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TITLE: AN INVESTIGATION INTO THE IMPACT OF IT – BUSINESS ALIGNMENT ON PERFORMANCE. A CASE OF ZIMBABWEAN STATE OWNED ENTERPRISES

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Student Signature Date

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Supervisor Signature Date

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DEDICATION

To my family, a beautiful wife and wonderful children

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I am greatly indebted to my Supervisor under whose guidance and advice this thesis was carried out. His experienced counsel and insight on the content, layout and direction of this dissertation were indispensable. May the Almighty bless him abundantly.

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ABSTRACT

This dissertation researches on:AN INVESTIGATION INTO THE IMPACT OF IT – BUSINESS ALIGNMENT ON PERFORMANCE. A CASE OF ZIMBABWEAN STATE OWNED ENTERPRISES. The research was conducted using a quantitative research approach making use of a questionnaire as a research instrument. The specific objectives of the study were:

i. Establish the relationship between IT governance and Business performance
ii. Identify the benefits emanating from utilizing IT and business collaborations on ensuring IT/business alignment
iii. Establish the effect of skills as a strategy for IT-Business alignment on business performance.
iv. Establish the effect of communication as a tool for IT-Business alignment to business performance.
v. Establish the knowledge of IT by Business and the knowledge of business by IT

The objectives of this study were achieved to a greater extent. Literature review demonstrated the importance of Information Technology to an organization whose importance now mean more than just Information Communication Technology but rather transcends departments and functions within a business organization. Literature also indicated that in order for business organisations to realise the full value of the investment that would have been made in Information Technology infrastructure. The researcher used Zimbabwean State Owned Enterprises as the research case study. The target population comprised of IT Managers, IT Systems Administrators, IT Technicians, Departmental Managers as well as general employees among others. The researcher issued out 150 questionnaires and 128 were successfully completed and returned representing a response rate of 85%

The findings of the inquiry indicated that IT – Business alignment had a positive impact to business performance in Zimbabwean State Owned Enterprise

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LIST OF ACRONYMS

CAAZ	Civil Aviation Authority of Zimbabwe
CMED	Central Mechanical and Engineering Department
ERP	Enterprise Resources Planning
ICT	Information Communication Technology
IT	Information Technology
MMCZ	Minerals Marketing Corporation of Zimbabwe
NOIC	National Oil Infrastructure Company
NRZ	National Railways of Zimbabwe
PSMAS	Premier Service Medical Aid Society
SAM	Strategic Alignment Model
SAP	Systems Application and Products
SOE	State Owned Enterprises
USD	United States Dollars
ZBC	Zimbabwe Broadcasting Authority
ZESA	Zimbabwe Electricity Supply Authority
ZETDC	Zimbabwe Electricity Transmission and Distribution Company
ZIMRA	Zimbabwe Revenue Authority
ZINARA	Zimbabwe National Road Administration Authority
ZMDC	Zimbabwe Mining Development Company
ZPC	Zimbabwe Power Company
ZUPCO	Zimbabwe United Passenger Company
POTRAZ	Post and Telecommunications Regulatory Authority of Zimbabwe

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Chapter 1

Introduction to the study

1.0 Introduction

Strategic IT-business alignment has been recognized as one of the major management issues for several decades now (Gerow et al., 2015; Luftman & Ben-Zvi, 2011). Researchers identified many positive effects of such alignment including increased operational efficiencies, innovativeness, additional competitive advantage, and ultimately, improved performance (Almajali & Dahalin, 2011; Chan, Sabherwal, &Thatcher, 2006; Henderson & Venkatraman, 1993; Kalkan et al., 2011; Raymond & Bergeron, 2008; Wagner, 2014). At the same time, failure to achieve alignment may result in adverse outcomes such as resource waste, an adverse financial bottom-line and corporate results (Ravishankar et al, 2011; Chen et al, 2010).

Despite effort to implement IT-Business alignment strategies among corporates in Zimbabwe, there is still a huge work to be done with State entities specifically within ZESA to ensure that the impact of IT-Business alignment can be realized. This research will drill on the impact of IT-business alignment on business performance among state owned entities.

1.1 Background to the study

The approach of Information Technology to Business alignment is one which seeks to explain or to explore how the Information Technology objectives, mission and plans feed into and are informed by organisational goals, vision, mission and plans. (Carvalho, &Sousa 2008). Moreso, it entails to the level of integration and fit between an Information Technology strategy, business strategy, business infrastructure as well as Information Technology infrastructure (Papp 2001). What could be regarded as a relevant problem according to Pereira &Sousa (2003) is the plight to establish an understanding of what exactly IT - Business alignment entails, how it is achievable as well as how it can be sustained once it has been achieved. Orthodox and traditional views seek to establish ways in which organisations could reach a level of IT – Business alignment, albeit, with most overlooking the basic fact of organisational analysis which begs the question of how to rectify misalignment. For purposes of utility and total applicability, it is

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imperative that an alignment strategy incorporates the following steps: Need for strategic modelling of the Strategic Business Units, Corporates or entities that are currently involved in alignment concepts and establish relationships between Information Technology and business firms.; there is need for the degree of alignment to be measured to establish if there is a need for actions targeted at improving the alignment; Continual improvement and innovative measures so as to continually improve the degree of IT-Business alignment. An automated support system is also of vast utility to offer a logistical, technological as well as strategical support for all involved processes in alignment management. To date, a multiplicity of views and models have been propounded in the plight to address the IT – business dichotomy with the Strategic Alignment Model (SAM) being one of the first (Henderson& Venkatraman 1993).

A plethora of other diverse and wide ranging studies were carried out with the main aim of evaluating the pioneering studies. A glaring example as explained by Avison et al (2004), is that the Strategic Alignment Model was applied to the Financial sector with the aim of establishing if it was of any apparent applicabilityin the assessment of strategic IT – Business alignment. In (Bleistein et al 2006), the general angles concerning demonstrating was discussed and a displaying issue was proposed. Specifically, the VMOST – Vision, Mission, Objectives, Strategies, Tactics – investigation was blessed to receive split the business procedure into the fundamental segments of vision, mission, objectives, techniques and strategies, and the BRG – Business Rules Group – show was proposed for demonstrating the association's frameworks. In De Castro et al (2011), the MDA – Model Driven Architecture – device was utilized to help the arrangement the executives, and meta-models were proposed for speaking to the elements associated with the arrangement investigation. In, Aversano et al (2010), a structure was proposed for displaying the arrangement at the useful dimension and a few measurements were presented for estimating the arrangement degree between business procedure and programming frameworks. In Etien and Rolland (2005), criteria and related nonexclusive measurements were proposed to evaluate at which degree there is a fit between the business and framework which underpins it. In Wieringa, (2003), a structure was exhibited for examining the arrangement issue and proposing a way to deal with application engineering plan with reference to a business setting.

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The Business and Information Systems Mis-Alignment Model (BISMAM), is proposed, to comprehend, order and oversee misalignments (Thevenet, 2006). The proposition tends to the arrangement issue consolidating the misalignment approach with restorative sciences approaches. The creators trust that the misalignment approach is nearer to associations reality and that medicinal sciences approaches give pertinent ideas and systems to misalignment the board. The examination builds were estimated utilizing multi-thing scales adjusted from the SAM system (Chen, 2010). The relationship existing between the arrangement development measurements and IS vital arrangement was analyzed. In Hooper et al (2010), another conceptualization of arrangement was accounted for together with the improvement and testing of a model which tends to this issue. Information from a review of 415 medium-expansive organizations were utilized to test the model. It was discovered that IS-showcasing arrangement positively affected both business and advertising exhibitions. This investigation broadened the utilization of Henderson and Venkatraman's (1989) work and offered a help to the heartiness of his conceptualization and estimation of vital introduction. In Becker and Prikladnicki (2008), it is discussed that Software Process Improvement (SPI) programs increment the intensity of programming advancement associations, and that QFD (Quality Function Deployment) is a powerful system that can be utilized for regulating improvement forms.

IT-Business alignment still continues to persist in our local State owned entities and its impact on business performance has not been properly analyse over the years. The research will look at the impact of this alignment on business performance in order to come up with solutions to address this misalignment challenges in state entities besides huge investment in IT systems especially in ZESA we millions of dollars are paid on they ERP system(SAP) and other systems used for power generation and Grid monitoring.

1.2 Statement of the problem

Since the turn of the millennium, there has been an increase in the investment in information technology in all facets of business organizations. Several researches were conducted to establish the benefits of information technology in organizations (Bannister & Remenyi, 2011; Brynjolfsson & Hitt, 1993; Korpelainen, 2011; Wessels, 2003). Benefits and opportunities that

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IT-Business alignment bring are not easily quantifiable and isolated (Bannister & Remenyi, 2011; Wessels, 2003). It is important to point out that most of these earlier researches were concentrating on corporates in developed countries.

According to Bannister and Remenyi (2011), most researches on the impact of IT-Business alignment to business performance are largely broad-focused. Very few researches have been done on the impact IT-Business alignment to business performance in single specified organizations despite large investments that have been done in IT systems by most individual organizations across the globe (Gowell & Anderson, 2012). This has created a research gap. Several companies have invested in technology meant specifically to enhance their functions with the expectation to reap a lot of benefits and more particularly to enhance their value addition to organizations and meet stakeholder expectations (Rezaee & Reinstein, 2011; Davis, 1989; Bierstaker, et al., 2001). Although information technology has been highly adopted in the developed world more than in the developing world, it has been noted that the developing world and the organizations therein are also embracing technology and are catching up (Deloitte, 2012). The fact that the developed world embraced technology earlier than the rest of the world, most of the researches are concentrated in the developed world also leaving a gap in the developing world. ZESA is one of the organizations in the developing world that has embraced technology for its several departments including the IT Division.

The fact that little research on the impact of IT-Business alignment to business performance in third world organizations is also a compelling motivation to explore the area further. This research in particular aims to analyse the impact IT-Business alignment to business performance in a single specified third world corporate (ZESA).

1.3 Research aim and objectives

The general purpose of this study is to evaluate the impact of IT-Business alignment strategies on business performance

The following were the objectives of the study:

- Establish the relationship between IT governance and Business performance

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- Identify the benefits emanating from utilizing IT and business collaborations on ensuring IT/business alignment
- Establish the effect of skills as a strategy for IT-Business alignment on business performance.
- Establish the effect of communication as a tool for IT-Business alignment to business performance.
- Establish the knowledge of IT by Business and the knowledge of business by IT

1.4 Research Questions

The study will be guided by the following research questions:

- What is the relationship between IT governance and Business performance?
- How does IT- Business alignment translate to improved Organisational performance?
- What is the effect of skills as a tool for IT-Business alignment to business performance?
- What is the effect of communication as a tool for IT-Business alignment to business performance?

1.5 Research Hypothesis

Main Hypothesis: A well aligned IT function and Business has a positive effect on business performance.

- H1: There is a positive relationship between good IT governance and business performance.
- H2: There is a positive relationship between use IT and business collaborations as a tools to ensure alignment and business performance.
- H3: There is a positive relationship between use of skilled personnel in ensuring IT-Business alignment and business performance.
- H4: There is a positive relationship between use of communication as a tool for IT-Business alignment and Business performance.

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1.6 Scope of the research

STATE OWNED ENTITIES IN ZIMBABWE

The study is restricted to the impact of IT-Business alignment strategies to business performance in Zimbabwean State Owned Enterprises. The observations therefore primarily relate to the Zimbabwean State Owned Enterprises and due care should be exercised when generalising the results to state owned enterprises in other countries and private organizations.

TIME CONSTRAINT

The researcher is fully employed by ZESA with five working days per week. The nature of the job also entails a lot of travel to power stations dotted around the country on work assignments. It therefore implies that the researcher will be working with a tight schedule in terms of available time. This has a potential impact on the quality of the research considering the six-month period that the researcher has to submit the research work.

