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DEPARTMENT OF ECONOMICS

LEVERAGING VIRTUAL NEGOTIATION TECHNOLOGIES FOR EFFECTIVE BUSINESS RELATIONSHIP MANAGEMENT IN THE MANUFACTURING INDUSTRY IN ZIMBABWE, A CASE OF SHEPCO HOLDINGS.

A RESEARCH

BY

CHIEDZA CHARI

B227586A

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN PURCHASING AND SUPPLY CHAIN MANAGEMENT- BINDURA UNIVERSITY OF SCIENCE EDUCATION

SUPERVISOR: DR S. MUTSVANGWA

RELEASE FORM

NAME OF AUTHOR: CHIEDZA CHARI

REGISTRATION NUMBER: B227586A

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SIGNED: ……………………………………………………………

PERMANENT ADDRESS: 1399 MAINWAY MEADOWS, WATERFALLS, HARARE

DATE 13/06/24 **……………………………………………………………….**

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I, Chiedza Chari, student registration number B227586A, hereby declare that the work presented here is entirely original with the exception of the citations that I have made, and that I have not submitted it to any university for the purpose of receiving a degree.

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DEDICATION

To the experiences we never expected, and the paths that were side tracked.

To the family and friends we found along the way.

When it looks impossible and deeper, look up to the hills where our help comes from.

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Primarily I would like to thank God for being able to complete this project with success. Then I also want to thank my supervisor DR Mutsvangwa for his valuable guidance, suggestions and instructions.

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ABSTRACT

Management of business relationships in the manufacturing industries proved to be very difficult for companies intending to negotiate with stakeholders that are from a distant location. This study explores the utilisation of negotiation technologies as a means to enhance business relationship management in the manufacturing industry in Zimbabwe, a case of Shepco Holdings. The manufacturing sector faces challenges in maintaining relationships with suppliers, distributers and other stakeholders. A mixed approach was used to, combining closed questionnaires and interviews were sent to the sampled population. A correlation research design was used to determine the relationship between variables of this study. A sample size of 80 was used from a targeted population of 100. Statistical Package for Social Sciences (SPSS) software was used to interpret quantitative data while thematic analysis was used for interview returns. The research focused at examining the impact of virtual negotiation technologies on business relationship management and to develop guidelines and best practices for leveraging virtual negotiation technologies in business relationship management. The findings reveal that negotiation technologies such as video conferencing, collaborative software, e-sourcing platforms and online negotiation platforms offer significant benefits for business relationship management in the manufacturing industry. These technologies streamline communication, improve information exchange, and increase efficiency, improve accessibility to global partners and reduce negotiation time. Moreover, they provide valuable analytics and insights that enable informed negotiation strategies and help build trust and transparency among business partners. However, several challenges were identified, including the need for technology adoption and integration, data security concerns and potential resistance to change. The study concluded that there is a positive relationship between virtual negotiation technologies and business relationship quality. This study implies that VNTs play a pivotal role in managing business relationships in the manufacturing sector and strategies, including training programs and establishing clear guideline and protocols for virtual negotiations to ensure effective integration of these technologies. The study recommends manufacturing companies should embrace VNTs as they can help them improve their business performance and further studies to delve deeper into specific technology implementation strategies and assess the long-term impact of negotiation technologies on business relationship with the manufacturing industry and other sectors.

Key words: leveraging, business relationship management, virtual negotiation technologies

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List of acronyms

VNTs…………………………VIRTUAL NEGOTIATION TECHNOLOGIES

SH……………………………SHEPCO HOLDINGS

BRM…………………………BUSINESS RELATIONSHIP MANAGEMENT

TAM…………………………TECHNOLOGY ACCEPTANCE MODEL

SPSS…………………………STATISTICAL PACKAGE FOR SOCIAL SCIENCES

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CHAPTER ONE

1.0 INTRODUCTION

The hasty advancement of innovation has changed the manner in which organizations work and connect with their partners. In the present globalized and digitalized business climate, viable negotiation and relationship management are crucial for maintainable achievement. The manufacturing industry with its intricate organization of partners can extraordinarily benefit from the coordination and usage of virtual exchange innovation. This research expects to investigate the potential of utilizing virtual negotiation technologies to upgrade business relationship management (BRM) within the manufacturing industry.

1.1 Background of the study

The manufacturing industry assumes a vital part in the worldwide economy, adding to employment generation, technological advancement and the by and large monetary development. Business relationships are just the premise of business, and without them no organization can work. Business relationships empower an organization to make beneficial deals and to purchase the items and administrations that they need that requires sound investigation, patient venture (Lewicki, Wiethoff and Tomlinson, 2021). Business Relationship management (BRM) is the method involved with building and keeping up with trust, arrangement, and coordinated effort between an organisation and its interior or outer partners. Business relationship empower an organization to get to the abilities and assets of others (Cohen and Bradford, 2020). BRM is a basic part of the manufacturing industry as it centres on fostering and keeping up with effective relationship with its different partners. Life would have been easier for business managers on the off chance that they simply required their own abilities and assets to work and serve their clients. In any case, the truth of business is that organizations likewise need useful relationships to get to the abilities and assets of their clients, providers and development partners. Managers should have the option to work successfully with and through yet in addition at times against and regardless of others (Ford *et al*, 2011). Nonetheless, similar to some other industry the manufacturing industry faces difficulties in carrying out and overseeing BRM which affect operational effectiveness and generally business activities performance.

BRM is important for any business function that cooperates with internal or external partners, like innovation, people, and finance, legal. In a period overwhelmed by innovation and advanced communication, the scene of business interactions has developed decisively (Movius, 2020). Perhaps of the main change has been the progress from customary face to face negotiations and personal exchanges to virtual contract negotiation. This shift presents the two difficulties and valuable open doors for individual and organizations participating in contractual arrangements. For the past couple of years, it was challenging to connect and collaborate with partners, and hard to deal with practically all relationship management activities (O'Leary and Tanouri, 2000).

Many existing organisation are struggling to manage its business relationship as their expectations and priorities are mismatching between them and stakeholders involved in a business dealings that result from seldom communication and transparency (Bain & Company's, 2001). Manufacturing organisations are battling in arranging and impacting the results of a business relationship. For instance, unique partners might have different prerequisite and assumptions organisation need to grasp the interests, needs, and values of the stakeholders to accomplish mutual benefit arrangements that need to use their credibility, rapport, and trust to convince and motivate business partners to team up and compromise.

Creating solid relationship with stakeholders is exceptionally significant as it structures an establishment for a successful business operations and furthermore trust is the foundation of any effective client relationship (Watchman, 1980). Nonetheless, managing relationships challenges the businesses because of issues like supplier dependability, quality control and contract negotiation. Quesada-Pineda, Pla-Barber and Bel Tan-Marting (2020), highlighted the significance of compelling supplier relationship management in the manufacturing industry and put emphasis on the requirement for consistent evaluation and figure out alternate ways of further developing relationships.

Communication is vital to lay out and guarantee that all parties engaged with business understand each other's assumptions, objectives and concerns for successful business relationship management, by building trust and laying out open lines of communication, organisations can actually address their clients' issues and guarantee their fulfilment (Owens, 2024). Rattanawong and Kleiner (2019), highlighted in their review that communication is significant in BRM and put emphasis on the requirement for clear and convenient information exchange between manufacturing organization and their supply chain stakeholders.

Nonetheless, communication gaps that happens at different levels for example between partners, inside the organisation business relationship the management professional and different partners. Because of unsuccessful communication there is harsh misalignment of expectations, missed opportunities and strained relations (Porter, 1980), result in delays in decision making and inefficiencies in the supply chain.

In global business partnership that involve various societies and geographies faces complexities in dealing with their business relations. Gaps in communication styles, business practices and social standards make difficulties to successful relationship management that requires additional work to bridge gaps. Cultural differences lead to misunderstanding various expectations and conflicting business approaches. The idea of business relationship management and the way that all associations between organizations are not purely transaction based was developed by the European International Marketing Purchasing conference research group (Hakansson, 1982) and has not acquired a lot of academic credence in the world.

In current digitalised business environment building solid relationship with partners, suppliers and customers is significant for collaboration, trust building and accomplishing shared objectives (Zineldin, 2005). Traditional face to face negotiations have generally been the essential strategy for overseeing business relations, however, ongoing advances in virtual negotiation technology, for example, video conferencing, online negotiations and collaborative platforms have opened the most recent avenues for organisations to overcome earlier referenced constraints and to improve communication, joint effort and trust working in the business relationship management process (Zineldin, 2005). Regardless of the developing accessibility of virtual negotiation technology, there is absence of extensive exploration on their effect on business relationship management (Prilepok, 2021). The issue is that organisations are not knowledgeable with the possible advantages and difficulties related with the reception of virtual negotiation technologies in relation to managing their relationships with partners of their business. It is subsequently fundamental to examine the effect of these technologies on relationship management and develop strategies for their viable usage.

1.1.1 Virtual negotiation technologies

Virtual negotiation technologies have become increasingly noticeable in the manufacturing industry, altering the way negotiations and business relationships are managed (Bohm and Renzi, 2020). These technologies offer various tools and platforms that enable manufacturers to conduct remote negotiations, co-operate with suppliers, and enhance relationship management. Virtual negotiation technologies are digital tools that allow people to negotiate and interact with each other online. These technology include things like video conferencing, instant messaging, online negotiation software and collaborative document editing tools. Alge (2020), noted that virtual negotiation technologies have become prevalent in recent years, as they offer advantageous and cost effective way for people to communicate and collaborate.

Negotiations as a process follow the unceasing changes in the business world and adjust according to the transformation and by adding new elements. It takes part in the everyday functioning of the organizations in the business world it represents a challenge on organizational and management level. It's a certain challenge for the management team as the outcomes of the various negotiations influence the organizations itself and its functioning, and the management and their position. In both cases the influence is both direct and indirect depending on the situation. With the creation of virtual organizations, virtual teams and the development of technology a need arises for substituting the traditional ways of communication with new and modern in which the physical absence wouldn't be an obstacle (Mor and Suppes, 2010).

