fairly with

integrity due to advanced technology

4.3 Impact of vendor management

Figure 4.3.1 impact of vendor management in procurement processes



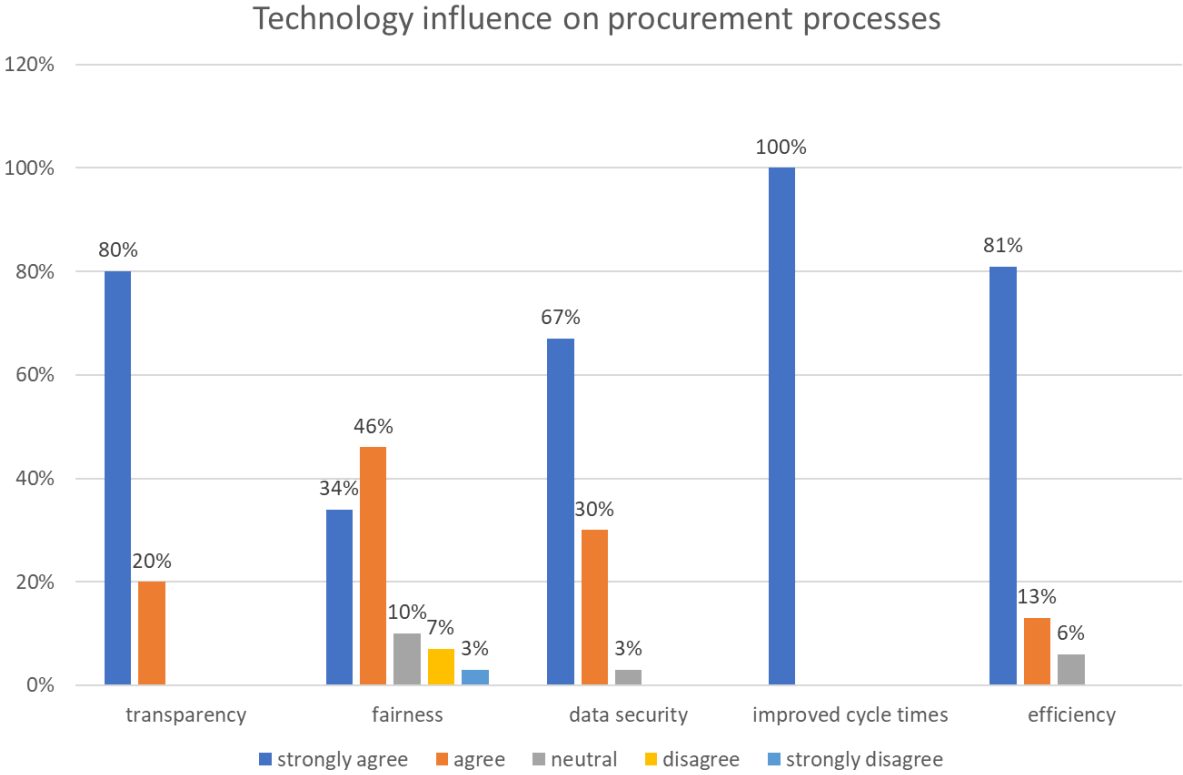
Source: Primary data researcher, 2024

The procurement department totally agreed on the frequent interaction with their suppliers in order to build strong relations. Regular interaction with vendors is essential for effective management through frequent meetings. Vendor performance reviews and due diligence is not a one-time process but, it is a process such that quality evaluations

take place. Therefore, Bakers Inn establish a schedule for vendor management activities that's align with their operational requirements and the nature of their vendor. According to the data 58% highlights that vendor management it's a continuous process unlike once off initiatives.