1.7 Justification / Rationale / Significance of the study

The researcher is convinced that the findings of this study, if availed to the following stakeholders and entities will not only assist decision-makers but will also provoke further

Firstly the study will assist the State Owned Enterprises boards and management to gain an insight into the impact of IT-business Alignment strategies on business performance and enable them to make optimum decisions from an informed position when investing in such solutions.

The corporate governance institute through the Office of the President and cabinet will also be apprised of the impact of IT governance to proper Zimbabwean entities since most current literature are biased towards Western entities.

Thirdly the University of Zimbabwe may also place the research report in the library for future research reference as well as inspiring further research on the subject matter.

It is also hoped that entities not specifically covered by this study will learn lessons from the findings of this research and use the knowledge to enhance capacity of IT-Business alignment. The research findings will provoke thinking and decision-making into whether adopting IT-business alignment frameworks is worthwhile or not.

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It is also projected that the results of the study will also shed insight into the subject of IT-business alignment and provoke thinking amongst the IT professionals themselves. As indicated earlier, the results of this study will be beneficial to the professional body of ICT. This in turn will cascade to the members themselves and the knowledge of IT professionals in this area will be enhanced

1.8 Layout of the dissertation

Chapter 1 covered the introduction to the research; the background to the study; the research objectives and the research questions; the rational of the study and the scope of the study. The chapter also set the tone for the subsequent chapters. The rest of this research is arranged as follows:

Chapter 2 reviews of existing literature on IT – Business alignment

Chapter 3 details the methodology applied in the study.

Chapter 4 reports the study findings and makes a comparative discussion of the findings to already existing literature.

Chapter 5 contains conclusions and recommendations to the research.

1.9 Chapter Summary

This chapter covered the introduction and gave an overview of the research problem. The chapter also outlined the, research objectives, research questions, and research proposition. The study's justification, its scope as well as the dissertation's layout were also covered.

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Chapter 2

Literature review

2.0 Introduction

The following literature review will highlight the impact of IT-Business alignment strategies to business performance with a particular bias to state owned enterprises. The search for literature was centred on the review of electronic journals concerning IT-Business alignment. Information was also gathered by pursuing papers cited in already obtained literature (ancestry approach).

In order to ensure that relevant studies were not overlooked, initial search terms remained broad. Articles with 'IT-Business alignment', 'IT-Business fit', 'IT-Business congruency', 'IT-Business partnership', 'IT-Business synergies', and/or 'IT-Business integration' in title, abstract or as main topic were identified in this manner. Next, a detailed examination of papers was executed to filter out articles focusing on IT-Business alignment. Papers that simply focused on the benefits of IT or the benefits of Business strategy as mutually distinct concepts were excluded.

According to Scott-Morton (1991) when using the word *alignment* it implies that there are two separate entities trying to work together but still remaining separate. The reality is that roles that were traditionally embedded in the IT are now embedded in the business meaning that both entities are moving towards becoming one unit.

The purpose of this chapter is to place the study in a historical perspective as well as to identify the gaps in research. This chapter also lays the foundation for the design of the research methodology. A review of existing theory and studies previously conducted by other practitioners, analysts, study groups and authors contained in texts, articles, publications and internet sites to which the researcher got access to, forms the basis of this chapter. The chapter also reviews the various views from different authors on the importance of IT-business alignment to performance of a business in general zeroing in to the performance of Zimbabwean state owned enterprises. To further corroborate the arguments the chapter looked into the issue of

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IT-Business miss-alignment and its possible negative impact to the performance of a business organisation. The researcher made extensive use of journals, reports, working papers, textbooks and the internet to find literature on the importance of IT-Business alignment to business organisations in general and Zimbabwean State Owned Enterprises in particular.

This chapter will delve deeper into the concept of IT-Business alignment as well as IT-Business misalignment and the possible connotations for both scenarios to the performance of Zimbabwean state owned enterprises. It looked to previous studies on It-Business alignment in other business organisations and other industrial sectors. The research weighs the postulations various fore-runner studies from various geographical dispersions and differing chronological eras. The research then compares and contrasts the thoughts of different studies and identifies clear gaps in existing literature. The study finally comes up with a conceptual framework to aid in the design of the research methodology and analysis of research findings. The theoretical framework touch bases on the underlying theories and is shaped by the synthesis of the available literature.

2.1 Literature Mapping

The conceptual framework for IT-business alignment will be discussed. The theoretical framework will be informed by the Fit theory / Congruency theory as well as the Strategic Alignment Model among other relevant alignment and integration theories. Arguments for pursuing IT-Business alignment strategies were also highlighted in this chapter. A case study demonstrating the utility of implementing IT-Business alignment will be offered. Alternative business survival strategies that might be adopted in the plight to achieve IT-Business alignment strategies were also critically evaluated. Other survival strategy models were examined briefly highlighting aspects about them that makes them incompatible with the nature, size and environment of state owned enterprises operating in Zimbabwe.

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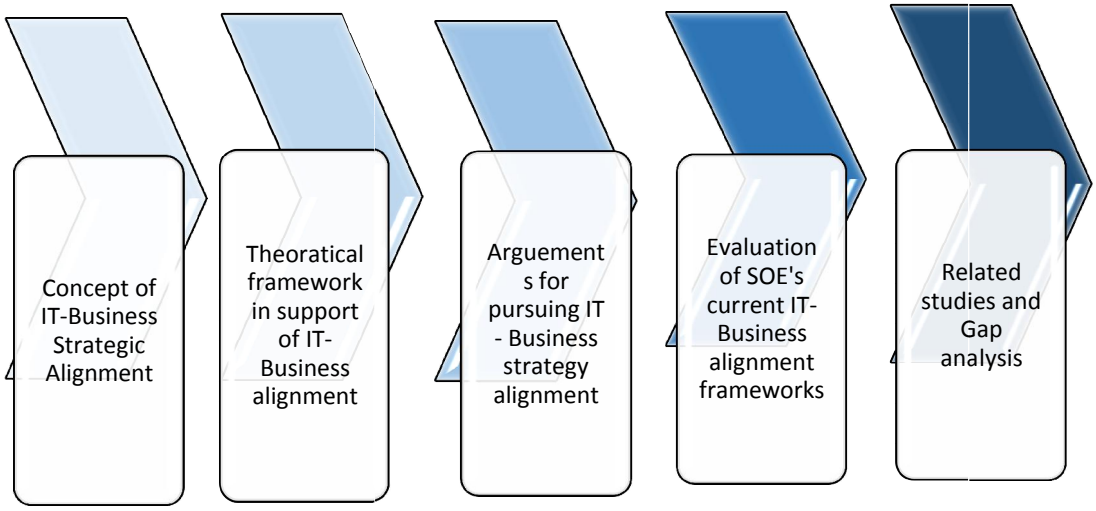
Figure 2.1 Literature Mapping



2.2 Explanation of Search strategy for literature.

Textbooks, scholarly journals, white papers, position papers and various articles on the internet forms the bulk of the literature used in this chapter. The researcher also took a keen interest in the Government Economic Blueprints as they are the shareholder's (Government) plans and strategy with regards to the operations and likely trajectory that the State Owned Enterprises will take. Although the available literature is largely oriented towards Western Economies, the study took a keen interest in like-minded developing countries in Africa, Asia, and the Middle East among others. Lastly where possible, data from selected State Owned Enterprise reports on IT-Business alignment was extracted and acknowledged.

2.3 What is Information Technology?

Information Technology can be defined as the use of computers in the storage, retrieval, transmission and manipulation of data (Daintith, 2009) or information, often in the context of a business organisation or other enterprise (FOLDOC, 2013). Leavitt and Whisler (1958), who are the proponents of the term Information Technology defines it as strategies for preparing, the use of measurable and numerical techniques to basic leadership and the recreation of higher request

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thoroughly considering PC programs. Data Technology is regularly utilized as an equivalent word for PCs and PC arranges yet in established truth it means a plenty of other data dispersion advances, for example, the TV and phones. A few items or potentially benefits inside an economy are related with Information Technology, PC equipment, PC programming, hardware, semiconductors, web, telecom gearas well as e-commerce (Chandler, 2012). Perhaps an interesting definition of Information Technology to this research comes from The Joint Task Force for Computing Curricula (2005) which defines Information Technology as a field of study and practice that is aimed at meeting Information technology needs of commerce, State Owned Enterprises, Government departments, educational institutions, healthcare institutions and other kinds of organisation. They go on to state that Information Technology specialists assumes the responsibility of selecting hardware and software products appropriate for an organisation, integrating those products with the organisational needs and infrastructure, and installing, customising and maintaining those applications for the organisation's computer users.

From the above definitions of Information Technology, it is apparent that from the onset information technology's presence in an organisation is deliberately meant to advance the need of the organisation. Yet the autonomous mandate of executing Information Technology aspects within an organisation that is bestowed to the information technology specialists create a scenario where the Information Technology Department and the business organisation itself appear to be mutually exclusive of each other. This then creates a dilemma of the operational aspects of Information Technology in the business context as it is the business organisation that is being used to justify the need for Information Technology and yet the aspects of Information Technology within the business becomes the sole prerogative of the Information Technology specialist. This scenario of mutual exclusiveness is what gives rise to the miss-alignment of the Information Technology and the strategic objectives of the organisation.

2.3.1 Roles of Information Technology

The role of Information Technology is of enormous and wide ranging proportions ranging from the apparently simple and almost negligible like using a calculator to the more complex like the use of artificial intelligence in the corporate world.

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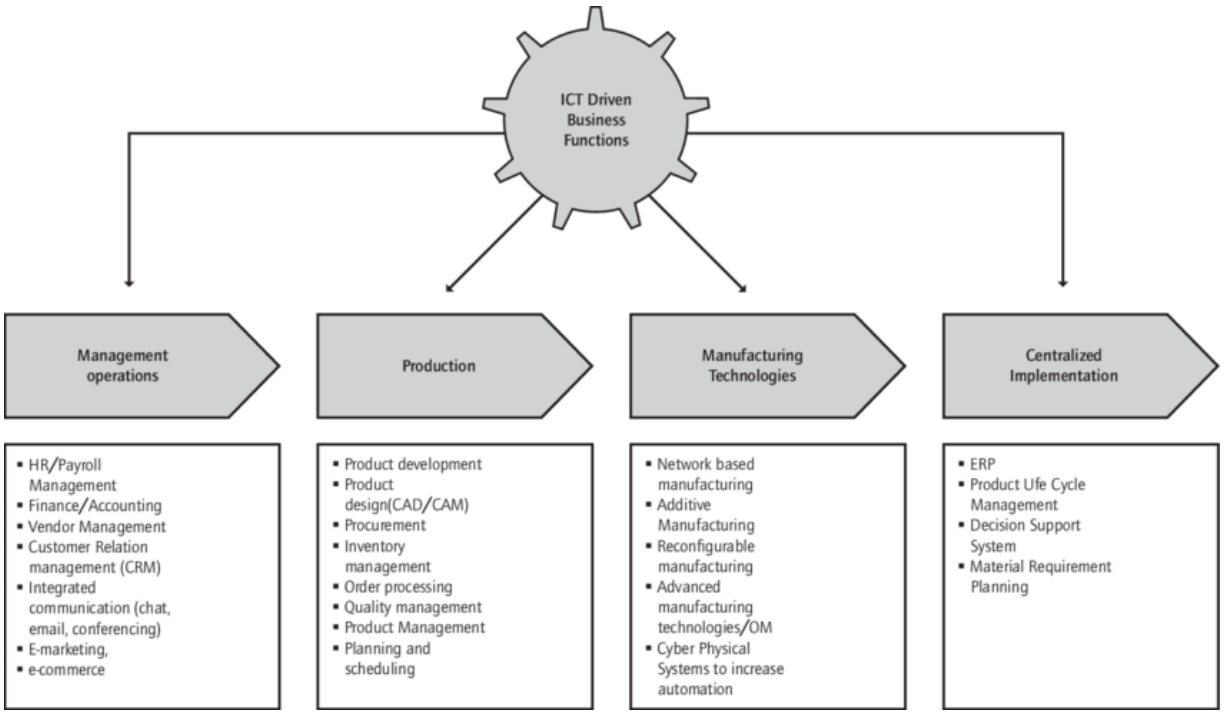
Figure 1.2 Benefits of Information Communication Technology (Schiappacasse, 2015)



Communication

Information technology has revolutionised communication in general as well as business communication in particular. Gone are the days when communication entailed paper written letters, paper printed memos stuck on notice boards as well as the use of other outdated and paper base methods of communication. These primitive methods are regarded as time expensive due to the length of time taken for the communication circle to be completed. However with the advent of Information communication technology the turnaround time of the communication circle to be completed has been drastically reduced (Walton, 2018). Information Communication Technology has changed the business communication landscape due the employment and use of Enterprise Resource Planning Systems like SAP and ORACLE used in communication, email, telephoning, teleconferencing, TeamViewer, Skype for Business, WhatsApp for business and a plethora of other Information Communication Technology tools used in the current business world. With the advent of environmentalism which seeks protecting the environment through environmentally friendly business practices the echo to change the kaleidoscope from the paper based to the electronic communication tools is ever growing louder (Ferley, 2017).