1.1.2 Shepco holdings (SH)

Shepco holdings is a business group with mining, industrial and manufacturing operations of nails, bolts, spares and maintenance for the mining industry, mining equipment (locomotives, loaders, coco pans, conveyor rollers, and distributing safety wear it has three members that are Shepco industrial supplies, Shepco BMA fasteners and Shepco rollers. Recently Shepco holdings acquired Haggie Rand Company which is now Hungwe Wire and Rope that is also into manufacturing of mining and industrial equipment such as wire rope, chains and fittings and aluminium conductors. Due to customer supplier relationship between activities of these parties they can be classified as vertical merger. Effective business relationship management is especially important for Shepco Holdings as it is in the manufacturing industry, Shepco frequently depend on a complex supply chain with multiple suppliers and partners. It needs strong relationships with these partners for smooth flow on material and components and prevent disruptions to the production process as postulated by Hu, (2011). Shepco Holdings as a group of manufacturing companies frequently need to work diligently with customers for their specific needs so as to build trust, loyalty and encourage repeat business. Shepco Holdings is encountering complexity in their supply chain which can make it difficult to coordinate and communicate with suppliers and partners and also due to the ever changing nature of the manufacturing industry which requires companies to constantly adapt and innovate. Shepco

Holdings can use technology to streamline communication and collaboration and better manage the supply chain (Gatner, 2021). Consequently, this study aims to investigate the specific problems faced by the manufacturing industry in managing business relationship and explore how virtual negotiation technology can be leveraged to mitigate them.

1.2 Statement of the problem

In today's fast-paced and interconnected business environment, effective business relationship management is crucial for organisations to maintain a competitive edge. The manufacturing industry encounters various obstacle to effectively manage business relationships resulting in suboptimal performance and missed opportunities for growth, sometime result from traditional negotiation methods (Prilepok, 2021). Like other industries, manufacturing industry faces difficulties in carrying out and overseeing BRM which affect operational effectiveness and generally business activities performance (Movius, 2020). For the couple of years it was difficult to connect, communicate and collaborate with partners. To ensure sustainable success in BRM in the manufacturing industry, this research need to identify these challenge and find out how virtual negotiation technology can be integrated in the manufacturing to overcome these challenges. Furthermore, manufacturing organisation lack awareness and understanding of potential benefits as there is lack of comprehensive research on the impact of these technologies on business relationship management especially in Zimbabwean manufacturing sector.

1.3 Purpose of the study

The aim of a study on utilising virtual negotiation technologies for effective business relationship management in the manufacturing industry is to explore and assess the potential benefits, challenges, and strategies associated with the use of virtual negotiation technologies in the context of managing business relationships within the manufacturing sector. The study seek to observe how virtual negotiation technologies, such as video conferencing, e-sourcing platforms or collaborative platforms, can enhance communication, collaboration, and relationship-building between manufacturers and their business partners, such as suppliers, distributors, or customers. The study aims to contribute to the understanding of how virtual negotiation technologies can be utilized to enhance business relationship management in the manufacturing industry, potentially leading to improved efficiency, productivity, and overall relationship outcomes.

1.4 Research objectives

This study aims to achieve the following objectives:

a) To examine the impact of virtual negotiation technologies on the quality of business relationship.

b) To develop guidelines and best practices for leveraging virtual negotiation technologies in business relationship management.

1.5 Research questions

To achieve the research objectives, the following research questions will be addressed:

a) What is the impact of virtual negotiation technologies on the quality of business relationships?

b) How can organizations effectively leverage virtual negotiation technologies to enhance business relationship management?

1.6 Statement of hypothesis

H1: Virtual negotiation technologies impact positively on improved communication, collaboration and trust building.

H0: There is no relationship between virtual negotiation technologies and improved communication, collaboration and trust building.

1.7 Significance of the Study

This study's findings contributed to the existing body of knowledge by shedding light on the potential benefits and challenges of leveraging virtual negotiation technologies for effective business relationship management. The research outcomes provided organizations with valuable insights and guidelines for adopting and utilizing virtual negotiation technologies. Ultimately, this study aimed at enhancing business relationship management practices, leading to improved collaboration, increased efficiency, and greater competitiveness in the digital era.

1.8 Assumptions

This study was carried out under the following assumptions:

- Sample population shall be fully representative of the total population.

- Researcher shall be objective and not biased.

● Data collected will be accurate and reliable.

● Respondents will complete all questionnaires clearly and legibly.

● Process shall be confidential, and no names shall be collected, however for key informants whenever it is deemed necessary, the respondents shall be given the choice to use self-styled names.

1.9 Delimitations

The delimitation served as a roadmap for the researcher to remain guided throughout the process. According to Woolfork (2003) delimitation helps the researcher helps the researcher to keep focused. The research focused on Shepco holdings group of companies which are Shepco Industrial Supplies, Shepco Rollers, Shepco BMA Fasteners and Hungwe Wire and Rope with a total population of 300. Within these companies the study focused on management personals, head of department and procurement personals.

1.10 Limitations

Sample size: The accuracy of the result of this study was limited by the number of participants or observations in the study was perhaps too small to draw meaningful conclusions or to generalize to a larger population. However, this was reduced by increasing the sample size by recruiting more participants or using a different sampling method, such as stratified sampling to estimate the effect of sample size on your results.

Time: The duration of this study was too short to observe the long-term effects of your research topic or to collect enough data to answer your research questions. This was solved by using a case study design. The researcher used historical or secondary data to supplement your primary data collection.

Selection bias: The way the researcher can select or recruit her participants may introduce a bias that affects the representativeness of your sample or the validity of your results. The researcher dealt with this limitation by using stratified sampling techniques to balance the characteristics of the sample.

Measurement error: The instruments or tools that was be used to measure the variables may had errors or inaccuracies that affect the quality of data or the validity of results. However, it was minimized by using reliable and valid instruments or tools, or by using multiple methods or sources of data collection, such as triangulation or mixed methods. The researcher used statistical techniques, such as reliability analysis, to assess the quality of measurement tools used.

***Ethical limitations*:** These were ethical issues or constraints that the researcher faced during research may limit the scope, methods, or data of study. This was addressed by following the ethical guidelines and principles of discipline or institution, and by obtaining informed consent or approval from the managing director of the group and used data sources that do not pose ethical risks or harm, such as anonymization or simulation.

1.11 Definition of terms

Leveraging means to use something as a way to achieve something else, for example in this context it could mean using virtual negotiation technologies to improve business relationships (Li *et al*; 2021).

Virtual negotiation technologies are digital tools that allow people or organisations to negotiate and interact with each other online that include video conferencing, instant messaging, collaborative document editing and other online collaboration tools (O'Connor *et al*, 2009; Curhan and Elfenbein, 2010).

Business relationship management is the process of developing and maintaining strong, positive relationship with business partners and stakeholders. It involves understanding the needs and wants of the other party, and finding ways to meet those goals of your own organisation (Berglund, 2007; Ford *et al*, 2019).

1.12 Chapter Summary

The chapter gave an overview of the background of the problem, objectives of the study, problem to be solved, its significance, limitations and the assumptions made and research scope. The following chapter is going to focus on literature review.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature that has been reviewed as far as virtual negotiation technologies and business relationships of a company is concerned. This chapter begins with an introduction, followed by a theoretical framework, explaining the theories underpinning the research. In addition, empirical evidence describing relevant research conducted by other researchers is embedded in this chapter. Finally, the chapter will conclude with a look at research gaps and chapter summary

2.1 Virtual negotiation technologies overview

Bryce (2020), defined virtual negotiation technologies as digital tools and platforms that allow people to negotiate and make decisions remotely, without the need for face to face interaction. These technologies can include video conferencing, online chart, electronic negotiation platforms and even virtual reality environments. Virtual negotiation technologies are becoming increasingly popular, as they offer several advantages over traditional, in-person negotiation. They allow faster decision making, reduced travel costs and increased efficiency. Some examples of virtual negotiation technologies include skype, zoom, google hangouts and spatial chats (Sanchez, 2009).

While virtual negotiation technologies offer many advantages there are also several challenges that should be considered when leveraging them (Brayce, 2020). Some challenges associated with leveraging virtual negotiation technology include; technical difficulties such as poor internet connection or compatibility issues; security and privacy concerns, such as the risk of hackers or data breaches. More so, lack of nonverbal cues such as body language and facial expression which can make it difficult to gauge the other party's reaction and built trust and time zone differences which make scheduling meetings and coordinating negotiations difficult (May, 2020).

2.2 Business relationship in the manufacturing industry

Business relationship management is critical component of success in the manufacturing industry. The manufacturing industry is highly competitive and companies need to build and maintain strong relationships with their business partners in order to succeed (Prilepok, 2021).

This includes suppliers, customers and other stakeholders. Effective business relationships management helps create a competitive advantage by building trust, improving communication and streamlining processes. In the manufacturing industry, business relationship management is especially important for managing supply chains and ensuring the timely delivery of products.

Taking a closer look at effective business relationship management it brings more benefits to the manufacturing organizations. One key importance is improved efficiency, by maintaining good relationships with business partners, companies can streamline their operations and reduce waste this can lead to cost savings and improved profitability (Karrass, 2006). Effective business relationship management can also lead to increased innovation, when companies collaborate with their business partners they can share ideas and insights that can lead to new product and services.

2.3 Theoretical Framework

The impact of virtual negotiation technologies for effective business relationship is determined by several factors. A number of theories and Models have been developed to explain the relationship. This study is based on the social network theory (Chistakis, 2009), stakeholder theory and technology acceptance model.

2.3.1 Stakeholder theory

This theory was proposed by Edward Freeman, (1984). The basic premise of the theory is that business has multiple stakeholder, people or groups who have vested interest in the business's success. The organization have a responsibility to all the groups or individuals who are affected by their actions not just their shareholders and should take into account the interest of all stakeholders when making decisions and strive to create value for all. In this context virtual negotiation technologies can be used to engage and communicate with the various stakeholders of the business for instance businesses can use online survey to gather input from employees and by using this business can create more meaningful and effective relationship with their stakeholders. More so, virtual negotiation technologies can help business to balance the interests of different stakeholders. For example, a business might need to balance the needs of shareholders who want to see profits with the needs of employees who want fair compensation.