4.4 Technology influence in procurement processes

Figure 4.4.1 Influence of technology in procurement processes



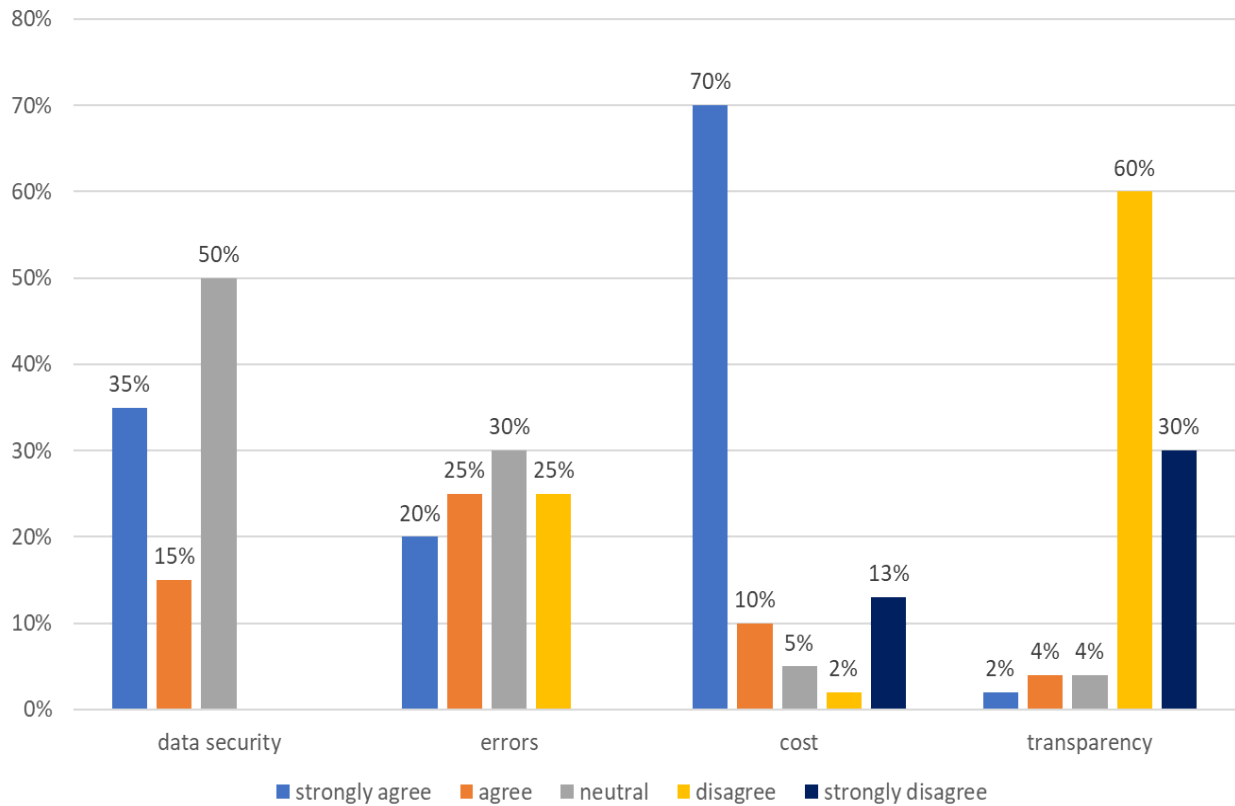
Source: Primary researcher, 2024

Outcome of the study propounded that, workforce has confidence in technology in trying to reach targeted results. From the above data shows that workforce has strongly agree on technology influences in the procurement processes with a positively. Even though they are a small gap which has left on the loophole side such as, dependence on electricity and network availability. Fairness is the aspect which bring the research debatable because some respondents argue that supplier selection might be based on direct procurement hence at times some who falls under such initiatives might be international suppliers and yet local firms needs to be promoted. Transparency offers high mark because, if it's a tender process from opening up to award all interested stakeholders are informed through official platforms just to mention a few. Data security is the most aspect and key feature of technology in the procurement process due to encryption keys such that one without cannot access, that's why respondents has confidence by strongly agree to its importance. Improved cycle times this is essential through the use of Block chain and ERP systems that's were organization rate its warehouse functioning, ordering time and the whole process this why it marks 100% agreeing.

4.5 Risk factors associated with technology in procurement processes

Fig 4.5.1 risk factor of technology

Risk factors of technology



Source: Primary data researcher, 2024

The outcome review that, yes technology speed up processes within the organization, but they are high risk of data security, errors, implementation cost and even transparency of information. So, respondents agree all the risk of technology leave a gap for merits in the long run if well managed. Also, they argue that, since its artificial intelligence it might be tempered will some people with an upper hand of it and even

their competitor might break in. Also, they put emphasis on, regardless of risk associated with technology it increases market share of baker's inn enormously to 48% against other bakeries.

4.6 Research results from interviews

4.6.1 What are the drawbacks faced in during vendor management?

The survey results indicate that obtaining sufficient resources poses the greatest challenge for larger organizations. These challenges are essentially examining opposing viewpoints and knowledge of the required technological instruments. When additional major challenges are considered, such as finishing risk assessments, customizing due diligence for each vendor, and obtaining the necessary documentation from vendors, this research is further reinforced.