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Hence communication as a benefit of Information Communication Technology has brought about benefit to the business organisation in its own individual capacity.

Data Management

Information and data are processed on a daily basis within business organisations. The traditional methods of data and information management entailed hard copies with paper documents. These would be stored in files on shelves and in entire rooms. This had a challenge of document and data loss due to environmental damage, fire, theft among a plethora of potential risks as well as the challenge of document retrieval which could take long especially when dealing with a large number of data documents (Mateen, 2011). However, with the advent of Information Communication Technology data and information storage is now being managed through information communication technology. Employee records, financial data, operations data, marketing data, and all information and data pertaining to the business organisation is then managed, stored and processed with the use of Information Communication Technology equipment and software. This has helped in the storage of information through the use of multiple servers and the information cloud. This has also contributed to document and information security through the use of passwords and encrypting which ensures information integrity and confidentiality. Retrieval of information has also been vastly improved due to the high retrieval abilities of computers (Mateen, 2011).

Marketing

Information Communication Technology has led to a paradigm shift in terms of how business organisations conduct their marketing. The use of social media, cookies, digital platforms, websites, emails to bring about awareness of organisational products and services, create interest in what the organisation offers, and desire to acquire the products and services as well as action towards purchasing the goods or services (Wavomba, 2017). Information communication Technology has capacitated business organisations as well as marketing professionals to be able to reach out to a larger market share at a lower cost than what was the case with the traditional marketing techniques. Market research has also been made cheaper and widely accessible through the use of online surveys (Wavomba, 2017).

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Human Resources Management

Human resources management is another aspect of business that has been greatly improved by Information Communication Technology. When conducting recruitment, Information Communication Technology enables the techno-savvy recruiter to reach out to a wide audience or pool of potential incumbents than what the traditional newspaper and flier advertisements would (Elhazzam, 2015). This enables the business organisation to attract the best possible candidate there is who is willing to compete for the job opening. Issues to do with training have also vastly benefited from information technology through the use of simulators and computer aided training. Human Resources Information Systems are also some potential spin-offs from the use of Information Communication Technology that have been brought to the business world.

Process Improvement

Information communication technology has brought about process improvements due to automation. In most business organisations there is an element of automation which is aimed at reducing or eliminating human effort in the execution of functions. Production and business processes have increased in efficiency as well as effectiveness due to the adoption of Information Communication Technology at the workplace (Jones, 2008).

Transactional Processing

Information Communication Technology have the potential benefit of bringing about transactional payment flexibility. Transactional payment flexibility entails ways in which customers and the business can transact liquidity (Chauhan, 2018). With the advent of ICT multiple payment methods have been adopted by business organisations which include mobile money, Credit Card, Real Time Gross Settlement (RTGS), Telegraphic Transfer, crypto currencies over and above the ability to still use hard cash.

Decision Support systems

Decision-making has been the prerogative of management since time immemorial. With the advent of Information Communication Technology various systems and applications have been developed to assist management in making decisions best suited for their organisations in the

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circumstances they might be in (Keen, 1980). Decision support systems are best utilised when the decision to be made is carefully analysed through input of correct data in the decision support system and potential decisions are highlighted or the best suitable decision is stated.

2.4 Importance of Study.

While acknowledging several fore-runner researchers on the subject of IT-Business Alignment, the researcher is convinced that the findings of this particular study, will not only explain some of the research gaps notable in literature but will also provoke further research on the subject. With the technology explosion and the seemingly endless information technology innovation and creativity coupled with the need for State Owned Enterprises to stay abreast with technology calls for integration between the available technology and the business strategy.

In that vein IT-Business alignment plays a crucial role in that it assists State Owned Enterprises in particular and business organisations in general realise the true value of their various investment. Supporters of IT-Business alignment argue that it brings both vertical and horizontal integration within a business organisation, more-so if it is sophisticated like that of a State Owned Enterprise. They argue that IT-Business alignment generally leads to increased productivity, improved communication, improved efficiency, improved production processes and ultimately culminate in improved profitability. The phenomenon of IT-Business alignment is becoming increasingly impossible to ignore as State Owned Enterprises in Zimbabwe face an in-depth introspection in their general low productivity. This study will help in demystifying some myths about IT-Business Strategy alignment. This study will proffer value-adding recommendations on the IT-Business alignment subject and provoke further research on the area.

2.5 IT-Business Strategic Alignment Conceptualization

Prior extensive researches have brought to the fore the importance of IT to the business. The researches have been so extensive and exhaustive that apparently both professionals and academia with an interest in Information Technology are convinced of the immense contribution in terms of cost effectiveness and time efficiency of IT to business. Researches on strategy have

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also apparently been wide ranging as to how an effective strategy can be crafted to deliver a sustainable competitive advantage in many aspects of the business including Marketing (Mhlanga, 2018; Mashumba, 2017), Human Resources (Maidza, 2012), Finance (Clarke, 1988) and Operations (Brown, 2013) among others. The fact that all these strategic functions of business lead to improved business performance is corroborated by the research findings of the researchers above among many others.

What however seems like a grey area is how then Information Technology fits in this whole matrix since it transcends the functions of Marketing, Operations, Human Resources, Finance, and Inventory Management amongst other departments that might be there at an organisation. Unlike other departments which can have stand-alone departmental strategies, Information Technology cannot or rather should not be a stand-alone department where its relationship with other departments is of a mutually exclusive nature. Consequently the strategy of Information technology should thus not be a reflection of Information Technology initiatives exclusively. It should rather be an integration of various departmental initiatives, functions and sub-functions which are then coordinated and managed through information technology with the aim of bringing about organisational efficiency and effectiveness, all meant to translate to improved productivity. As aptly captured by Scott-Morton (1991) the mere use of the word alignment entails two or more mutually exclusive items that seek to be merged to become one. Whether that intended one will bring about improved productivity or not is what this discourse seeks to deconstruct.

IT-Business alignment is a much debated concept with academics and practitioners emphasising different dimensions of the relationship. It may be considered a harmonious, mutually supporting and timely association; a continuous contributor to performance over time; a facilitator of change that can drive transformation and the degree of fit or integration (Van Grembergen & De Haes 2010; Luftman 2011). It is intellectual, structural, social and cultural, and constantly evolving. Despite nuances in definition, perspective and scope, complementarity and coevolutionacross IT and business processes, underpinned by supporting organisational factors is required to create value and synergy, support effectiveness and efficiency, enhance competitive position and

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facilitate dexterity and responsiveness to react to, shape and enact change (Wade & Hulland 2004; Luftman 2011).

The inconsistent study results related to IT-business alignment may have arisen from different alignment theories, definitions, models, and measures (Chen et al., 2010; Gerow et al., 2015). Indeed, researchers and practitioners have focused on various forms of alignment including among others the links between IT and business strategies, the fit between IT and organizational processes and infrastructures, the alignment of decision making information and IT architecture practice, and alignment of business needs with information systems and applications (Cragg et al, 2007; Tan & Gallupe, 2006). Still, despite seeming failure of researchers and practitioners to converge on the same idea about IT-business alignment, some models have been more frequently used due to their robustness, validity, and strong psychometric measures. The Strategic Alignment Model (SAM) developed by Henderson and Venkatraman (1993) has been considered as a basis for much of strategic IT-business research (Avison et al., 2004; Coltman et al., 2015; Luftman, Lyytinen, & Ben Zvi, 2015). When IT is working to support business goals it leads to happier, more productive teams, smarter investments and greater return.

2.6 Strategic Alignment

With the plethora of benefits and potential benefits that the advent of Information Communication Technology has brought, the onus is up to the business world to tap into Information Communication Technology and align it to their own unique operations so as to try and establish a sustainable business operation that is technologically abreast.

Franken (2014) postulates that strategic alignment is the ability to create a fit or synergy between the position of the organization within the environment (business) and the design of the appropriate business processes, resources and capabilities (Information Technology) to support the execution. Strategic alignment cannot be reached when strategy development is considered to be a separate process from strategy implementation. Strategy development and strategy implementation are intertwined processes which both need to be successful for superior firm performance. Strategic alignment is also defined as the strength of the links between an organisation's overall goals and the goals of each of the units that contribute to the success of

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those overall goals (Andolsen, 2007). The concept is closely related to strategic fit, which exists when the network of internal performance drivers is consistent and aligned with the firm's desired customer and financial outcomes (Kaplan & Norton, 2006). In this context the alignment is however of Information Technology and the overall business strategy. The way toward bringing the activities of an association's business divisions and staff individuals into line with the association's arranged goals. The capacity of most organizations to accomplish their vital objectives will profit by playing out an extensive key arrangement to help guarantee that its divisions and representatives are together moving in the direction of the organization's expressed objectives (www.businessdictionary.com). According to Malaczynski (2018) Strategic alignment is the process and the result of linking an organisations structure and resources with its strategy and business environment (regulatory, physical, etc.) Strategic alignment enables higher performance by optimising the contributions of people, processes, and inputs to the realisation of measurable objectives and thus, minimising waste and misdirection of effort and resources to intended or unspecified purposes.

IT-Business misalignment is considered in a two-pronged way of either Information Technology shortfall or business strategy shortfall. Technology shortfall arises when an organization's IT capability fails to provide adequate support for its business strategy. As a result, the organization is held in check by its IT capability. Strategy shortfall, on the other hand, arises when an organization's business strategy fails to take full advantage of its existing IT capability. For instance, business opportunities are present in the environment for which technological support is available, yet for some reason the business strategy has neglected to take full advantage of these opportunities. Organizational knowledge allows some firms to achieve a competitive advantage and explains why firms treat organizational learning processes as valuable assets. Explicit articulation of this knowledge is embodied in the alignment outcomes. IT-Business strategy alignment supports the use of information Technology for competitive advantage by the more accurate mapping of IT strategies to business strategies.

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2.7 Theoretical Framework

2.7.1 Alignment Theory /Fit Theory / Congruence Theory

The alignment theory is one of the most universally applied and versatile of all theories. It transcends field of study from Psychology, Sociology, Biology, Economics, Marketing, Management and Information Technology among others. It is interchangeably referred to as the Fit Theory or the Congruence Theory. The basic tenets of the theory is that there should be strategic fit between the various aspects of a business organisation (Chorn, 1991). By the achievement of congruence the theory postulates that the organisational mechanisms would be able to function harmoniously with minimum if any friction or conflict. Thus by the achievement of organisational fit performance is maximised. According to Chorn (1991) the principle of strategic fit considers the degree of alignment that exists between competitive situations, strategy, organisational culture, leadership style, infrastructure, technology and any other factors important to organisational productivity. The Congruence Theory informs this research in that it brings to the fore the importance of why business organisations should strive to achieve both horizontal and vertical fit. Whilst conflict might remain relevant for purposes of innovation and creativity, the conflict envisaged by the Congruence theory is the type of conflict which is toxic and counterproductive.