By taking into consideration the interest and expectations of all stakeholders, manufacturers can better understand how virtual negotiation technologies can be effectively utilized to foster positive business relationship in the industry. In some cases they can find out how VNTs can enhance communication, collaboration, trust among stakeholders leading to improved relationship and business outcomes. However, it might be challenging to satisfy all stakeholder expectations simultaneously as they may have divergent goals and priorities.

2.3.2 Social network theory

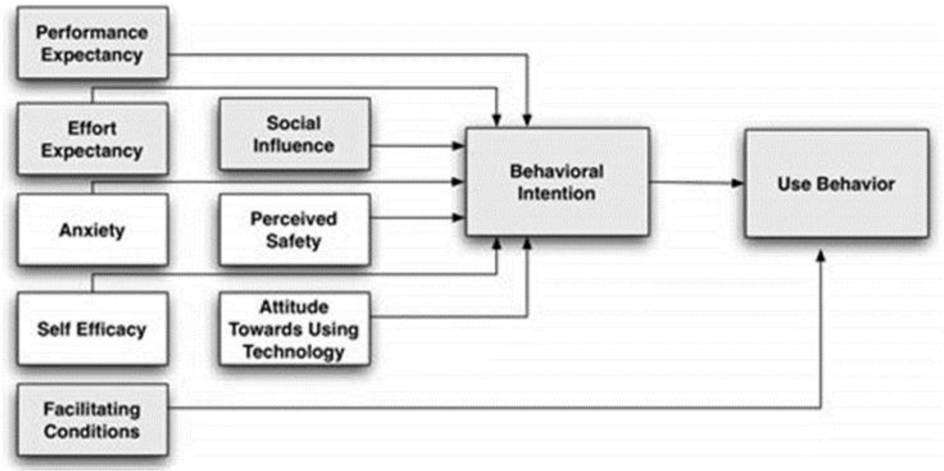
This theory was proposed by Mark Granovetter and Barry Wellman, (1973). The theory proposes that relationships are formed and maintained through network of contacts and connections. In the context of business relationship this theory suggest that the virtual negotiation technologies can be used to create and strengthen these social networks. Virtual negotiation technologies can be used to connect with potential partners and customers and to build and maintain relationships with them and this can lead to increased trust, better communication and improved collaboration. For example Zoom is a virtual negotiation technology that can allow people to communicate and collaborate in real time regardless of location. It can be used to build and maintain social networks by allowing people to connect and interact with each other virtually (Granovetter, 1973)

The key concept of social network theory is the idea of “strength of ties”. This refers to the idea that relationships can be strong or weak and that the strength of the relationship affects how people behave and interact, strong ties are close, intimate relationships, while weak ties are more casual and distant but week ties are actually really important because they bridges the connection of different parts of network they allow information and resources to flow between those different parts. In this context virtual negotiation technologies can change the strength of ties between stakeholders. For example by using video conferencing to connect with customers, business can turn weak ties into stronger and more meaningful relationships (Christakis and Fowler; 2009). By analyzing the social network between stakeholders, the manufacturers can explore how the adoption and the use of virtual negotiation technologies can influence the formation and evolution of business relationships. This may involve studying communication patterns, information sharing, collaboration and the development of trust within the social network. However, social network may not fully capture the complexity of human behavior and the subjective experiences of individuals and partners of relationship ignoring individual motivations attitudes and intentions.

2.3.3 Technology acceptance model (TAM)

This is the framework proposed by Davis, (1989) that is used to understand how people accept and use technologies. This framework focuses on two key factors; perceived usefulness and perceived ease to use. Basically, people are more likely to use new technology if they think it will benefit them and if they find it easy to use. It is relevant in the context of leveraging virtual negotiation technologies for effective business relationship management in the manufacturing industry. TAM could be a good way to understand how people are using virtual negotiation technologies and whether they are finding them useful and easy to use.

Figure 1 Technology Acceptance Model (Davis et al, 1989)



Source: Venkatesh et al; 2003

Venkatesh et al. (2003) and David (2000), suggested four key factors that can affect the influence of adopting new information technology: senior management support, vendor support, user training, and user involvement. Senior management support is generally reflected in two ways: that is willingness to provide the necessary resources to the implementation of an information technology application; and a strong role played at resolving disputes result from the introduction of the information technology system. When employees are given a clear signal from their senior management about the importance of the information technology application to succeed and also receive considerable support in terms of necessary training and required changes necessary for business process, their willingness to accept that IT are increased (Archer, 2005).

In the context of virtual negotiation technologies for business relationship management in manufacturing, the TAM can help researchers and practitioners understand the factors that influence the adoption and usage of these technologies. For example, the study may examine how manufacturers perceive the usefulness of virtual negotiation technologies in improving communication, collaboration, and relationship-building with their business partners. Additionally, the study may explore how manufacturers perceive the ease of use of these technologies and whether that perception affects their willingness to adopt and utilize them (Legris, Ingham, & Collerette, 2003). TAM can also guide the identification of barriers and challenges that may hinder the acceptance and the effective utilization of virtual negotiation technologies such as concerns about security, complexity or lack of training.

2.4 Empirical framework

A numeral of studies was conducted internationally on the relationship between negotiation technologies and business relationship management. In one study by Ivanovski and Gruevski (2014) in Macedonia, about the usage of virtual communication tools in business communication and negotiation- a factor of increased efficiency. Their objective was to assess the influence of usage of virtual communication tools on efficiency of business negotiations, with the main hypothesis stated as usage of virtual communication tools business negotiations enriches the process, outcomes and increases its efficacy. What probed this study was pursuing the new trends in business negotiations (communications) and level of usage of virtual communication tools. The researchers used the classical descriptive analysis and used three research instruments that are experiment, questionnaires and interviews. They concluded that usage of virtual communication tools in business negotiation reduces the time needed for reaching agreement and in the same time saves time and resources and emphasized the reduced travel costs as well as reduced physical absence of negotiators which increases the overall efficiency. It also concluded that virtual negotiators tend to follow more the established ethical norms then face to face negotiators who tend to behave unethically, something that is more noticeable at the more experienced face to face negotiators.

Te'eni and Carayannis (2017) examined the impact of virtual negotiation technologies on trust and collaboration in buyer and supplier relationships in Israel. Their main objective was to examine the influence of virtual negotiation technologies on trust and collaboration in buyer-supplier relationships. Their empirical study used online survey questionnaire as its research instrument and discovered that virtual negotiation technologies such as video conferencing and online collaboration tools, positively influenced trust building efforts and facilities collaborative interactions between buyers and suppliers.

More so, Wang, Chen and Dai, (2019) studied virtual negotiation technology, information sharing and negotiation effectiveness in China. They aimed at investigating the impact of virtual negotiation technologies on the effectiveness with the focus on information sharing. They used exploratory research and used questionnaires to gather primary data. The research concluded that the use of virtual negotiation technologies such as online negotiation platforms improved negotiation outcomes , enhanced information sharing and reduced negotiation time leading to more efficient and successful negotiations.

In addition, Grimpe, Kesting and Baaken, (2018) studied about virtual negotiation technologies in University-Industry collaborations: Building relational capital in Germany. Their main aim was to explore the role of virtual negotiation technologies in managing university industry collaborations and building relational capital. In their exploratory research design they made use of questionnaires and interviews to gather their primary data from participants and found out that virtual negotiation technologies such as web conferencing and virtual collaboration platforms supported efficient communication, reduced geographical barriers and facilitated knowledge exchange ultimately enhancing relationship quality and collaboration outcomes in the university industry partnerships. Therefore, concluded that there is a positive impact of various negotiation technologies on the relationship quality and collaboration outcomes in university industries.

Virtual negotiation technology vs business relationship building and management

Virtual negotiation technology and business relationship building and management are interconnected and can both influence and complement each other. While virtual negotiation technology refers to the tools and platforms used to facilitate remote negotiations, business relationship building and management encompass the strategies and processes employed to establish and maintain relationships partners, suppliers and clients (Cohen and Lee, (2019). Lewicki, Barry and Saunders, (2015) noted virtual negotiation technologies have a significant impact on business relationship management in manufacturing businesses, enabling organizations to effectively manage and maintain relationships with their partners, suppliers and clients in a digital environment. Ivanovski and Gruevski (2014) added that effective relationship management enhance manufacturing organizations to manage their supply chain well, through receiving their raw materials in time and be able to fulfill their customer orders in time. These technologies provide a platform for remote collaboration, communication and negotiation allowing businesses to overcome geographic barriers and enhance their relationship management processes.

Das and Teng (2001), examined how the use of virtual negotiation technologies influences the nature and quality of buyer-supplier relationship. These authors discovered that virtual negotiation technologies, such as video conferencing, email and collaborative software provide a means for organizations to interact with their partners without the need for physical partners without the need for physical presence. This digital communication enables more frequent and efficient information exchange, leading to improved relationship management. They further emphasizes that virtual negotiation technologies can enhance trust and cooperation among parties involved contributing to the development of long term mutually beneficial relationships.