4.6.2 What are challenges faced during implementing technology?

By establishing that technology in procurement processes traditional was the most popular procurement method, the researcher also seeks to find out which factors hamper the realization of benefits of technology in the procurement processes. All the respondents pointed out to various factors that may turn technology from angel to demon within the procurement processes. Majority of the respondents pointed out to financial constraints to fund procurement of efficient software packages and lack of proper funding of refresher training such that it allows proper use of electronic means for its employees. Such factors obviously would in turn jeopardize efficiency on procurement process with outdated software packages coupled with less competent staff.

4.6.3 Suggested ways that can make technology enhance efficient in procurement processes

Majority of the respondents suggested that there is need to acquire current software packages that are more efficient. Some also pointed out that there is need to provide training to every employee to ensure better competence that will translate to improved service delivery.

4.7. Chapter Summary

The study's questionnaire and interview, which involved discussion, interpretation, and analysis, were used to collect data from the field, which was examined in this chapter. In accordance with the goals of the study, the chapter particularly addressed the respondents' background data and the analysis that was carried out. An overview of the study's results, recommendations and conclusions drawn from them, and an explanation of the goals of the investigation will all be covered in the upcoming chapter.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.0 Introduction

The results of the study were presented in the chapter prior to this one. The study's findings are presented in this section. The goals of the first chapter are arranged neatly in the conclusions and include analyzing the function of technology in the procurement processes, evaluating the impact of vendor management in the procurement processes, evaluating the role of technology in overall success, and evaluating the risk of technology in the procurement processes. This chapter also includes a summary of the results, an analysis of the implications, and recommendations for further study. This study's conclusions and implications were mainly derived from the information provided in chapter four.

5.1 Summary of findings.

The goal of the study was to look into the use of technology in the procurement procedures. A descriptive survey was the method used, and the sample consisted of 37 workers from 5 departments. The study was primarily motivated by the presumption

that the private sector's traditional procurement procedures are marked by inefficiencies, so they ought to make use of technological tools.

The study's findings regarding the technology convinced most of the respondents that there was a relationship between the technology and the procurement process at Bakers Inn because it was the most efficient and effective mark in the bakery industry, additionally, a greater percentage of survey participants were found to have concluded that technology improved the performance of their business. The study found that a minority of participants agreed that bakery firms are having trouble managing the procurement processes beginning with need recognition and trying to manage the risk of technology in light of the financial crisis' effects on their ability to buy modern technology.

In conclusion, the study consistently found that technology is a widely-used, useful tool in procurement processes that has advantages over conventional methods. It offers several benefits, such as a larger market share and happier customers, and directly improves the way services are provided. Despite its utility, financial constraints were found to be a significant barrier to the complete and accurate execution of materials and general set up cost. Overall, the study emphasizes how crucial technology is to the bakery industry and how crucial it is to find solutions to financial constraints so that the best results can be obtained.

5.2 Conclusion

In summary, the study found that, when used effectively, technology is an important component that can significantly improve procurement procedures. However, financial limitations and a fear of the unknown are the main reasons why many bakeries are reluctant to fully embrace technological initiative. Shorter lead times, more convenience, and transparency can result from using electronic tendering and e-ordering, which can boost productivity and provide high-quality service. Notwithstanding the advantages of technology, funding limitations continue to be a significant barrier to its widespread adoption. As a result, it is advised that bakeries purchase more effective software programs and give their staff members the necessary training to guarantee improved

competency and the successful application of contemporary technologies within the sector, ultimately leading to customer satisfaction.

5.3 Recommendations.

The researcher suggests that;

The bakery industry should modernize its procurement procedures to include fully integrated new software, technological tools, and processes that improve long-term service delivery to customers' satisfaction and market expansion.

In order to maintain strong relationships with their strategic suppliers and potentially establish partnerships, the bakery industry should place a high priority on vendor management in their procurement procedures. Vendor management is an essential part of both procurement and financial management. It aids bakeries in cost control, risk mitigation, process simplification, and maintaining a healthy supply chain. It is becoming more and more important for companies that have prioritized environmental and sustainability goals. These companies should have required ongoing oversight to ensure compliance and added more standards to their vendor selection process. An organization's performance can be greatly enhanced by a successful vendor management process. The following benefits of using best practices in vendor management are possible. Cost control, risk mitigation, quicker payments, enhanced compliance, more efficient supply chains, and better ways to deal with disruptions in the supply chain. If your business depends on important vendors to provide value to your customers, then managing these vendors effectively is critical to its success.