2.7.2 Strategy Alignment Model

Perhaps the most comprehensive and widely applied holistic IT-Business alignment framework is the strategic alignment model (SAM) developed by Henderson & Venkatraman (1993). SAM is a holistic framework that envisions organizations and their IT as having internal (infrastructure and operations) and external (strategy) components. Internal domain encompasses alignment between business and IT infrastructures, while external domain encompasses alignment between business and IT strategies. Henderson & Venkatraman (1993) also defined the cross-domain link which encompasses the relationships between IT strategy and business infrastructure and vice versa. This creates six types of IT-business alignment. Intellectual alignment refers to the link between business and IT strategies and denotes theway toward bringing the activities of an association's business divisions and staff individuals into line with the association's arranged targets. The capacity of most organizations to accomplish their key objectives will profit by playing out a complete vital arrangement to help guarantee that its divisions and representatives

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are mutually working to achieve the mission, destinations, and plans contained in the business technique are shared and upheld by the Information Technology Strategytowards the organization's expressed objectives (Chan et al. 2006, p. 27). Operational alignment refers to the link between organizational and IT infrastructures and operations and denotes integration between organizational policies, procedures, and systems with IT architectures and processes (Henderson & Venkatraman, 1999). It recognizes "multivariate relationships" between all four components of business and IT dimensions (Henderson & Venkatraman, 1999, p. 477).

SAM was named the crown jewel from the theoretical developments of IT-business alignment in the 1990s (MacDonald & Yapp. 1992, p. 256). The major theoretical contribution of SAM is that it was the first theory to look at the IT-business alignment as a continuous, dynamic process involving different variables (Gerow et al., 2015). Such a view was acknowledged as corresponding to the modern view of organizational strategy within an extremely competitive and constantly changing environment (Baker et al., 2011; Guillemette & Pare, 2012; McLaren et al., 2011).

2.8 Prior Studies/Existing Models

The concept of IT-Business alignment has been studied before and is not entirely a virgin area of study. Prior studies have studied the concept of IT-Business Alignment in both western as well as African Economies.

2.8.1 Western Economies-Oriented Literature

The concept of IT-Business strategy alignment has been a topic of study in the Western spheres for a while now dating to as far back as the early 1990s (Henderson and Venkatraman, 1993).

De Haes, Haest & Van Grembergen (2010) conducted research on IT Governance and Business-IT alignment in Small and Medium Enterprises in the Netherlands. It is argued that IT Governance has been underlined as one of the necessary conditions for a better IT-Business alignment (De Haes, Haest & Van Grembergen, 2010) (Luftman & Kempaiah, 2007) (Well & Ross, 2004). The research of De Haes, Haest & Van Grembergen (2010) was premised on the Strategic Alignment Model developed by Henderson & Venkatraman (1993). The research

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established a positive correlation between IT-Business alignment and organisational success. The research also reiterated on the need for reciprocal understanding between Information Technology. Borrowing from Henderson & Venkatraman (1993), De Haes, Haest and Van Grembergen (2010) sought to bring to the fore the need for Information Technology to be cognisant of business strategy and in the same manner business executives should be aware of Information Technology both conceptually and the infrastructural options available.

The research of De Haes, Haest and Van Grembergen (2010) however had a bias towards Information Technology Governance and thus did not dwell much on how strategic IT-Business alignment is achieved as well as the benefits of such.

Afandi (2017) carried out research on the impact of Strategic IT-Business alignment concentrating on the Small to medium businesses in Saudi Arabia in the Middle East. Afandi (2017) sought to establish if there was a relationship between IT-Business alignment and an improvement in the financial bottomline of a business organisation. The research by Afandi (2017) established that there was indeed a positive correlation between an increase in the level of IT-Business alignment and an increase in the profit margins of business organisations in the Small to Medium Enterprise sector, in the context of Saudi Arabia. The research findings of Afandi (2017) corroborated and supported previous research findings on the role of IT-Business alignment in a firm's financial performance(Chan et al, 2010; Gerow et al, 2014; Raymond and Bergeron, 2008; Wagner, 2014). Afandi (2017) established that the strongest effect on financial performance was exerted by operational alignment, which suggested that establishing a link between organisational infrastructure and Information Technology infrastructure was key to the achievement of an improved financial bottom-line. The relationship between Information technology and strategy was established to have an impact on the financial performance of business, albeit on a relatively lower scale compared to the impact of the alignment between Information Technology and organisational infrastructure.

The research by Afandi (2017) played a key role in the construction and development of this research in that it puts into perspective the practical reality of the potential benefits of the alignment between Information Technology and Business strategies. The research however

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appears to over-emphasize the importance of Information Technology and organisational infrastructure alignment whilst downplaying the importance of strategies in the achievement of an improved financial bottom-line for the business organisation. The research conducted by Afandi (2017) was conducted with focus on Small to Medium Enterprises in the context of Saudi Arabia. Though some of the findings are key, applicable and actually inform this research, some of the research dynamics that applied to Small and Medium Enterprises in the context of Saudi Arabia cannot be generalised to State Owned Enterprises in Zimbabwe due to the nature of business, size of business, objectives of the businesses as well as the differences in the operational environments that these two separate contexts entail.

Alagaraja et al (2015) conducted research on unpacking organisational alignment with the aim of studying the issue of migrating from theory to practice in Louisville, United States of America. The research was focused on the implementation of IT-Business alignment within organisations. Alagaraja et al (2015) sought to establish how alignment is created or measured over time and at multiple levels in the organization. They attempted to expand and enrich different perspectives and types of alignment that exist and occur in organizations. They proposed a framework for examining different perspectives of organizational alignment emphasizing conceptual similarities as well as distinctiveness. Their core contribution was an emergent theoretical framework that expanded on the concept of organizational alignment. They found that while conceptual overlap is problematic from a theory building perspective, the organizational context of alignment necessitates unique and varying ways in which this construct is practiced. They applied the theoretical framework to develop recommendations for senior leaders, Human Resource and Operations managers. Finally, they presented implications for both theory and practice.

The research by Alagaraja et al (2015) though important to business in general, it was negligent or ignorant of alignment in the context Information Technology. This ignorance or oversight then leaves a literature gap pertaining to the question of what is to be done with regards to IT-Business alignment. The research failed to address the question of IT-Business misalignment.

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2.8.2 Literature from African Economies.

Researchers in Africa have also conducted researches related to IT-Business alignment that the researcher determined were important to thus research as they provided a foundation upon and around which the researcher sought to build his research.

Wachinga (2010) conducted research on the challenges of Information Technology alignment to Business strategy in the banking sector in the Kenyan context. Wachinga (2010) sought to establish the current (2010) practices with regards to IT-Business strategy alignment in the Kenyan Banking sector, how well IT-Business alignment is achieved as well as establish any challenges faced by banks given the alleged complexity of pursuing IT-Business alignment as a goal. Wachinga (2010) established that competitive advantage as well as improved organisational performance were outcomes of IT-Business alignment. The research also established that management perceived the Information Technology department as the drivers or organisational IT-Business alignment initiatives. Wachinga (2010) cited competitive advantage, improved performance, faster decision making, growth in revenue as well as innovation and creativity among the benefits of IT-Business strategy alignment.

The research by Wachinga (2010) provided an important insight in that it gave a managerial perspective with regards to IT-Business strategy alignment. It is the perspective of management that generally the achievement of fit between Information Technology and the overall organisational strategy will culminate in the improved performance and ultimately profitability for the business organisation. The research by Wachinga (2010) was limited to the banking sector as well as the Kenyan context. Both the scope and context of Wachinga's (2010) study do not exactly augur with the aims of this research, even though certain aspects of his research inform the current research.

Kufandirimbwa, Hapanyengwi and Kabanda (2012) conducted research on the state ICT and business alignment in Zimbabwe. The point of their examination was triple; to ponder and look at ICT-business arrangement cases in Zimbabwe, to set up the current (2012) province of ICT-business arrangement in the Zimbabwean business area, and decide factors that have a pushing or frictional impact on arrangement change. The examination results showed that ICT and business officials in Zimbabwe value that ICT contributes emphatically to business development

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and manageability of their associations. Be that as it may, most of the administrators did not comprehend and apply the idea of IT-business arrangement in their associations. Another outstanding outcome was that to accomplish arrangement in a violent domain there are numerous elements that have a moving or hauling impact on arrangement. The variables have varying size of impact on arrangement all things considered a basic investigation of each factor is required.

This Zimbabwean specific research on IT-Business strategy alignment provides a key insight into the perspectives and thought processes of business executives in Zimbabwe with regards to the issue of IT and its possible contributions to business organisations. The research by Kufandirimbwa, Hapanyengwi & Kabanda (2012) also plays an important role in informing the research gap that this research seeks to fill. The research also provided an important insight in that it offered a Zimbabwean contextualised foundation upon which research on IT-Business alignment research can be built upon and developed around.

The research by Kufandirimbwa, Hapanyengwi & Kabanda (2012) however looked at IT-Business alignment is the Zimbabwean business sector in general without particular focus to State Owned Enterprises. The bureaucratic challenges and dynamics at play in State Owned Enterprises are unique and totally different from other businesses and researches conducted on private companies are not easily generalizable to Zimbabwean State Owned Enterprises.

2.9 Gaps in Literature

A plethora of gaps in literature have arisen and have been identified. These stemmed from the theoretical framework, review of related literature as well as previous researches both in the western context as well as in the African context. The major gap identified is the lack of literature which sought to study the issue of IT-Business alignment in the scope of State Owned Enterprises. Most of the literature available is aimed at Small to Medium enterprises as well as industrial sector such as the hospitality Industry and the Banking Industry. This gap in literature means that the research is treading on a virgin field of study that has not been studied before and if it has the literature has not been made available.

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Another literature gap is that of limited Zimbabwean context specific researches in the field of IT-Business alignment. The only research literature available was that of Kufandirimba, Hapanyengwi & Kabanda (2012). This limitation in literature means that the topic and field of study of IT-Business alignment in the Zimbabwean context has not yet been fully explored and there is vast potential for research in order to close the knowledge as well as literature gap that exists.

Due to the limited availability of literature that focuses on IT-Business alignment in the Zimbabwean context there is a literature as well as knowledge gap in terms of how alignment is to be achieved. Though Alagaraja et al (2015) conducted research and sought to explain this phenomena, her research cannot be generalized across sectors and contexts as the dynamics affecting the unique sectors and contexts are very different.

2.10 Conceptual Framework

A conceptual framework depicts the researcher's analysis and synthesis of literature on how to explain the phenomenon under investigation. The relevant literature pertaining to IT-business alignment specifically was identified and reviewed. Gaps associated with the literature were identified and outlined. The researcher acknowledges that the success of a business organisation in general and a parastatal in particular can be as a result of a multiplicity of factors and cannot be solely attributed on IT-Business alignment. The conceptual framework is shown in Figure 2 below:

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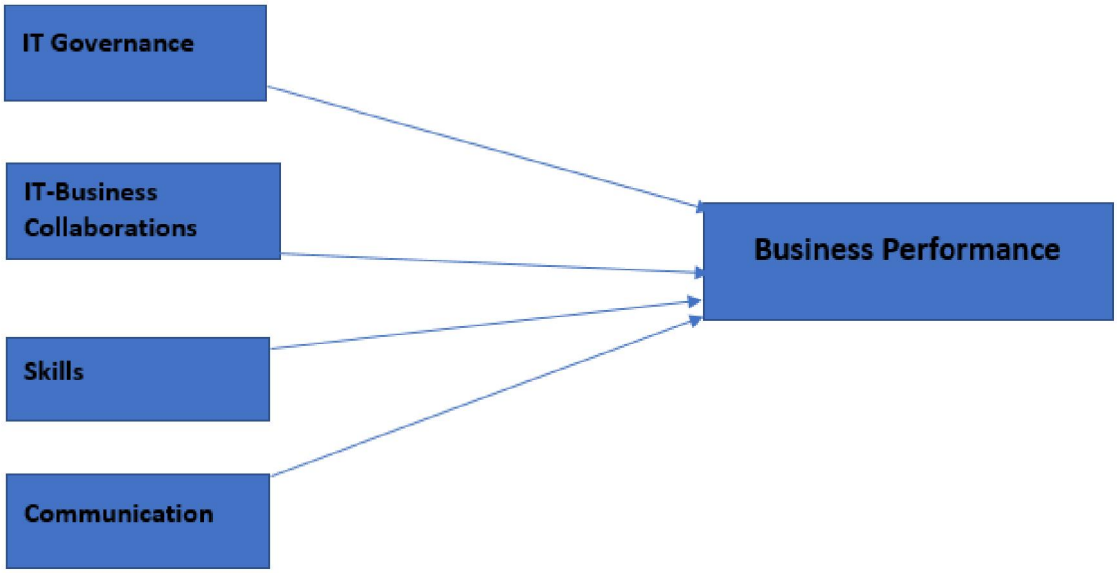
Figure 2.2 IT-Business Strategy Alignment Conceptual Framework



A Priori the hypothesis is:

I. H1: There is a positive relationship between use IT Governance and increased IT-Business alignment in State Owned Enterprises.
II. H2: There is a positive relationship between the use of IT-Business Collaborations and organisational productivity in State Owned Enterprises.
III. H3: There is a positive relationship between use of Information Technology tools and the quality of productivity output at State Owned Enterprises.
IV. H4: There is a positive relationship between use of Information Communication Technology tools and the quality of productivity output at State Owned Enterprises.