Grimpe, Kesting and Baaken, (2018) found out that virtual negotiation technology can greatly support and enhance business relationship building and management by improving communication, increasing accessibility, enabling collaboration and providing cost and savings. Manufacturing organizations that effectively utilize virtual negotiation technology alongside traditional relationship building strategies are likely to experience stronger and more successful business relationships

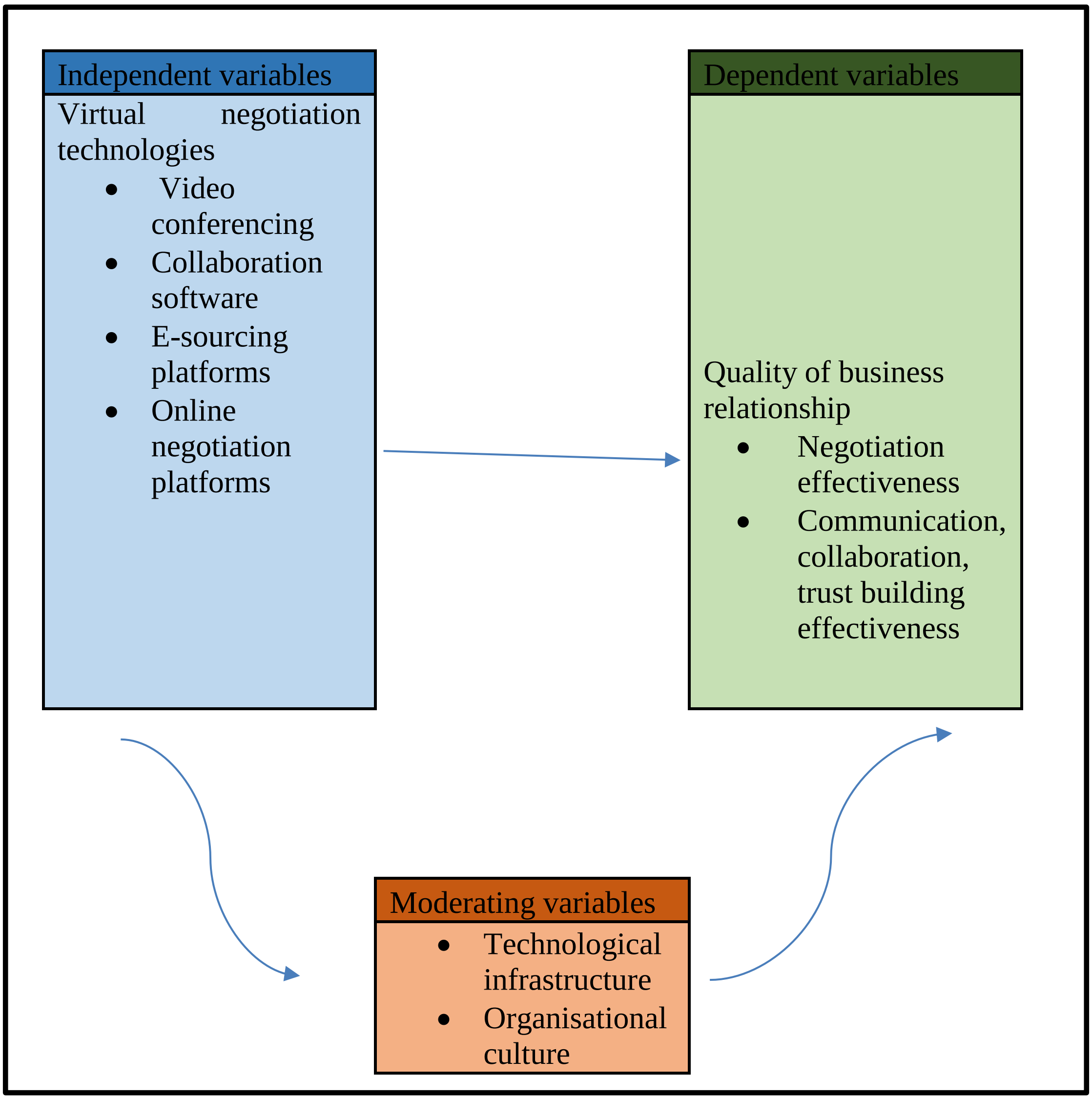
2.6 Research gap

In the business world, the most important component of the cooperation between partners is building healthy business relations. It can be seen from the empirical literature that was evaluated that there is a gap between this research and the studies described above. This research seek to explore the specific challenges and opportunities related to leveraging virtual technologies for effective business relationship management in the manufacturing industries. There might be a lot of general information about this topic in other countries but limited specific research that applies to the manufacturing industry in Zimbabwe.

2.7 Conceptual framework

There is a strong connection between virtual negotiation technologies and business relationship management in the manufacturing industry, according to a significant body of research. Ridder (2017) noted that a conceptual framework helps the researcher to organize their thoughts, define key variables and establish relationships between different concepts. The diagram below represents conceptual framework for leveraging virtual negotiation technologies for effective business relationship management. It include virtual negotiation technologies as independent (input) variables that influence the moderating variables that is communication effectiveness and collaborative decision making that in turn impact the dependent (outcome) variables that is negotiation effectiveness, relationship quality and business performance.

Figure 2 Conceptual framework



Source: Author

2.7.1 Independent variable

- ***Virtual negotiation technologies***

Virtual negotiation technologies have become increasingly prominent in the manufacturing industry, transforming the way negotiations and business relationships are managed. These technologies offer various tools and platforms that enable manufacturers to conduct remote negotiations, collaborate with suppliers, and enhance relationship management. Here are some key virtual negotiation technologies used in the manufacturing industry.

Video Conferencing. Video conferencing platforms, such as Zoom, Microsoft Teams, enable manufacturers to conduct virtual meetings and negotiations with suppliers, partners, and clients for instance a manufacturing company video conferencing use can use video conferencing to conduct virtual meetings with suppliers allowing efficient information sharing, clarifying expectations and addressing any concerns or issues promptly. These platforms provide real-time audio and video communication, allowing participants to interact effectively, discuss terms, and negotiate contracts without the need for physical presence. Video conferencing enhances collaboration and reduces travel costs and time associated with in-person meetings Chen and Zhu, (2020) and stronger relationships between the company and its suppliers.

Collaborative Software. Collaborative software tools, such as project management platforms and document sharing platforms for example google drive, Microsoft SharePoint, enable manufacturers and their partners to collaborate on projects and negotiate contracts remotely. These tools provide a centralized space for sharing and editing documents, tracking progress, assigning tasks, and maintaining communication, promoting efficient collaboration and negotiation. This transparency and shared visibility can foster trust, coordination and effective collaboration, thereby strengthening business relationships.

Chan and Qi (2003) mentioned E-sourcing platforms, such as Ariba and Scout RFP that facilitate the negotiation and management of supplier relationships in the manufacturing industry. For instance in the Shepco holdings supply chain, its customers like Zimplats use the Ariba which they use in requesting and comparing of quotations and contract negation These platforms enable manufacturers to streamline the sourcing process, request and compare bids, negotiate contract terms, and manage supplier relationships digitally. E-sourcing platforms enhance transparency, efficiency, and standardization in supplier negotiations and relationship management.

2.7.2 Dependent variables

- ***Quality business relationship***

The ability of virtual negotiation technologies to strengthen the quality of business relationships build and maintained in the process of doing business. Hendrick and Hendrick (2006), defined relationship quality as the quality of relationships between different entities within the industry such as manufactures, suppliers, distributors and customers. These relationships plays a crucial role in the overall success and competitiveness of the manufacturing business. There are some indicators that shows high quality of business relationship such as effective communication, trust and honesty in doing business, shared values and interest, conflict resolution as conflicts are inevitable in any business relationships and mutual respect and equality. Relationship quality varies based on the industry, line of business and even environment ultimately a high quality relationship is the one that brings good results, fulfillment of objectives and effective business performance to all stakeholders involved. This effective relationship management enhance manufacturing organizations to manage their supply chain well, through receiving their raw materials in time and be able to fulfill their customer orders in time (Cohen and Lee, (2019).

Technology provide a platform for remote collaboration, communication and negotiation allowing businesses to overcome geographic barriers and enhance their relationship management processes. Das and Teng (2001), examined how the use of virtual negotiation technologies influences the nature and quality of buyer-supplier relationship. The authors argue that virtual negotiation technologies, such as video conferencing, email and collaborative software provide a means for organizations to interact with their partners without the need for physical partners without the need for physical presence. This digital communication enables more frequent and efficient information exchange, leading to improved relationship management. They further emphasizes that virtual negotiation technologies can enhance trust and cooperation among parties involved contributing to the development of long term mutually beneficial relationships.

Negotiation effectiveness in the manufacturing industry can be explained the ability of manufacturers to achieve favorable outcomes through negotiations with various stakeholders, including suppliers, distributors, customers, and labor unions (Mortensen, 2017). Effective negotiation skills are crucial for manufacturers to secure advantageous terms, such as favorable pricing, quality standards, delivery schedules, and contractual agreements. Manufacturing negotiation effectiveness is influenced by quite a lot of issues such as thorough preparation when negotiating, effective communication and relationship building, employing different bargaining strategies, being flexible and creative in exploring alternative solutions, require knowledge and expertise to make informed decisions and must consider power dynamics between themselves. It is important to note that negotiation effectiveness in the manufacturing industry can vary depending on the specific context, such as the size of the manufacturer, the nature of the product, the competitive landscape, and the geographical location.

2.8 Chapter summary

The chapter looked at the theoretical framework that explained the theories that underpin the study. The chapter also summarized the empirical literature. Gap analysis was also covered under this chapter capturing the difference between existing studies and this research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The preceding chapter focused on the literature review, which would be incomplete without the interpretation of basic research methods and techniques. This chapter focuses on the research design and methods, the procedures that the researcher followed when collecting data and shows how the data was analysed analysis and at the end there is a summary.

3.1 Research design

In this study the researcher used a correlation research design. As argued by Brannen (2018) correlational research is a type of research that is used to explore the relationship between two variables, this research design does not involve manipulating the variables or introducing any interventions. The main benefit of correlation research is that it can help to identify the associations between variables without having to establish a cause and effect relationship (Saunders et al, 2018). For instance in this case correlation research design would useful for exploring the relationship between virtual negotiation technologies and business relationship management.

This study was carried out using pragmatism or mixed approach which employs both quantitative and qualitative methods. Mixed approach combined the best of both paradigms and overcomes the weaknesses of each (Creswell, 2014). The use of mixed research approach allowed the researcher to enhance research instrument reliability and completeness of the data collected. Creswell (2014) assumes that mixed research methods is an approach which collects and integrates both qualitative and quantitative methods and also uses distinct designs that may involve philosophical and theoretical frameworks. The weaknesses of one research instrument can be corrected by the strengths of other methods used in the same study. The combination of qualitative and quantitative approaches provides the most complete or insightful understanding (Miles, Huberman and Saldana, 2013).

For the qualitative data, the researcher used of interview transcripts, these interviews were recorded on site as the researcher made visits to selected members of Shepco Holdings. Leedy and Ormrod (2005) assert that qualitative research is used to answer questions about complex nature of situation and with the aim of describing and understanding the situation from participants' point of view. The quantitative research approach used involved administering Likert scale questionnaires to the remaining members from selected sample in the case study approach.

3.2 Population

The population of the study was all staff from Shepco Trading who were 300. The study was focused on the target population.