It is important to take risk management in procurement processes seriously. This process entails locating, evaluating, and reducing potential risks that might have an impact on the technologies used in the process. These risks can originate from a number of different places, including viruses, cyberattacks, data security, system malfunctions, changes in regulations, and even internal elements within your business. The common goal is to create a proactive strategy to reduce the negative consequences of these risks.

Providing training to employees that is proper for the procurement procedures is vital for the effective and efficient adoption of modern technology in the procurement. It is important to note that this cannot happen without proper guidance and cooperation between suppliers and buyers also other interested parties. Therefore, it is recommended that there should be increased cooperation in the initial phases of the procurement cycle to guarantee the success of technologies within the margins of procurement processes

The bakery industry must acknowledge the importance of implementing creative solutions to promote efficient use of public resources. One way to achieve this is to consider technological procurement options for sustainable goods and services, which would not only make the sector more competitive but also contribute to sustainable development.

5.4 Areas of further study.

The researcher suggests that further research concentrate on the following areas after assessing the study's findings:

Subsequent research endeavors ought to concentrate on investigating the optimal methodologies for integrating technologies in procurement within the bakery sector.

To identify the factors preventing developing nations from fully utilizing technology, more research must be done. This study would contribute to the development of practical policies and strategies that support sustainable service delivery by offering a more thorough understanding of the challenges and opportunities presented by technology in the bakery sector.

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APPENDIX 1

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF ECONOMICS

RESEARCH QUESTIONNAIRE FOR EMPLOYEES

Dear Sir/Madam,

Ref: Request for permission to carry out research in your organization

The questionnaire was prepared by Allen Zvikomborero Gova, an undergraduate student at Bindura University of Science Education. In order to fulfill the requirements for his degree, he seeks permission to conduct a research project in your organization. The research will focus on "Impact of technology in the procurement processes in bakery industry: Bakers Inn Zimbabwe," with the goal of producing a conclusive outcome on the impact of technology in enhancing overall success of business performance at Bakers Inn Zimbabwe. It is important to note that the information gathered will be used exclusively for academic purposes and kept confidential.

The submitted responses shall be treated with strict confidentiality and the researcher shall use it for academic purposes only. If you wish to get more information concerning the study feel free to contact the supervisor of my current research study; Mr. Pande on his email address chomuzvondiwa@gmail.com.

Your assistance will be greatly appreciated.

Yours faithfully

Allen Zvikomborero Gova (B200442A)

govaallen@gmail.com

QUESTIONNAIRE
SECTION A: DEMOGRAPHICS

NB:(Please tick where appropriate)

A1. GENDER

Male

Female

A2. AGE (years)

18-25

26-34

35-42

43+

A3. EDUCATIONAL QUALIFICATION

High school

diploma certificate

degree

post graduate

A4. DEPARTMENT

Procurement

res ce

Finance

Stores

IT

Human

SECTION B: Technologies in procurement processes

B1. Does the company use technology in the procurement processes?

Yes

No

B2. What are technologies available in the procurement processes?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Block chain					

ERP System					
Big Data					
Internet of Thing					
AI					

B2. What aspects found in the procurement process?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Need identification					
Purchase requisition					
Review of requisition					
Solicitation procedure					
Evaluation processes					
Order management					
Invoice approvals					

Records keeping					
-----------------	--	--	--	--	--

B3. Which activities of the procurement process and technology involves other departments?

	Human resource	Stores department	Legal department	Finance department	Procurement department
Risk management					
Supplier relations					
Vendor management					
Environment sustainability initiatives					
Regulation compliance					

SECTION C: Impact of vendor management

C1. Is vendor management in procurement process important?

Yes

No

C2. At what intervals vendor management carried out?

Frequently

Monthly

Quarterly

Yearly

C3. Which goods require good vendor management to aid business success?

**Strongly
disagree**

Disagree

Neutral

Agree

**Strongly
agree**

Goods

Works

Consultancy
service

SECTION D: Technology influence in procurement processes

D1. Is technology a key factor for business success?