2.11 Chapter Conclusion

This chapter delved into the literature applicable to the subject matter at hand. The writer was able to revisit and compare various prior authors, models and underlying theories pertaining to the subject and nature of the study. Various diverging and converging views of different authors were noted and deconstructed. Most of the available literature covers mostly Western Economies

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and not developing countries. In addition, most of the available literature seems to promote IT-Business alignment based on organisational case studies and not sector-wide studies such as those of State Owned Enterprises which may have an impact on a nation's economy on a grand scale.

The writer managed to find literature gaps which although partially covered; remains largely undocumented and it is the purpose of the next and subsequent chapters to come up with a study which will do justice to the identified research gaps.

Chapter 3

Research Methodology

3.0 Introduction

This chapter discusses the methodology that was used in gathering, analysing and representing the data. It explains the research design adopted by the researcher; the targeted population; the sampling approach and an explanation of the research instruments applied in the research. Drawing on Haneef's (2013) conceptual framework of the flow of empirical research, this section explicates the pre-empirical content, within which a need for broad skills proficiency is acknowledged, a noted challenge for mixed methods researchers given the breadth and depth of competencies required (Saunders 2015). This chapter is conceived to aid the study to answer the specific research questions raised in the first chapter of this research paper.

The chapter also describes the techniques used in data compilation and presentation to ensure credibility of the data collected. Methods of enhancing validity and reliability of the data have

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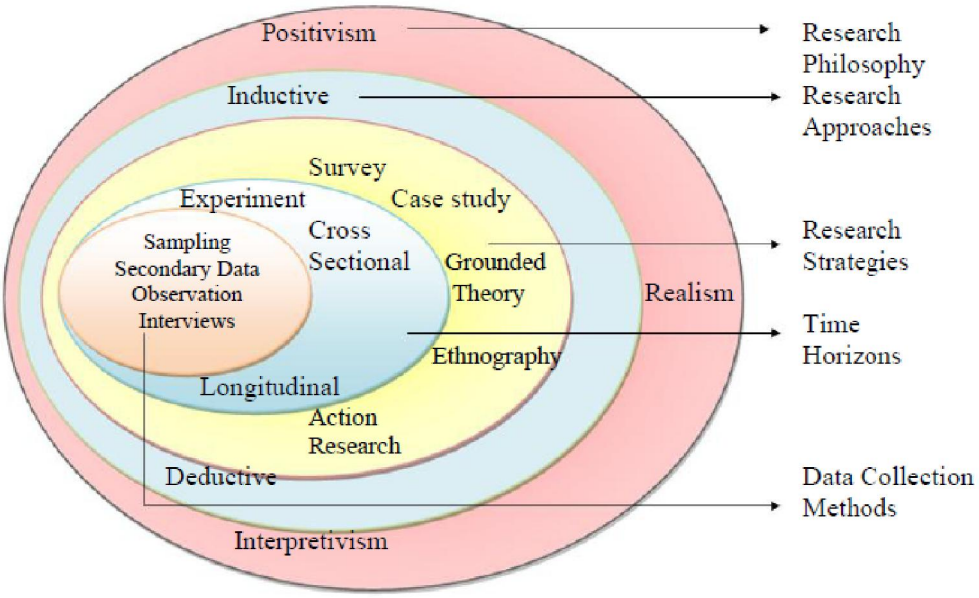
also been presented together with ethical considerations. The research framework was guided by Saunders et al (2011) research onion. An appropriate variable was chosen at each stage and justification provided.

Figure 3.1 Research Onion (Saunders et al, 2012)



3.1 Research Design

Research configuration is a point by point blue print used to direct an exploration think about towards its goals. It indicates the strategies and systems for gathering and breaking down important information. Research configuration guarantees that the information gathered meets the educational needs of the decision maker (Saunders 2008).

3.1.1 Research Philosophy.

The underlying philosophy for this study was positivism. Positivism depends on quantifiable observations that can lend themselves to statistical analysis (Collins, 2010). Collins (*ibid*) further states that, as a philosophy, positivism is in accordance with the empiricist view that knowledge stems from human experience. Positivism often involves the use of existing theory to develop hypotheses to be tested during the research process (Collins, *ibid*). The positivism philosophy is related directly to a deductive or quantitative research approach. In that vein, the researcher adopted a quantitative approach for this study.

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3.1.2 The Research Approach.

The study examined the impact of IT-Business alignment strategies with particular reference to Zimbabwe state owned entities that include Zimbabwe Electricity Supply Authority (ZESA), National Railways of Zimbabwe (NRZ), Zimbabwe Revenue Authority (ZIMRA) Air Zimbabwe, Zimbabwe Revenue Authority (ZIMRA), Mineral Marketing Corporation of Zimbabwe (MMCZ), Zimbabwe Mining Development Company (ZMDC), Central Mechanical Engineering Company (CMED), Zimbabwe Broadcasting Authority (ZBC), ZUPCO, National Oil and Infrastructure Company of Zimbabwe (NOIC), TelOne, NetOne among many others, as a case study. The researcher identified several variables have greater impact on IT-Business alignment can be realized. The cause and effect relationship therefore necessitated a quantitative inferential research. The research also called upon the study to gather factual data pertaining to IT-Business alignment.

The study was able to independently and objectively extract information from respondents in order to validate the pre-existing assertion that IT-Business alignment strategies are a key role to strategically drive businesses. It is from this point that this research seeks to highlight alignment strategies. This was done through a structured questionnaire. It was felt that such an inquiry would best conducted under the chosen philosophy and would best presented through a descriptive quantitative approach. Adoption of such a philosophy allowed the study to understand the global view of respondents and to be able to concisely describe it. Additionally, due to the compact time frames in which the research was to be completed, the study felt that this philosophy was most suitable and could yield meaningful results with a high degree of data integrity.

3.2 Research Strategy

The Case Study Approach- Government state owned enterprises as a Case Study

According to Shoreline (2017), a case study is an intensive description and analysis of a single individual item for the purposes of investigation, theory development and testing or simply as a learning tool. The case study for this research is that of State Owned Enterprises as well as quasi-government entities. Yin (2003) defines a case study as an inquiry that investigates contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context

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are not clearly evident; and in which multiple sources of evidence are used. Denscombe (2007) agrees and opines that the case study focuses on just one or just a few instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance.

The study opined that adopting a case study approach would prevent the research from spiralling into a confused piece of work and also maintain both reasonability and applicability. Due to the focused lenses of the case-study approach, the study was able to extensively analyse the data at hand and to also capture the feelings, views and perceptions of respondents. This approach economized on both time and suitability of responses in light of limited resources. The overall result of such an approach is a binocular view on the specific phenomena under study.

3.3 Methods of data collection.

3.3.1 Primary Data.

This entails to first-hand information that was obtained as a result of field work. This could either have been interviews, questionnaires and observations. Primary data pertains to the set of data whose acquisition would have come about specifically as a result of an intended research study. (Panneerselvan 2004). The clearest advantage of primary data is that it is collected for the purpose at hand. The major drawback is that it is cumbersome to gather. By utilising primary data, the researcher was able to gather a complete set of data particularly relevant to this research.

3.3.2 Secondary Data.

Secondary data pertains to information that would have been gathered for other reasons and purposes other than the study concerned. However despite it not being specifically for the study concerned it would possess relevant information whose consideration would add significant input and value into the study at hand. Its main advantage is that it is inexpensive and readily available. Its major drawback is that it may not be relevant to the task at hand. The main sources of secondary data used in this study included scholarly books, academic journals, newspaper journals, government owned entities annual reports and other sources. These are referenced in the bibliography.

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3.4 Research Instrument

In this study, the major source of data was primary data collected using a researcher administered questionnaire.

3.4.1 Questionnaire

The research instrument adopted by the study to collect primary data was the questionnaire.Primary data gave first-hand information, which was clear and straight forward. Primary data was also more reliable since it came from original sources and was collected specifically for the research.

A questionnaire is an instrument that consist of a series of questions and statements to which individuals are asked to respond. The questionnaire was designed in line with the objectives of the study, the research questions as well as the variables in the conceptual framework. The first part (Part A) of the questionnaire was designed to gather data on demographics while the second part (Part B) was designed to collect data relating to the variables under discussion. The study utilized Likert scale type of questions with three choices.

3.4.2 Pilot-testing the questionnaires

The questionnaire was pre-tested to IT managers, their departments and general employees in selected but related organizations to assess its comprehensiveness. Corrections and improvements to its contents and structure were made before the final distribution of questionnaires to the targeted respondents. Pre-testing was done to fine-tune the questionnaire and improve both its meaningfulness and acceptability.

3.5 Population and Sampling Techniques.

The population of interest in a research is the population from which sample is to be drawn. Population could also imply an entire group of individuals, objects or items from which the researcher wants information about (Du, 2013). The target population refers to the specific population from which the research is to be based and is a subset of the population. A target population by deffination entails to the part of a group to which the research pertains. This can also be defined as a group of people who have multiple and varied things in common in rder to be categorised as one (Salkind 2010).

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3.5.1 Population

In this study, the population included IT departments, Department heads, Managers and General employees in various parastatals in Zimbabwe and beyond, the total population is 150 respondents.

3.5.2 Sample Size

The sample size of this research consisted of 150 targeted individuals within the organizations varying from different departments to give it a more balanced view about IT-Business alignment and how they understand its importance to the organization as a whole. The targeted sample represented experts well-versed in the subject and that by itself enhanced the quality of responses from the sample population. The targeted population also included users who did not have an IT background so as to offer a perspective from a user point of view. This mixture of both IT professionals and IT users created a balanced sample with a holistic view of the organization. Table 3.1 below is the sample size considered for the research:

Table 3.1 Sample size

PARTICIPANT	**NUMBER**
IT Managers	20
IT Administrators	20
IT Technicians	20
Departmental Heads	20
Directors	20
Managers	20
General employees	30
TOTAL	**150**

3.5.3 Sampling Method.

Du (2013) defined a research sample as a quantitative part of a research's targeted population from which data will be acquired.. In simple terms, sampling is taking a smaller proportion from

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a larger population. Du (2013), defined sampling as the process of selecting a number of individuals for a study from the larger group referred to as the population.

The sampling method used in this study is systematic random sampling. Patton (2002) describes it as type of probability sampling method in which sample members from a large population are according to random starting point and a fixed, periodic interval. As the name implies, random sampling is sampling done with a clear a purpose or goal in mind. Simple random sampling include its ease of use and its accurate representation on the larger population. Simple random sampling is as easy as it is Oz & Sosik (2000).

It starts with a purpose and then the sample is selected to include only information-rich participants for in-depth analysis of the central issues under study (Maree, 2007). The researcher consciously selects a sample that he or she considers to be most appropriate for the research study. Potential research respondents who were adjudicated to have the potential to be the best fit for the research were sought after and selected to be part of the sample to improve the quality of responses.