3.2.1 Target Population

The target demographic included employees from the Shepco Holdings management personals, head of department, and the procurement personals. According to Creswell (2020), the target population is the entire population or group that a researcher is interested in researching and studying. The target demographic for this study is depicted below.

Table 1 Target population

Shepco Holdings Participants		Number
	Management personnel	1
	Head of departments	3
Shepco BMA	procurement personnel	2
	Management personnel	6
	Head of departments	20
Shepco Haggie	procurement personnel	14
	Management personnel	2
	Head of departments	5
Shepco Rollers	procurement personnel	3
	Management personnel	7
Shepco Industrial Supplies	Head of departments	22
	procurement personnel	15
Total		100

3.3 Sample size

The sample size was 80 and calculated from targeted population as shown below. A sample size is the number of individuals derived from the target population to take part in the primary data collection process. The researcher will use the formula developed by Bekele, Shigutu, and Tensay (2020) to determine the sample size and ensure the representation bias was reduced as shown below:

n = N/ (1+Ne2),

Where n is the sample size,

N is the population size and

e is the margin of error term 5% (that is 95% confidence interval).

Calculation

n = 100/1 +100(0.05)2

=80

3.4 Sampling techniques

Sampling refers to a subset of subjects' representative of a population (Anderson, 2008). It aids in research analysis as it determines the adequate respondents from the total number of the targeted population. The researcher will use the stratified random sampling technique. The researcher used the stratified sampling technique since the target population have heterogeneous characteristics. The sample elements will be selected proportionally to their contribution to the population. The use of stratified random sampling will allow the study to perform their research on elements from the study population so that the findings can be applied to the sample frame. Stratified random sampling method is the representative to the heterogeneous characteristics of general population, allowing effective collection of data, and ensure that all population units have a fair probability of being selected.

3.5 Research instruments

3.5.1 Questionnaires

Questionnaires are common and important tool in research that was used in this study to collect a wide range of information from a large number of people in a short amount of time. Timm (2005) said argued that questionnaires are set of questions prepared by the researcher in order to get primary data to address research objectives of this study. The researcher composed the questions and print them to everyone in a simplified manner that made collection of data easy. It enabled the researcher to gather all the data in less haste and more ease to come up with the correct conclusion. According to Baily et al (2008), cited that, the disadvantage with this instrument of research is that the respondent may not understand the research questions thus causing a bias in the data gathered; therefore the researcher will try to present the questions in the simplest language so that the respondents will easily understand.

The researcher used Likert scale questions to pre-code the questionnaire. This type of questionnaire presents participants with a series of statement and asks them to indicate their level of agreement on a 5-point scale, the scale can be either positive or negative and the scale typically ranges from strongly agree to strongly disagree (Lusk and Walkiewicz, 2005). Likert scale questionnaires were quick and easy to administer and they provided quantitative data that was easy to analyse statistically. However, they were limited in their ability to capture complex and nuanced opinions (Kerlinger, 2011)

3.5.2 Interviews

The researcher also did face to face interviews with managerial staff of Shepco Holding. James, (2000) noted that interviews allow the researcher to directly ask the participants questions and the participants can provide detailed and in-depth responses. Interviews were contacted since Saunders et al (2018) argued that interviews have the ability to gather valid and reliable data that is relevant to the study. Face to face interviews were ideal to regional managers for them to get a chance to explain what is important to them. Undeniably, interviews were requisite in data collection since it was the non-tiresome way for managers to explain the relationship between virtual negotiation technology and business relationship management.

3.6 Data collection

3.6.1 Secondary data

In this study, the researcher used secondary data. According to Proctor (2000) of the secondary data is the data already collected, other than the problem at hand. He added that secondary data can be divided into internal and external, internal data is generated within the organization, but may require a lot of processing, and then useful to the researcher. Internal data involves company files and annual reports and external involves directories, textbooks, and internet. The researcher also checked the previous records and books therefore to be a comparison with the current scenario. External data are those generated by sources outside the organization and they may exist in the form of published materials, computerized databases or information made available by syndicated services. In addition, secondary data was easily accessible, relatively inexpensive and quickly obtained.

3.6.2 Primary data

The researcher also used primary data in order to cover this academic gap of the effect of virtual negotiation technologies on the quality of business relationship. This is the first hand data to be collected for the specific purpose of addressing problem at hand, Churchill (1998) and used in this research since the study took the form of a descriptive nature thus meaning that there was little or no prior investigation of the subject. Data was gathered using questionnaires and interviews. The primary data was used because secondary data failed to provide all the answers to solve the research problem. The data was original, specific, relevant and up to date. Primary data will give the current situation rather than a historical point and also it makes sense to collect information relating to the current scenario.

In collecting data, the researcher used questionnaires. According to Baily et al (2008), suggested that questionnaire is a list of carefully structured questions chosen after considerable testing with a view to eliciting reliable responses from a chosen sample. The researcher used self-administered questionnaires to obtain information from respondents. Therefore, the researcher delivered the questionnaires in person, to ensure that, the questionnaire go into the hands of the intended respondents. The questionnaires was administered by drop and pick method.

In order to validate the questionnaire, researcher carried out a pilot test. Preliminary analysis shall be carried out before sending the actual questionnaires. This was done so as to establish clarity, validity and reliability of the instruments employed. The pilot study helped to reveal the misconceptions of the respondents and the need to rephrase some of the questions for more clarity and relevance (Davila et al 2002).

3.7 Data analysis and reporting

The data collected was sorted and entered into the statistical packages for social sciences for analysis. Frequencies and percentages were used as a way to analyse demographic data and used pie charts and graphs for presentation. The data obtained from research questionnaires was presented in the form of tables, figures and were discussed and analysed using mean and standard deviation figures. In order to determine the impact of virtual negotiation technologies on business relationship management, regression analysis was used. The researcher reviewed the interview transcripts and identified common themes and patterns then the results of the analysis were presented in a report.

3.8 Ethical considerations

Saunders *et al* (2007) referred to ethics as appropriateness of the conduct of the researcher with respect to the rights of those who became subjects or affected by it. To ensure that the rights of the participants are considered the researcher respected the rights, needs, desires and values of informants and participants. Amold and Essig (2002) acknowledged that, the most critical ethical considerations to observe during social research is to respect for human dignity, protection from harm and exploitation, informed consent and voluntary participation as well as the right to confidentiality and anonymity. The researcher acknowledged that, the study did not injure participants physically, psychologically or emotionally.

3.9 Summary

This chapter of research methodology focused on research design, population, sample size, sampling techniques and procedure, data collection procedure ,research procedure as well as research instruments such as questionnaires and interviews, reliability and validity issues including ethical consideration. The next chapter will focus on data analysis and presentation.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presents data analysis, presentation, interpretation, and discussion. The results of the questionnaire, response rate, demographics, and conclusions relating to each and every study objectives are all intently covered in this chapter. A summary of the chapter will be presented at the end.

4.1 Response Rate

- **Questionnaire response rate**

The response rate for this research study was calculated by dividing the number of participants who provided valid responses by the total number of participants invited to participate. Out of the 80 participants invited, 76 responded, resulting in a response rate of 95%. It should be noted that the response rate may have been influenced by factors such as participant availability and willingness to participate.

- **Interview response rate**

The principle of saturation was used in conducting interviews. Data saturation refers to the point in the research process when no new information is discovered in data analysis, and this redundancy signals to researchers that data collection may cease. (Saunders, 2017). Simply, it is the point in a research process when sufficient information has been gathered to reach the essential conclusions and further data collecting will not yield insightful information. Six interviews were conducted on regional managers.

4.2 Demographic information of respondents

The demographics and general information of the respondents are shown in this section. The respondents' gender, age, greatest level of education, employment history with the firm, and length of time with the present employer were the main topics of discussion. It was also possible to evaluate how long respondents had held their current positions.

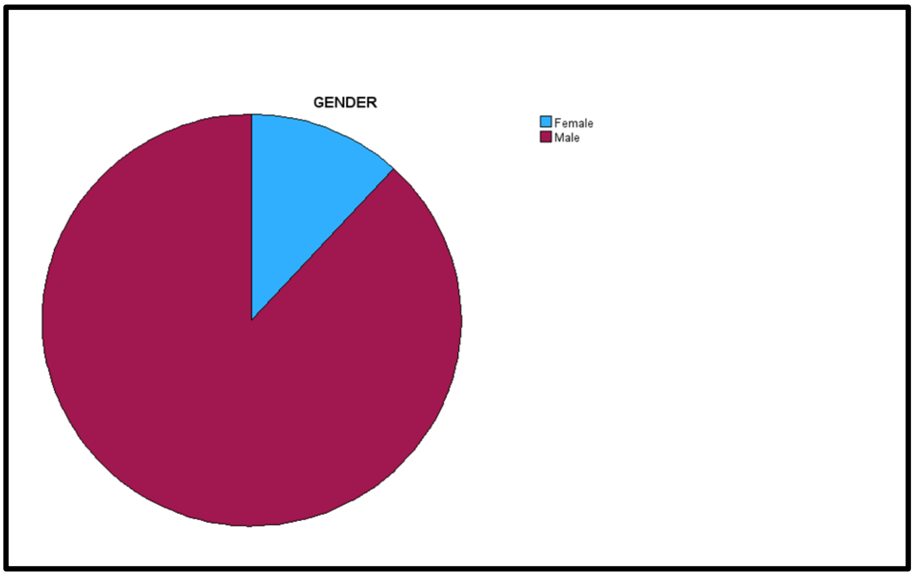
4.2.1 Gender of Respondents

Table below presents gender of respondents.

Table 2 Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	9	11.8	11.8	11.8
	Male	67	88.2	88.2	100.0
	Total	76	100.0	100.0	

Figure 3 Gender of respondents



The results presented above shows that there were more male stakeholders in the industry, with reference to female having 11.8% and male having 88.2% that engage with these technologies and this suggest that there are gender disparities in the manufacturing industry. Sirapraph et al, (2020) also identified gender discrepancy in their study, acknowledge that these maybe influenced by some factors such as societal norms and industry demographics. As it was mentioned in one of the themes that Shepco Holdings mostly employ females due to the nature of jobs done that involves listing of heavy items and other heavy duties done in the workshop. This may have the impact on integration of virtual technologies as noted by Prilepok, (2021), female participants may demonstrate preference for more personalized and interactive virtual communication channels, such as video conferencing as a means to establish trust and build stronger business relationships while males place greater emphasis on efficiency and cost saving benefits.