Yes

Neutral

No

D2. What are technological factors that are greatly affecting procurement processes?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Transparency					
Fairness					
Data accuracy					

Improved cycle times					
Efficiency					

SECTION E: Risk factors associated with technology in procurement processes

E1. Is technology risk free?

Yes

No

E2. What are technological risks which affects procurement processes directly?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Data security					
high errors and inaccuracy					
Implementation cost					
Poor transparency and accountability.					
Rely on power supply and					

network.					
----------	--	--	--	--	--

SECTION F: RECOMMENDATIONS

F1. What recommendations would you give to improve technology in the procurement processes?

Data confidentiality backup solution reliability and validity no
cha s

F2. What recommendations would you give to address risk of technology?

Training and support employee development high data security no action

Thank you.

INTERVIEW GUIDE

1. Does Bakers Inn introduces technology in the procurement processes?
2. What are technologies available in the procurement processes?
3. Which departments mostly involved in procurement process initiatives?
4. What are activities which align technology and procurement processes?
5. Which type of procurement method often used within the organization?
6. which activities of the procurement process, technology involves other departments?

7. how is vendor management in procurement process important?
8. What factors affect the choice of procurement method?
9. how often you revise risk mitigation measures for technological malpractices?
10. What is the purpose of risk mitigation in the procurement processes?
11. How does technology enable overall success of the business?
12. What are the drawbacks faced in during vendor management?
13. What are the challenges faced during implementing technology?
14. What are technological factors that are greatly affecting procurement processes?
15. How does technology help impact in the procurement processes?
16. Suggested ways that can make e-procurement enhance efficient service delivery?

Allen Zvikomborero Gova... ?

Match Overview ×

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**FACULTY OF COMMERCE
ECONOMICS DEPARTMENT**

RESEARCH SUPERVISION PROGRESS REPORT

STUDENT'S NAME: ALLEN ZVIKOMBORERO GOVA

REG. NUMBER: B200442A

DISSERTATION SUPERVISOR: MR PANDE

PROGRAMME: PURCHASING AND SUPPLY

DISSERTATION TITLE

IMPACT OF TECHNOLOGY IN THE PROCUREMENT PROCESSES. A CASE OF BAKERS INN

DATE	STAGE OF RESEARCH	SUPERVISORS' COMMENTS
29-01-24	Research problem statement	Redo the research problem statement it should point to those who are affected, what will happen if not addressed and challenges faced.
01-02-24	Research problem	Proceed to chapter 1
10-02-24	Chapter 1	Redo make sure follow the guideline in terms of numbering, font size, references and bulleting.
10-2-24	Chapter 1	Proceed to chapter 2
26-02-24	Chapter 2	Please remove numbering on 2.3 and 2.5.1 just explain the points
01-3-24	Chapter 2	Proceed to chapter 3
05-3-24	Chapter 3	Please provide answers on your questionnaire F1 and F2
12-3-24	Chapter 3	Proceed to chapter 4
15-3-24	Chapter 4	Proceed to chapter 5
20-5-24	Chapter 5	Proceed

OVERALL COMMENTS BY THE SUPERVISOR:

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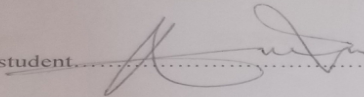
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STUDENT'S SIGNATURE: DATE:

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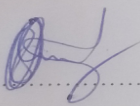
APPROVAL FORM

The under signed certify that they have read and recommend that Bindura University of Science Education for acceptance, a research project entitled, "Impact of technology in the procurement processes: A case of Bakers Inn Zimbabwe submitted by Allen Zvikomborero Gova in partial fulfilment of the requirements of the Bachelor of Commerce (Honours) Degree in Purchasing and Supply.

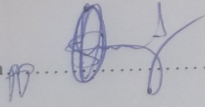
I. To be completed by student
I certify that this dissertation meets the preparation guidelines as presented in the Faculty Guide and Instructions for typing dissertations.

Signatures of student.......... Date: 27.1.24.....2024

ii. To be completed by supervisor
This dissertation is suitable for submission to the Faculty. This dissertation should be checked with conformity with Faculty Guidelines.

Signature of supervisor.......... Date: 30.1.24.....24

iii. To be completed by chair of department I affirm, to the best of my knowledge, that the preparation requirement for this dissertation has been met and that the necessary procedures have to be followed.

Signature of Chairman.......... Date: 30.1.24.....24

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