The main advantage attributed to this sampling method is that it eliminates subjects who do not fit the requirements of the enquiry, and therefore produces an accurate or near accurate sample (Umaru, 2009). The results of the study usually portray an accurate result. Selecting respondents is usually faster and the method is less costly compared to other sampling methods.

The major selection criteria adopted by the study when choosing respondents included the branch of IT one worked under and level within the organisation. Such selection criteria ensured that the respondents were well informed about the issues involved, understood the questions posed and their implications, and provided very useful information and suggestions which proved invaluable to the study.

3.6 Questionnaire Administration.

The questionnaires were administered personally by the researcher in order to increase the response rate and to create rapport with the respondents. By administering the questionnaire in person, the researcher was able to build rapport with the respondents and a level of mutual trust was maintained. The researcher was also able to explain the questions and offer clarifications. Such an approach improved the quality of the information gathered.

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3.7 Data Gathering, Processing and Analysis.

After primary data was collected, it was organized to identify errors before it was cleaned, coded and stored in appropriate format. The completed questionnaires were carefully checked to ensure completeness and to enable coding, and tabulation. The collected data was analysed quantitatively to establish the association between various independent variables and the dependent variable.

3.8 Research Limitations.

3.8.1 Targeted Population Size

The study examined State Owned Enterprises and Quasi-Government Institution IT managers, IT departments, Departmental heads, Directors, Managers, and general employees only. The study does not cover all the government departments such as Ministries, The Police, The Registrar General's Department and others that use IT in their day to day business and also because of the extensive nature of State Owned Entities in Zimbabwe the researcher could not manage to interview and administer questionnaires to all the companies. Proper care should thus be taken when generalising findings of this research to such institutions.

3.8.2 Sensitivity

The area of study was sensitive given that IT and Business are the core values of any company, so IT departments and IT managers were not fully pleased to cooperate. Employees were not willing to divulge any information that they felt will compromise their job security. A level of trust was built between the researcher and interviewees. The questionnaire was made less sensitive to obtain meaningful results.

3.8.3 Time and resources constraints.

As in all researches, time and economic resources limitations were also encountered by the researcher.

3.9 Validity and Reliability

According to Lenz (2013), reliability is the extent to which a questionnaire, test, observation or any measurement procedure produce the same result on repeated trials. In this study the questionnaire was pre-tested to ascertain reliability of the instrument in the required information collected. Reliability of the data collection instrument was established trough test re-test method.

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In addition, the researcher made sure the questionnaires were hand-delivered to the selected respondents. To avoid misunderstanding from the respondents, clarifications were done in person. To avoid ambiguity, the questions in the questionnaire were made relatively short, concise and clear.

Validity test refers to the degree of success of an instrument in measuring what it is set out to measure so that differences in individual scores can be taken as representing true references in the characteristics under study (Lenz, 2013). To reduce the loss of vital information, a select number of questionnaires were dispatched to research participants well in advance to give the allowance for them to be able to respond and return the questionnaires to the researcher.

3.10 Ethical Considerations

The researcher expressed honesty, objectivity, integrity, care, openness, confidentiality and respect in reported data, results, methods and procedures, and did not fabricate, falsify, or misrepresent data. The researcher upheld the right of privacy and anonymity of the participants and responses will be held in strictest confidentiality. The researcher avoided discrimination against colleagues or students on the basis of sex, race, ethnicity, religion or creed and any related factor not related to their competence and integrity. Finally, the researcher will not use data collected from respondents for any other purposes than the research purpose.

3.11 Conclusion.

This chapter covered the research methodology employed in this study, starting with the underlying research design. The research philosophy of the study, namely positivism was explained and justified mainly due to the fact that the data lend itself to pre-existing phenomena and can be best parsed by a deductive approach. The case study strategy was adopted mainly because of its ability to narrow the research area hereby increasing both finesse and extent. The population of the study and the target population were identified and systematic/simple random sampling sample selected to economize on time and resources and at the same time improve the usefulness of the information gathered. Questionnaire was given as the data collection instrument. This was followed by an explanation of how the data collected was analysed and measures taken to ensure the trustworthiness of data. The next chapter will deal with data presentation and analysis.

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Chapter 4

Data Analysis and Presentation of Findings

4.0 Introduction

This chapter offers a presentation of the data gathered during the field work where data was collected. The data represents data collected from the field using the questionnaire that was issued. This chapter shows the response rate of the respondents. The research data was presented and analysed in two forms, the first being the demographic data which was analysed in a dominantly quantitative manner. The second which is the research data on IT- Business alignment was then presented and analysed again in a predominantly quantitative manner. The analysis of the data was juxtaposed with the information that was unveiled in the literature review in Chapter Two.

4.2 Descriptive analysis

4.2.1. Response rate

Below is a table which summarizes the response rate of the questionnaires which were distributed to 150 respondents. The total of 150 questionnaires were distributed to the respondents as follows: 20 questionnaires were distributed to the ZPC company, 10 questionnaires to ZETDC company, 10 questionnaires to ZESA Holdings, 10 to ZIMRA, 25 to Air Zimbabwe , 20 to CAAZ ,10 to ZINARA, 10 to TELONE , 20 to NETONE and 15 to POTRAZ Company.

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Table 4.1 Responses from different research respondents

Organization	Targeted Responses	Actual Reponses	Percentage
ZPC	20	19	95%
ZETDC	10	8	80%
ZESA Holdings	10	7	70%
ZIMRA	10	8	80%
Air Zimbabwe	25	17	68%
CAAZ	20	18	90%
ZINARA	10	10	100%
TelOne	10	10	100%
NetOne	20	17	85%
POTRAZ	15	14	93.3%
Total	150	128	86.13

As from the table 4.2.1 above it is shown by the table that the response rate is high from the research participants with an average of 86.13%. According to www.utexus.edu/academia/diia, a survey response rate of over 60% is regarded as sufficient threshold and adequate to authenticate

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the findings of a research. On the other hand Fincham (2008) argues that 70% is the minimum acceptable threshold level to deem research findings as acceptable and authentic. Given the 86.13% response rate in this research study the results are valid and meet the threshold level for them to be deemed authentic, reliable and representative of the sample.

The high response rate is attributable to the fact that the researcher participants showed great interest of participation in the research process. In addition to that the researcher made extensive use of respondents at his work place as well as colleagues from former colleges, trainings, and conferences to gather data in their respective organization. This meant that the researcher already had rapport and credibility thus there was neither hesitation nor complacency to provide to required responses on time. However the 22 questionnaires were not responded to due to other reasons which were unknown which signifies a non-response rate of 14.7%.

4.2.2 Sample adequacy

The researcher used the Kaiser-Meyer-Oklin (KMO) and Bartlett test in measuring the sample adequacy. The Kaiser –Meyer-Oklin (KMO) and Bartlett was deemed important considering that an inadequate sample produces doubtful results. The test was done for validating the sample as adequate for conducting a factor analysis. Mahotra (2012), posts that the Bartlett's test is often accepted as reliable when testing large sample size.

Factor Analysis

*Table 4.2 KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.702
Bartlett's Test of Sphericity	Approx. Chi-Square	26.507
	Df	6
	Sig.	.000

*Based on correlations

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The table 4.2.2 above shows a KMO value of .702 that is acceptable as it is just above 0.500 therefore we can consider the Bartlett's test of sphericity because it has an associated significance value of $p<0.001$ that indicates that we can proceed to conduct further test using the factor analysis as follows.

4.2.3 Demographics

The research study used the descriptive statistics to analyse the demographic data. However descriptive statistics were used and the results were presented in form of frequency tables as follows:

Table 4.3 Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Males	71	55.5%	55.5%	55.5%
	Female	57	44.5%	44.5%	100%
	Total	128	100.0	100.0	

The researcher distributed the total of 150 questionnaires and the total of 128 questionnaires were completed and returned to the researcher, 71 of the respondents were males and 57 respondents were females.

4.2.4: Age of respondents

Table 4.4 Age of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent

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Valid	Less than 25 years	19	14.8	14.8	31.25
	Between 25 and 34 years	33	25.8	25.8	57.05
	Between 35 and 44 years	30	23.4	23.4	80.45
	Between 45 and 54 years	40	31.25	31.25	95.25
	55 years and Above	6	4.7	4.7	100.0
	Total	128	100.0	100.0	

It is depicted by the frequency table above that 31.25% are less than 25 years, this is because this age range is occupied by IT heavy users in the state owned companies at the management level. This was followed by 25.8% of the respondents ranging between 25 and 34 years, Table 4.2.4 above clearly indicated that the respondents from all the age groups were fairly represented by the study therefore the results indicated all age groups of the respondents .

4.3 Normality test

It was the researcher's aim to test for normality by using the Shapiro Wilk and the Kolmogorov Smirnov and this is shown below.

Table 4.5 Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
IT Govenance	.243	5	.200*	.922	5	.545
Use of IT and Business Collaborations	.334	5	.071	.779	5	.054
Skilled Personnel	.183	5	.200*	.939	5	.660
Communication	.322	5	.098	.764	5	.040

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

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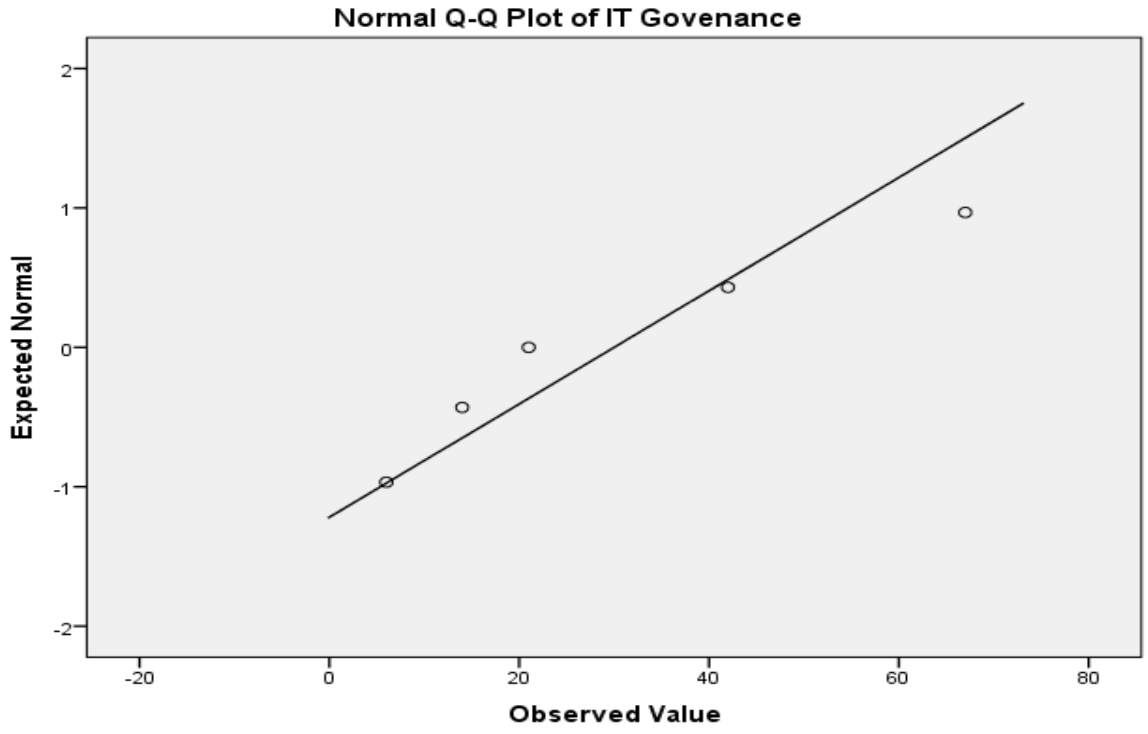
The table 4.3.1 above shows the normality test of Business Technology and Business performance.Kolmogorov Smirnov, the K-S test was used to test if a distribution of scores significantly differs from a normal distribution.If the K-S test is significant ($p < .05$) then the scores are significantly different from a normal distribution. Otherwise, scores are approximately normally distributed. The Shapiro–Wilk test does much the same thing, but it has more power to detect differences from normality (so this test might be significant when the K-S test is not).It is more appropriate with smaller samples

Figure 4.1 Normal Q-Q of IT Governance



The Normal Q-Q plot on Figure 4.3 above shows the results of the normal test above which shows that the graph is evenly distributed. The further the value is from zero, the more likely it is that the data are not normally distributed. So, values close to zero indicate likely normality.