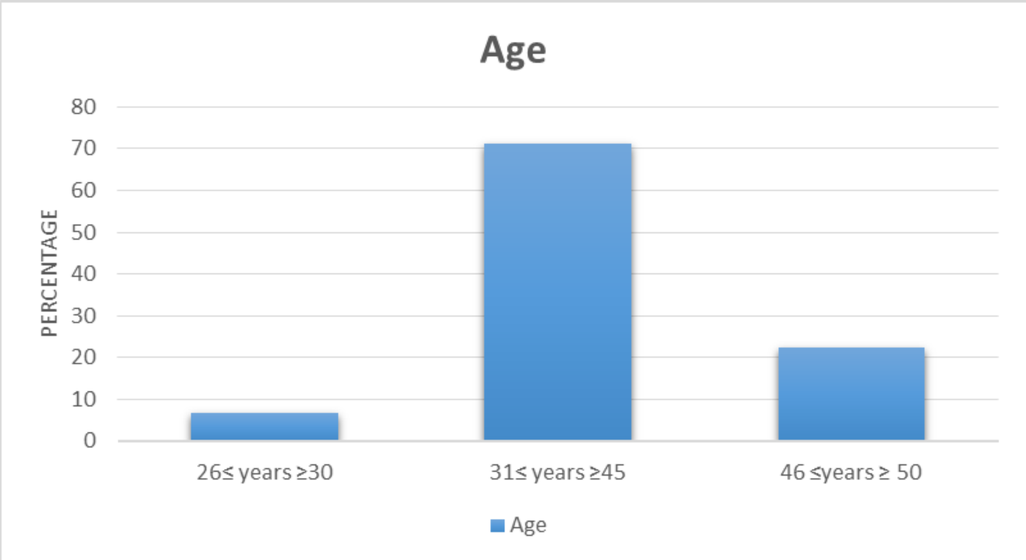
4.2.2 Age Categories of Respondents

The table below presents age categories of respondents.

Table 3 Age category of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26≤ years ≥30	5	6.6	6.6	6.6
	31≤ years ≥45	54	71.1	71.1	77.6
	46 ≤years ≥ 50	17	22.4	22.4	100.0
	Total	76	100.0	100.0	

Figure 4 Age categories of respondents



According to table above 71.1% of respondents were between the age of 31 and 45years and 22.4% were between the age of 25 and 30years and only 6.6% were 45years and above. The results shows that respondents were mostly of 45 years and below. This results further demonstrate that respondents had knowledge of the subject under investigation, as younger participants may exhibit higher acceptance and adoption rate of virtual negotiation technologies due to their familiarity and comfort with digital tools whilst older stakeholder may express concerns about technical competencies that may result in lower adoption rate as argued by (Ahvenniemi and Helle, 2020). By understanding these dynamics, manufacturing companies can tailor strategies and communication approaches to effectively engage and build relationships with stakeholders of different age groups.

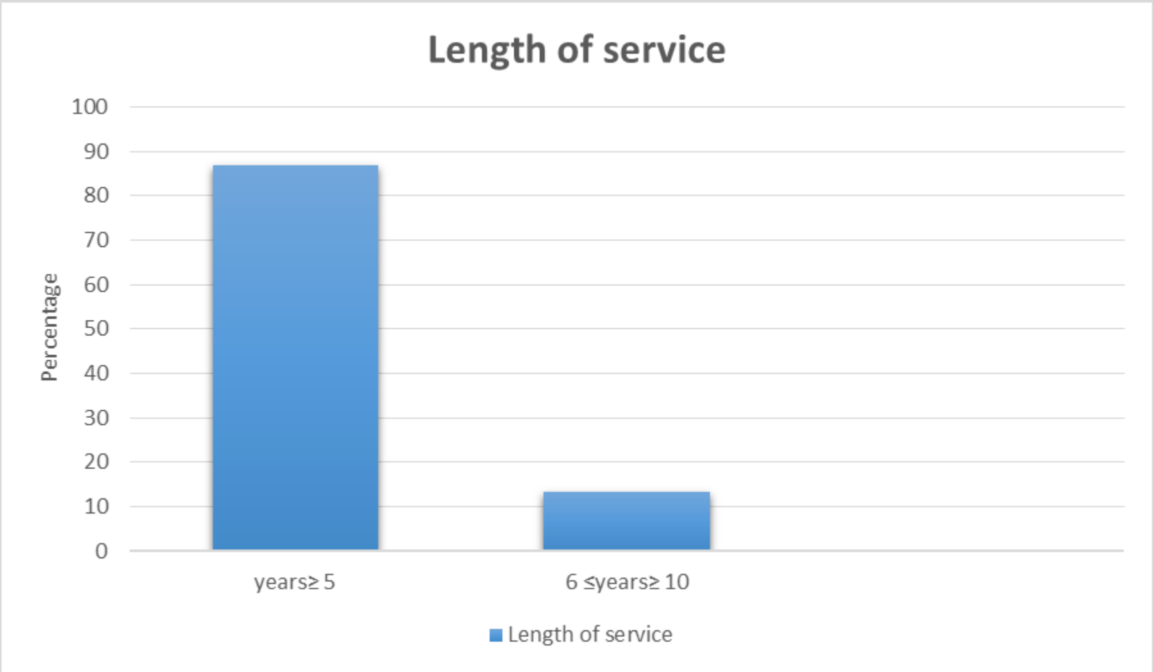
4.2.3 Respondents' length of service

The table below presents length of service of the participants.

Table 4 Respondents' length of service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	years≥ 5	66	86.8	86.8	86.8
	6 ≤years≥ 10	10	13.2	13.2	100.0
	Total	76	100.0	100.0	

Figure 5 respondents' length of service



According to the table 4.5, 86.8 percent of the participants had five years and below of experience in the industry and 13 percent of participants had between 6 to 10 years of experience in the industry. These findings shows that the highest percentage of participants have at least five years of experience working in the manufacturing industry. Based on the themes, the majority of the respondents have five years or more in the organization therefore will be reliable in attesting the negotiation technologies implemented an their impact on business relationship. This simply mean they understand well how things work and it will be easier for them to fit in the issue of virtual negotiation technologies with the interest of business success and business relationship improvement.

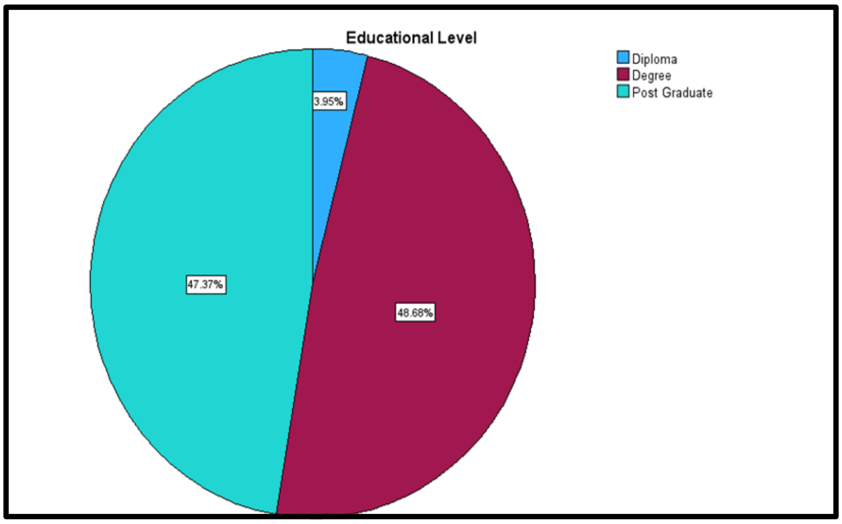
4.2.4 Educational qualifications

Table below presents highest level of education of respondents

Table 5 Educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	3	3.9	3.9	3.9
	Degree	37	48.7	48.7	52.6
	Post Graduate	36	47.4	47.4	100.0
	Total	76	100.0	100.0	

Figure 6 Educational level of respondents



According to figure 4.5, 48% of respondents had first degrees, 47.37% of participants has diplomas and at least 3.95% had post graduate qualifications. These findings demonstrate that almost everyone participated in the survey have at least a diploma qualification, despite their different background in education they had a good understanding of the subject under research as supported by Malacina et al (2022) that educational background of respondents has impact on their acceptance of virtual negotiation technologies. Interviews findings also showed that the majority of respondents have degrees qualifications and most of them are progressing with their education, this fact one cannot dispute that the participants to have a good understanding of subject under review.

4.3 Reliability statistics

Table below presents the reliability statistics. The reliability of the questionnaire tool was tested using the Cronbach Alpha. The result findings of the test were presented by the following table

Table 6 Reliability statistics

Cronbach's Alpha	N of Items
0.742	37

From the table above the reliability test was conducted using the Statistical Package for Social Science. The reliability score should be closer to 1 as researchers seek absolute reliability. In this case the Cronbach Alpha lies at 0.742 which is a bit far from one. This implies heterogeneity amongst respondents in terms of how they view things for instance in this case some respondents may have strongly agreed with the idea that virtual negotiation technologies enhance effective business relationship management whilst others strongly disagree with that same idea.

4.4 Findings and discussion

4.4.1 Virtual negotiation technologies

Table below presents virtual negotiation technologies have been integrated by Shepco holdings for effective business relationship management.

Table 7 Virtual negotiation technologies

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Use of video conferencing for negotiation	76	1.00	2.00	2.1316	0.34028
Utilization of collaborative software for negotiation process	76	1.00	5.00	3.6974	0.81682
Application of e-sourcing platforms	76	1.00	2.00	3.5132	0.50315
Adoption of online negotiation platforms	76	1.00	2.00	2.1316	0.34028
Incorporation of blockchain technology for secure and transparent negotiations	76	1.00	3.00	1.0132	0.99991
Valid N (listwise)	76				

Table 4.6 above reveals that participants generally highly rated the use of video conferencing, utilization of collaborative software, application of e-sourcing and adoption of online negotiation platforms as reflected by the mean value of 2.1; 3.1; 3.5 and 2.1 respectively There was little deviation from the responses as the standard deviation was less than 1.5. This implies that Shepco Holdings was utilizing these technologies in trying to manage and improve their business relationship with their stakeholders. Some respondents moderately rated, incorporation of blockchain technology was moderately rated with mean value of 1.2 with very much less deviation also. These variability in responses suggest differing levels of interest, adoption or opinions among stakeholders for certain technologies such as incorporation of blockchain, virtual reality and data analytics.