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Figure 4.2 Normal Q-Q Plot of use of IT and Business Collaborations

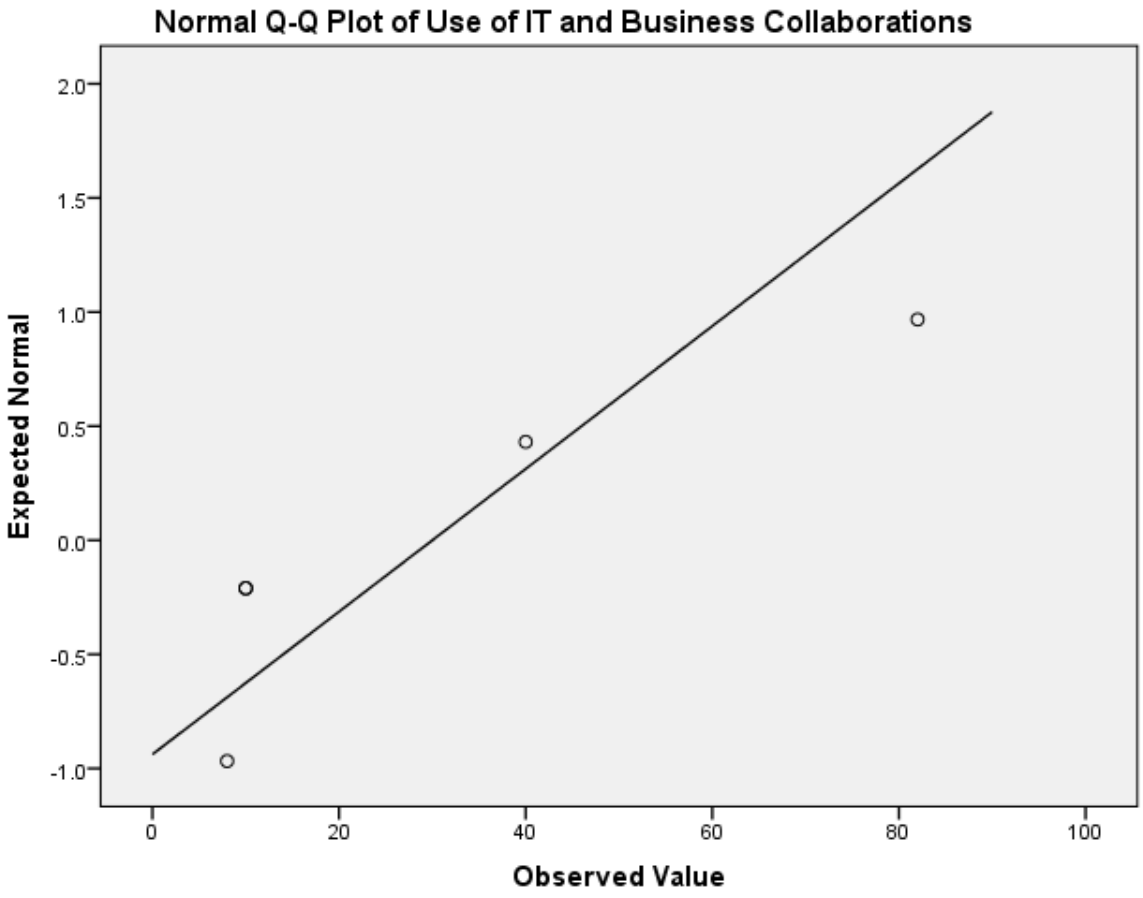

Figure 4.4: Shows the Normal Q-Q Plot of the use of IT and the Business Collaborations.

Above is the normal Q-Q Plot which shows the normality results of IT and Business Collaborations. The Q-Q Plot above depicts the observed value against the expected Normal. Positive values of skewness indicate too many low scores in the distribution, whereas negative values indicate a build-up of high scores. Positive values of kurtosis indicate a pointy and heavy-tailed distribution, whereas negative values indicate a flat and light-tailed distribution.

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Figure 4.3 Normal Q.Q Plot of Skilled personnel

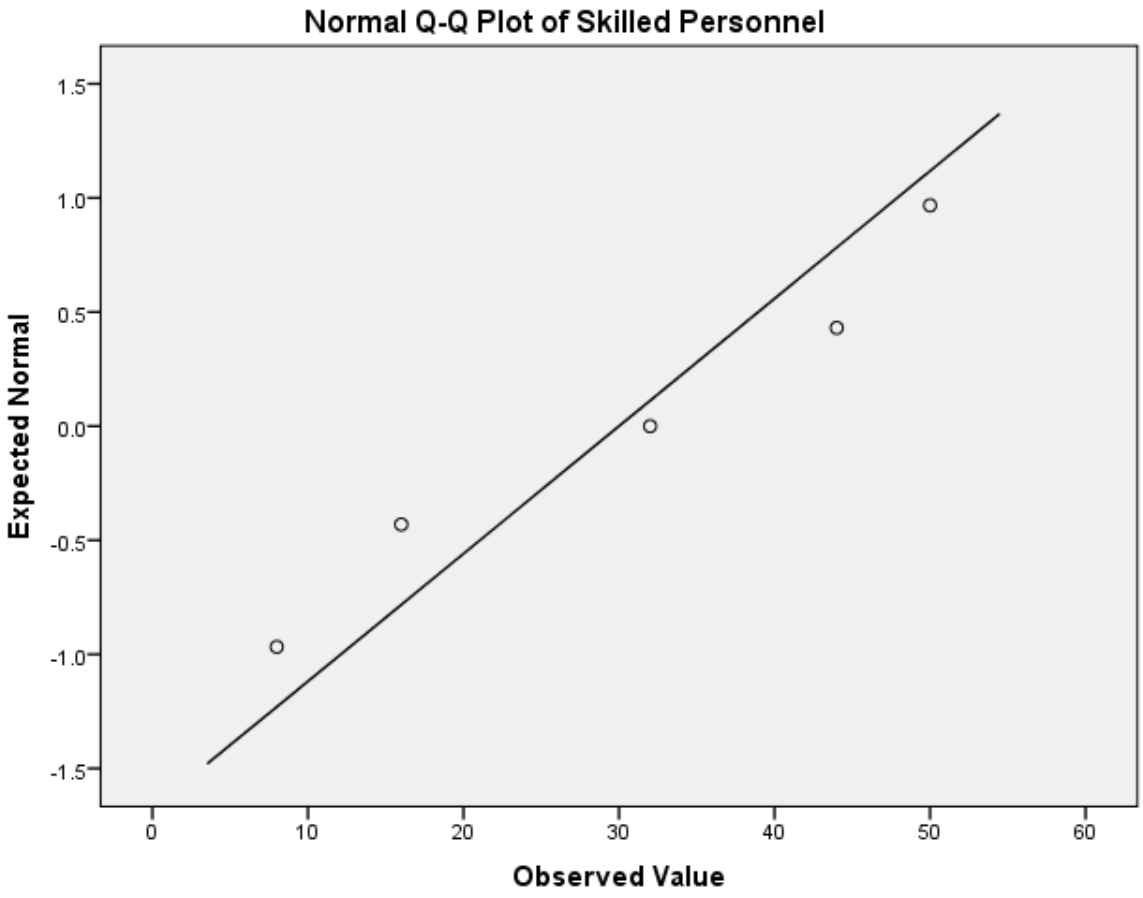

Figure 4.5: Normal Q-Q Plot of Skilled Personal.

Positive values of skewness indicate too many low scores in the distribution, whereas negative values indicate a build-up of high scores.

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Figure 4.4 Normal Q-Q plot of Communication

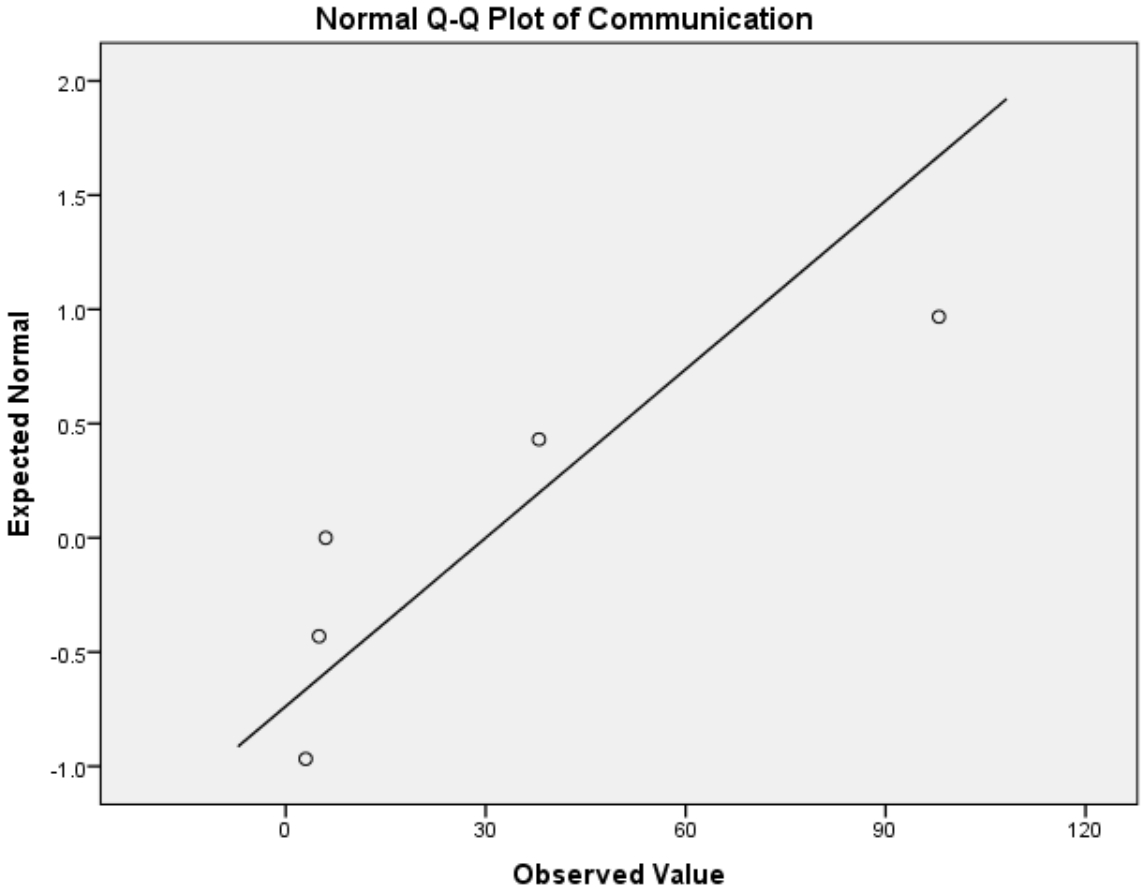

Figure: 4.6 shows the normal Q-Q Plot of Communication.

The Normal Q-Q plot on Figure 4.6 depicts that positive values of skewness indicate too many low scores in the distribution, whereas negative values indicate a build-up of high scores. Positive values of kurtosis indicate a pointy and heavy-tailed distribution, whereas negative values indicate a flat and light-tailed distribution.The further the value is from zero, the more likely it is that the data are not normally distributed.

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Table 4.6 Total variance explained

Total Variance Explained

		Initial Eigenvalues[a]			Extraction Sums of Squared Loadings		
	Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Raw	1	3474.678	96.438	96.438	3474.678	96.438	96.438
	2	127.069	3.527	99.965			
	3	.672	.019	99.984			
	4	.582	.016	100.000			
Rescaled	1	3474.678	96.438	96.438	3.690	92.247	92.247
	2	127.069	3.527	99.965			
	3	.672	.019	99.984			
	4	.582	.016	100.000			

Extraction Method: Principal Component Analysis.

a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.