4.4.2 Benefits of virtual negotiation technologies in the manufacturing industry

The following table present the positive impact of virtual negotiation technologies on the quality of business relationships.

Table 8 Virtual negotiation technology benefits

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Enhance effective communication, trust and honesty	76	1.00	2.00	3.5000	0.40332
Streamlined negotiation processes and reduced time constraints	75	1.00	2.00	3.4933	0.40332
Improved accessibility to negotiation partners globally	76	1.00	2.00	4.4132	0.11471
increased efficiency and cost savings in business relationship management	76	1.00	2.00	3.6184	0.48900
Enables more frequent and efficient information exchange	76	1.00	3.00	2.0921	0.52632
Enhanced data security and privacy in virtual negotiations	75	1.00	3.00	1.5733	0.52436
Enhanced adaptability to changing business environments	76	1.00	2.00	1.3947	0.49204
Improved negotiation outcomes and satisfaction levels	76	1.00	4.00	3.6579	0.30338
Valid N (listwise)	74				

The findings above provide insights into stakeholders' perceptions and priorities related to the importance of virtual negotiation technologies in business relationship management. The statistics above shows that participants recognize the importance of negotiation technologies in enhancing effective communication, trust and honesty, streamlining process, accessibility to global partners, efficiency cost saving and negotiation outcomes with the mean value of follows 3.5; 3 .4; 4.4; 3.6 and 3.6 respectively. This support the idea of Robert, Ihlstrom and Kindstrom, (2019), in their research they found out that collaborative technologies, such as collaborative platforms and social media, improve communication, knowledge sharing, and cooperation in business relationships. All the variables' the standard deviations for were above 0.5 which means the responses were generally range around the mean score. However, there were some variation in the perceived impact among participants especially regarding aspects of adaptability to changing environments and data security and privacy received lower ratings. This concur with Brayce (2020) that though virtual negotiation technologies offer several advantages some stakeholders suggest data security and privacy and adaptability to changing business environment. With the support from themes, respondents mentioned that through using VNT it will be easier to communicate frequently with stakeholder that consequently create good friendship and trust between partners and improve reliability in business deals as supported by Carter, (2016) who stated that when seeking reliability with partners you need to better your communication and collaboration with them.

4.4.3 Challenges faced in integrating virtual negotiation technologies

The following table presents the challenges that may have been faced by manufacturing companies when trying to integrate virtual negotiation technologies in managing their business relationship.

Table 9 Challenges in integrating virtual negotiation technologies

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Limited technological infrastructure for virtual negotiations	76	1.00	4.00	4.1184	0.22166
Resistance to change and adoption of virtual negotiation technologies	76	1.00	4.00	3.7500	0.34784
Lack of technical skills and training in utilising virtual negotiation tools	76	1.00	4.00	3.5658	0.53606
Concerns about data security and privacy in virtual negotiations	76	2.00	4.00	3.0921	0.94060
Challenges in building trust and rapport in virtual negotiation settings	76	2.00	5.00	4.4211	0.63798
Complexity in managing multiple virtual negotiation platforms and tools	76	2.00	5.00	3.9342	1.03712
Lack of standardisation and interoperability among virtual negotiation technologies	76	2.00	4.00	3.0789	0.94887
Overdependence on technology leading to reduced personal interactions	76	1.00	3.00	1.7105	0.64943
Valid N (listwise)	76				

The above table present some findings related to some challenges that might affect manufacturing companies to integrate virtual negotiation technologies effectively in trying to improve their relationships with business stakeholders. The participants highly rated overdependence on technology, complexity in managing multiple virtual negotiation platforms, lack of technical skill and training and resistance to change with mean value as 1.7;

3,9; 3.5; and 3.7respectively as their main challenges that the integrate virtual negotiation technologies in their systems with less deviation. The standard deviations for all the variables were above 0.5 which means the answers were broadly range around the mean score. Lack of technological infrastructure was rated low as they have some tools to use for Integration of VNT. This concur with what was noted (Bhaskar and Krishnamurthy, 2021) that some employees who accustomed to traditional face to face negotiations may resist the change and finding it challenging to adopt to new technology. Alge (2020) also noted that some employees are resistant to embrace new technology due to their concerns about their technological skills and fear of managing multiple virtual negotiation platforms.

4.4.4 Strategies that can be implemented to integrate virtual negotiation technologies for effective business relationship management

The following table presents strategies than can be used by manufacturing organizations to leverage virtual negotiation technologies to improve their business relationship management.

Table 10 Strategies to leverage virtual negotiation technologies for effective business relationship management

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Investment in robust virtual negotiation platforms and tools	76	1.00	3.00	4.5526	0.24388
Providing comprehensive training programs on virtual negotiations technologies	76	1.00	3.00	3.6053	0.67486
Promoting a culture of virtual collaboration and communication	75	1.00	4.00	2.0933	1.14104
Establishing clear guidelines and protocols for virtual negotiations	76	1.00	4.00	3.3553	0.93387
Collaborating with technology partners to enhance virtual negotiation capabilities	76	1.00	3.00	2.0789	0.35640
Encouraging knowledge sharing and best practices in virtual negotiation	76	1.00	2.00	3.1316	0.34028
Aligning virtual negotiation strategies with overall business objectives	76	1.00	2.00	3.0263	0.16114
Valid N (listwise)	76				

The analysis above allowed the researcher to understand the participant's perceptions regarding various factors that can be implemented to improve the integration of virtual negotiation technologies in the business in order to improve relationship management. The participants greatly rated investment in robust VNTs platforms and tools, promoting a culture of virtual collaboration and communication and having clear guidelines and protocols for virtual negotiation with mean value of 4.5; 2.1; 3.3 respectively. In contrast the provision of comprehensive training on virtual negotiation technologies, encouraging knowledge sharing and best virtual negotiation and aligning virtual negotiation strategies with overall business objectives received low rating with less variability in responses through this suggests that participants generally agreed on the need for such training. This support the idea of Cohen and Lee, (2019) that manufacturing organisations need to introduce training programs on virtual negotiations technologies and promote the culture of virtual collaboration with business partners in order to improve their quality of business relationship.

4.4.4 Hypothesis testing

Hypothesis testing involves evaluating a specific hypothesis using statistical analysis. The correlation ranges from -1 to +1 and a positive value indicates a positive correlation meaning that as one variable increases the other variable tend to increase as well. This hypothesis testing was done to determine the relationship between virtual negotiation technologies and business relationship quality as shown on the table below.

Table 11 Hypothesis testing

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.764[a]	0.584	0.570	0.048
a. Predictors: (Constant), video conferencing, collaborative software, e-sourcing platforms, online negotiation platforms				

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.329	1.987		3.689	0.001
	Video conferencing	0.218	0.402	0.106	0.542	0.043
	Collaborative software	0.280	0.423	0.130	0.662	0.014
	Online negotiation platform	0.322	0.439	0.142	0.667	0.029
	E-sourcing platforms	0.570	0.363	0.306	1.571	0.037
a. Dependent Variable: Relationship quality						

The regression above shows the strength and the direction of linear relationship between the two variables of this research that is virtual negotiation technology and quality of business relationship. The regression analysis results shows an R-value of 0.764. In this case this R-value suggests a moderately strong positive correlation between the use of virtual negotiation technologies and the factors of improved communication, collaboration and trust building.

Since the R-value is positive, it indicates that as the use of virtual negotiation technologies increases so does the likelihood of improved communication, collaboration and trust building. Based on these findings we can safely reject the hypothesis which states that there is no relationship between virtual negotiation technologies and improved business relationship quality, hence accept the alternative hypothesis as the findings proved that there is a positive relationship between these two variables under research. This concurs with Wag et al (2019) findings that the use of virtual negotiation technologies such as online negotiation platforms can improve negotiation outcomes, enhance information sharing and result in successful negotiation. More so, the findings of Te'eni and Carayannis (2017) also support this idea as they discovered that VNTs such as video conferencing and online collaboration tools positively influence trust building.

In general the above shows that manufacturing companies such Shepco Holdings have adopted some virtual negotiation technologies which include video conferencing, collaborative software, electronic sourcing platforms, online negotiation platforms and to come extent incorporate blockchain technology to secure and ensure transparent negotiations. Some themes also mentioned that they utilize data analytics to make informed decisions. Findings showed that by integrating those VNTs Shepco Holdings managed to better their relationships with its stakeholders through improved communication, better collaboration, build trust between them and improved negotiation outcomes hence improve the overall performance of their operations. These results concur with the findings of Das and Teng (2001), that VNTs such as video conferences, emails and collaborative software enable more frequent communication, efficient information exchange that lead to better relationship management. However, this research outcomes also showed some challenges that disturb proper integration and also reduce yield from integrating these technologies such as resistance to change, lack of technical skills and complexity in managing various virtual negotiation platforms, some themes mentioned and these findings support the ideas of Alge (2020), that though VNTs have become popular in recent years some stakeholders in different industries have less technical skills that made the resistant to change in fear of managing these various negotiation platforms. Participants suggested some ways that can be used to get better results from integrating the VNTs like providing comprehensive training programs, establishing clear guidelines and protocols for virtual negotiations and aligning virtual negotiation strategies with overall business objectives. Research outcomes also found out there is a positive relationship between the virtual negotiation technologies and quality of business relationship in the manufacturing industry meaning the more they integrated these technologies the better the relationship they built and maintained with their stakeholders. This concur with Te'eni and Carayannis (2007) findings as they discovered that VNTs like video conferencing and online collaboration tools positively influenced trust building efforts and facilitate collaborative interactions between buyers and sellers.

4.5 Chapter summary

This chapter presented and analyzed data on research findings generated from the questionnaires that were distributed within Shepco Holdings. Data was presented through tables, charts and correlation generated from SPSS and findings were also discussed such as the specific implications of negotiation technologies for different stakeholders in the manufacturing industry. The next chapter will dwell on summarizing the findings of the research, conclusion and recommendations on the impact of virtual negotiation technologies for effective business relationship management.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This study aimed at exploring how virtual negotiation technologies can be leveraged to enhance effective business relationship. This chapter seeks to outline the summary of major findings picked from chapter four, to make research based conclusions and finally end with recommendations.

5.1 Summary from findings

The research focused on virtual negotiation technologies and their integration in business relationship management in the manufacturing industry. The major findings of this research objectives are covered under this section.

5.1.1 Virtual negotiation technologies used by Shepco Holdings

In terms of the use of virtual negotiation technologies, participants highly rated video conferencing, collaborative software, e-sourcing platforms, and online negotiation platforms. Shepco Holdings, the company under study, was found to effectively utilize these technologies in managing their business relationships with stakeholders. However, there were varying opinions and adoption levels for technologies like virtual reality and blockchain.

5.1.2 Benefits of virtual negotiation technologies in the manufacturing industry

The benefits of virtual negotiation technologies were recognized by participants, with improved communication, trust, honesty, streamlined processes, global accessibility, efficiency, and cost savings being highly rated. However, there were variations in perceived impact, particularly in relation to adaptability to changing business environments and data security and privacy concerns.

5.1.3 Challenges in integrating virtual negotiation technologies

Challenges in integrating virtual negotiation technologies were identified, including limited technological infrastructure, resistance to change, lack of technical skills and training, data security and privacy concerns, trust and rapport building difficulties, complexity in managing multiple platforms, lack of standardization and interoperability, and overdependence on technology.

5.1.4 Strategies to leverage virtual negotiation technologies for effective business relationship management.

Strategies for leveraging virtual negotiation technologies were suggested, such as investing in robust platforms and tools, providing comprehensive training programs, promoting a culture of virtual collaboration and communication, establishing clear guidelines and protocols, collaborating with technology partners, encouraging knowledge sharing, and aligning strategies with business objectives.

5.1.5 Hypothesis testing on the relationship between VNTs and BRM

The hypothesis testing using regression analysis indicated a moderately strong positive correlation between the use of virtual negotiation technologies and factors related to improved communication, collaboration, and trust building. This supported the alternative hypothesis and demonstrated the positive relationship between virtual negotiation technologies and improved business relationship quality.

5.2 Conclusion

The research findings highlight the significance of virtual negotiation technologies in the manufacturing industry for effective business relationship management. Shepco Holdings successfully integrated various technologies, leading to improved communication, collaboration, trust building, efficiency, and cost savings. However, challenges such as limited skills and training, resistance to change, and data security concerns need to be addressed.

To leverage virtual negotiation technologies effectively, manufacturing organizations should invest in robust platforms and tools, provide comprehensive training programs, promote a culture of virtual collaboration, and establish clear guidelines and protocols, collaborate with technology partners, encourage knowledge sharing, and align strategies with business objectives.

Overall, virtual negotiation technologies have the potential to enhance business relationships quality and improve outcomes. However, careful consideration of challenges and implementation strategies is necessary to maximize their benefits and address stakeholder concerns.

5.3 Recommendations

Based on the mentioned above findings, the following recommendations were made:

5.3.1 Recommendations to the industry

Manufacturing companies in Zimbabwe should embrace virtual negotiation technologies such as video conferencing, collaborative software and online negotiation platforms as they proved to improve their quality of business relationships and overall business performance with due diligence to the challenges mentioned from findings.

5.3.2 Recommendations for further studies

The researcher recommends further studies to delve deeper into specific technology implementation strategies and to assess the long term impact of negotiation technologies on business relationships within the manufacturing industry and other sectors.

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Appendix 1

Questionnaire

I am Chiedza Chari, a student from Bindura State University pursuing a Master's of Science Degree in Purchasing and Supply Chain Management. I am carrying out a research entitled "**Leveraging virtual negotiation technologies for effective business relationship management in the manufacturing industry" a case of Shepco Holdings**. Kindly respond to the following questions, you opinion and suggestions will be used strictly for academic purpose and shall be treated with utmost confidentiality.

Note:

Virtual negotiation technologies refers to digital tools and platforms that allow people to negotiate and make decisions remotely, without the need for face to face interaction.

1.0 Section A: Demography variables

Please WRITE or Tick in the space available to indicate your answer

No.	Variable	Response	Code
1.1	Gender	Female	(1)
		Male	(2)
1.2	Age	years≤25	(1)
		26≤years≥30	(2)
		31≤years≥45	(3)
		46≤years≥50	(4)
		51≥years	(5)
1.3	Length of service	Years ≤5	(1)
		6≤ years ≤10	(2)
		11≤ years ≤20	(3)
		21≤ years	(4)
1.4	Education level	Secondary level	(1)
		Diploma	(2)
		Degree	(3)
		Post graduate	(4)

2.0 Section B: Virtual Negotiation Technologies

To what extent do you think virtual negotiation technologies have been leveraged in your organization for effective business relationship management?

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

No.	Virtual negotiation technologies	(1)	(2)	(3)	(4)	(5)
2.1	Use of video conferencing for negotiations (zoom, Microsoft teams)					
2.2	Utilization of collaborative software for negotiation processes (google drive, Microsoft SharePoint)					
2.3	Application of e-sourcing platforms (ARIBA, Scout RFP)					
2.4	Adoption of online negotiation platforms					
2.9	Others(Specify)					

3.0 Section C: Benefits of Virtual Negotiation Technologies

What do you think are the impact of virtual negotiation technologies on the quality of business relationships? Rate these with the options below.

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

No.	Benefits	(1)	(2)	(3)	(4)	(5)
3.1	Enhance effective communication, trust and honesty					
3.2	Streamlined negotiation processes and reduced time constraints					
3.3	Improved accessibility to negotiation partners globally					
3.4	Increased efficiency and cost savings in business relationship management					
3.5	Enables more frequent and efficient information exchange					
3.6	Enhanced data security and privacy in virtual negotiations					
3.7	Enhanced adaptability to changing business environments					
3.8	Improved negotiation outcomes and satisfaction levels					
3.9	Others (specify)					

4.0 Section D: Challenges

To what extent have you faced the challenges listed in this section in leveraging virtual negotiation technologies for effective business relationship management?

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

No.	challenges	(1)	(2)	(3)	(4)	(5)
4.1	Limited technological infrastructure for virtual negotiations					
4.2	Resistance to change and adoption of virtual negotiation technologies					
4.3	Lack of technical skills and training in utilizing virtual negotiation tools					
4.4	Concerns about data security and privacy in virtual negotiations					
4.5	Challenges in building trust and rapport in virtual negotiation settings					
4.6	Complexity in managing multiple virtual negotiation platforms and tools					
4.7	Overdependence on technology leading to reduced personal interactions					
4.9	Others (specify)					

5.0 Section E: Strategies

Rate the extent to which the following strategies are used in the organization to leverage virtual negotiation technologies for effective business relationship management.

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

No.	Strategies	(1)	(2)	(3)	(4)	(5)
5.1	Investment in robust virtual negotiation platforms and tools					
5.2	Providing comprehensive training programs on virtual negotiation technologies					
5.3	Establishing clear guidelines and protocols for virtual negotiations					
5.4	Promoting a culture of virtual collaboration and communication					
5.5	Collaborating with technology partners to enhance virtual negotiation capabilities					
5.6	Encouraging knowledge sharing and best practices in virtual negotiation					
5.7	Aligning virtual negotiation strategies with overall business objectives					
5.8	Others (specify)					

6.0 Section D: Relationship between VNTs and quality of business relationship

6.1 In your opinion, is there any direct relationship between VNTs and quality business relationship?

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

(1)	(2)	(3)	(4)	(5)

6.2 To what extent would you recommend the integration of VNTs in your organisation as a way of improving business relationship quality?

NOTE: Indicate by ticking in the appropriate space in the tables below using the scale of:

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree, where possible.

(1)	(2)	(3)	(4)	(5)

Thank you for your cooperation

Appendix 2

Interview guide

I am Chiedza Chari, a student from Bindura State University pursuing a Master's of Science Degree in Purchasing and Supply Chain Management. I am carrying out a research entitled "Leveraging virtual negotiation technologies for effective business relationship management in the manufacturing industry" a case of Shepco Holdings. Kindly respond to the following questions, you opinion and suggestions will be used strictly for academic purpose and shall be treated with utmost confidentiality.

Work position		Department	
Gender		Age	

Highest level of education		Length of service	

Interview guide questions

1	Do you understand the concept of virtual negotiation technologies	
2	Which virtual negotiation technologies are adopted by your organization	
3	In your experience, how do virtual negotiation technologies enhance business relationship management	
4	What obstacles hinder proper implementation of virtual negotiation technologies	
5	How do you evaluate the negotiation technologies used in your organization	
6	How do you ensure effective integration of these technologies	
7	How is VNTs related to quality of business relationships	
9	How does virtual negotiation technologies benefit business relationship management	

SIGNATURE

Appendix 3

P Bag 1020
BINDURA, Zimbabwe
Tel: 271 – 7531-6, 7621-4 ,6230
Fax: 263 – 271 – 7534
Cell No 0777603758

BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF COMMERCE
ECONOMICS DEPARTMENT

15 April 2024

Dear Sir/Madam

RE: REQUEST FOR PERMISSION TO COLLECT DATA

This letter serves to inform you that Chiedza Chari (Reg number: B227586A) is pursuing an MSc in Purchasing and Supply Chain Management with our Department. Please assist him with data for his dissertation titled ***"Leveraging virtual negotiation technologies for effective business relationships in the manufacturing industry, a case of Shepco holdings".***

The information gathered from this research will be used purely for academic purposes and your response will be classified as private and confidential.

Your cooperation will be greatly appreciated.

Yours sincerely,

16 APR 2024

Mutsvangwa. S. (Ph.D)
Chairperson: Department of Economics

Appendix 4

Document Viewer

Turnitin Originality Report

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Chiedza Chari B227586A By Vv Vv

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