Table 4.3.2 above shows 1 critical component extracted out of the data which were analysed by SPSS using the factor analysis to measure the effect of IT and business performance. The results of the factor analysis shows that there is 1 component that explains the 96.4% of the total variance. This means that these 1 component have a major contribution of 96.4% of the total variance. Evidence of these results are further collaborated on a scree plot below where it is clear that there is 1 components with eigenvalues greater than 1.

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Figure 4.6 Scree Plot

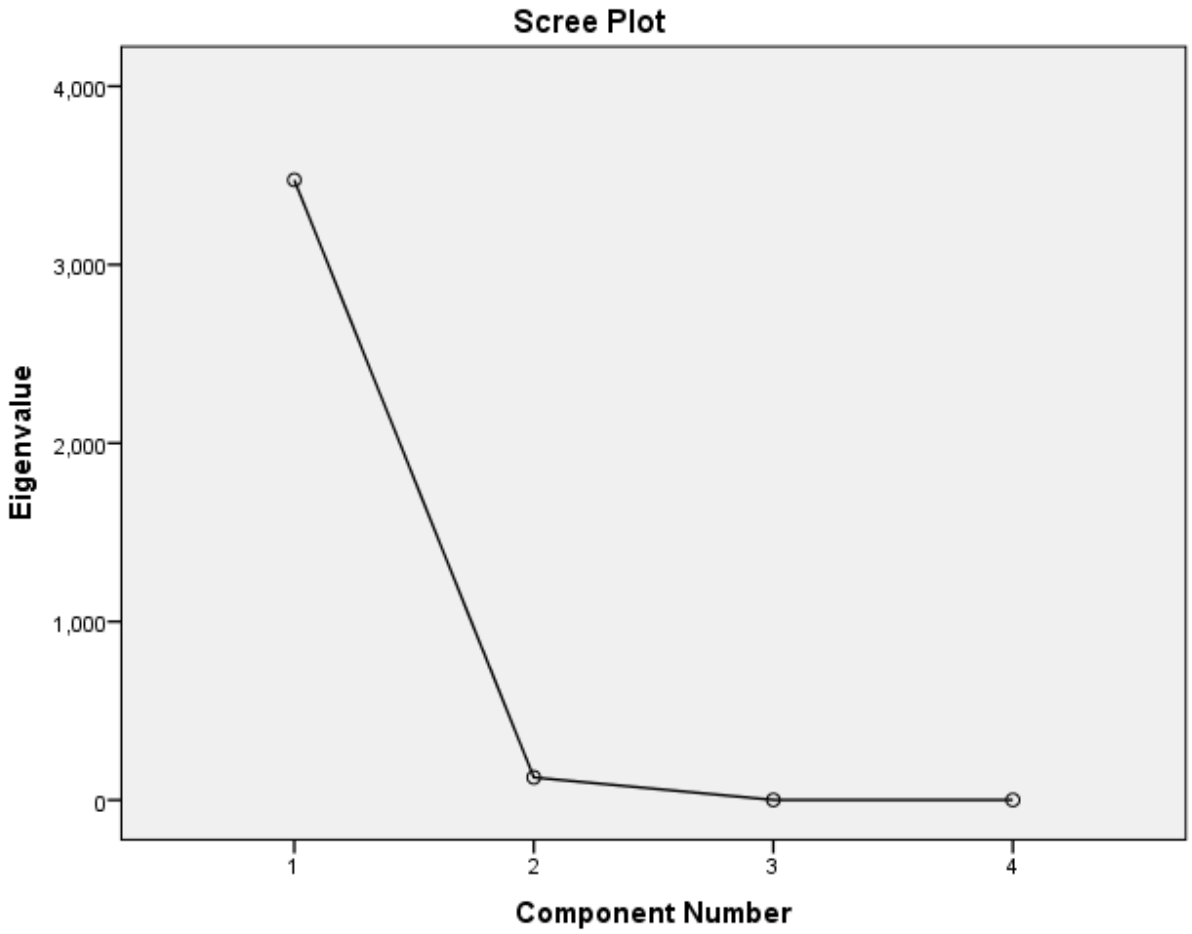

Figure 4.7: Scree plot: IT Business and business performance.

The scree plot on Figure 4.7 above support the results shown in Table 4.3.2 above which shows that only components 1 have eigenvalues greater than 1 and these is the component which contributes to the 96.4% explained variance.

Table 4.3.3: Rotated component Matrix: IT and Business performance.

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Table 4.7 Rotated Component Matrix

Rotated Component Matrix[a]

	Raw	Rescaled
	Component	Component
	1	1
IT Governance	24.260	.985
Use of IT and Business Collaborations	31.925	.999
Skilled Personnel	15.349	.858
Communication	40.389	.993

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The table 4.3.3 above shows the Rotated Component Matrix and the factor loadings for each variable and the component on which each variable loaded most strongly on. One of the sub variables under Business technology loaded strongly on component 1 with a factor loading of 0.999 to confirm that use of IT and business influences business performance. For the second sub variable, a strong factor loading of 0.993 on component 1 shows that the communication positively affect the business performance of the state owned companies. Therefore, Parastatals companies should concentrate on Business IT since it positively affect the business performance.

4.4 Validity and reliability

The data validity and reliability have been done through using the SPSS Software. The reliability test was done by using the Cronbach's Alpha index. The researcher used Face validity, which relates to the degree to which the questionnaire is measuring what it was supposed to be measured, the researcher also recognised it, through ensuring that the questionnaire addresses the objectives of the study

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4.4.1 Reliability analysis

Table 4.8 Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.971	5

The reliability test was performed on all the 5 items in the SPSS Software. The scale was very reliable since it scored .971 which is above the threshold of 0.7 hence further analysis can be done using the instrument. The average Cronbach's Alpha index for the 5 items is .971 which is more than 0.70 the minimal threshold to be accepted. The average Cronbach result is a higher value which shows that there is high reliability of the questionnaires and the results for each item is shown below:

Table 4.9 Total Statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IT Govenance	120.0000	13579.000	.987	.957
Use of IT and Business Collaborations	120.0000	11900.500	.993	.951
Skilled Personnel	120.0000	15744.500	.843	.985
Communication	120.0000	10188.500	.975	.969
Business performance	120.0000	12576.500	.994	.951

The table above shows the item total statistics of all the variables and all the Cronbach's Alpha if item deleted values are above the threshold of .70 the minimum threshold to be accepted.

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Table 4.4.3: Data Validity

Validity

Table 4.10 Variable Checks

Categorical	Categories Containing One Case > 90	IT Governance Skilled Personnel Communication

Each variable is reported with every check it fails.

For ensuring content validity, the researcher ensured there was consistency in the administration of questionnaires to the respondents. The questionnaire was shared with some marketing professionals prior to dispatch in order to ensure accuracy of its contents. The researcher has conducted a pilot study on the 15 participants in order to ensure the questions were well understood and rightful responses were given to research study.

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4.5 Tests of relationships

4.5.1 Correlations tests for Business Information Technology and Business performance.

Table 4.11 Correlations

Correlations

			IT Govenance	Use of IT and Business Collaborations	Skilled Personnel
Spearman's rho	IT Govenance	Correlation Coefficient	1.000	.975**	1.000**
		Sig. (2-tailed)	.	.005	.
		N	5	5	5
	Use of IT and Business Collaborations	Correlation Coefficient	.975**	1.000	.975**
		Sig. (2-tailed)	.005	.	.005
		N	5	5	5
	Skilled Personnel	Correlation Coefficient	1.000**	.975**	1.000
		Sig. (2-tailed)	.	.005	.
		N	5	5	5
	Communication	Correlation Coefficient	.700	.821	.700
		Sig. (2-tailed)	.188	.089	.188
		N	5	5	5
	Business performance	Correlation Coefficient	.975**	1.000**	.975**
		Sig. (2-tailed)	.005	.	.005

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	N	5	5	5

**. Correlation is significant at the 0.01 level (2-tailed).

There is no multi collinearity problem since all are below <0.9 the highest being 0.37. The correlation between Business Technology and Business Performance is strong and it shows that there is positive relationships exists between the two factors. The strong relationship shows that the variables are related and they are as good as one. The sig values ranges at 0.05 which is the acceptable range.

4.5.2 Regression analysis for business technology and business performance.

Regression.

Below is a model summary which shows the model summary

Table 4.12 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000[a]	1.000	.976	1.03478

a. Predictors: (Constant), Communication, Skilled Personnel, IT Governance, Use of IT and Business Collaborations

R represents the correlation coefficient for all the independent variables on the dependent variables when combined. All independent variables are positively correlating at 0.706. R square explains the variance that is being predicted by independent variables on dependent variables. Business technology predicts 97.6% relationship on business performance, meaning that there are about 2.4%% of other factors which influence the business performance.

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Table: 4.5.3 Anova for Business technology and business performance.

Table 4.13 Anova

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3338.000	4	834.500	456.394	.000[b]
	Residual	.000	0	8.234.		
	Total	3338.000	4			

a. Dependent Variable: Business performance

b. Predictors: (Constant), Communication, Skilled Personnel, IT Governance, Use of IT and Business Collaborations

The data was entered in the SPSS software version 2, and a simple ANOVA was conducted to assess the extent to which Business Technology influences business performance. On Table 4.5.3 above, the p-value<0.05 and as such we can accept that business technology positively influence the business performance. At α=0.05 level of significance, there is enough evidence to give conclusions that the business technology can positively influence the business performance of the state owned companies.

Table 4.14 Coefficient of correlations

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity
		B	Std. Error	Beta			Tolerance
1	(Constant)	2.968	.000		2.256	.092	
	IT Governance	.058	.000	.049	21.765	.000	.002

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	Use of IT and Business Collaborations	.845	.000	.935	24.567	.000	.001
	Skilled Personnel	-.022	.000	-.013	13.342	.004	.007
	Communication	.020	.000	.028	12.923	.000	.001

a. Dependent Variable: Business performance

Table 4.5.4 above confirms the results obtained in Table 4.5.3 above. The results show a higher Beta value of 0.935 which is way below the t-value of 24.567. This is evidence of the existence of a positive relationship between business technology being used by state owned companies and its contribution towards business performance. There is also a 95% confidence interval ascribed to these results.

Table 4.15 Collinearity Diagnostics

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	IT Governance	Use of IT and Business Collaborations	Skilled Personnel	C o
1	1	4.493	1.000	.00	.00	.00	.00	.0
	2	.448	3.168	.10	.00	.00	.00	.0
	3	.059	8.756	.30	.00	.00	.01	.0
	4	.000	109.124	.08	.95	.16	.72	.0
	5	.000	131.520	.51	.05	.84	.26	.9

a. Dependent Variable: Business performance

The table above shows the results of collinearity diagnostics of the variables. The results are supporting the above results by shows the positive Eigenvalues that shows positive relationships between business technology and business performance.

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4.6 Tests of independence

The researcher used the chi-square test in testing for independence. The chi-square provides little information about the strengths or the form of association between variables. According to Mahotra (2012) the magnitude of the observed chi-square depends not only on the goodness of fit of the independence model but also on the sample size. If the sample size increases n-fold, so does the chi-square value. The larger the sample size, the more 'easily' you are able to obtain statistical significance, even when the degree of association between the variables is actually rather small.

4.6.1 Cross tabulation

Table 4.16 Chi-square tests

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.000[a]	12	.241
Likelihood Ratio	13.322	12	.346
Linear-by-Linear Association	3.809	1	.051
N of Valid Cases	5		

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

From the above chi-square test, the significance value of .241, .346 and .051 depends not only on the goodness of fit of the independence model but also on the sample size. The above results present the sig values which found out that observed differences between proportions of events in two groups' business technology and business performance maybe considered statistically significant.

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*Table 4.17 IT Governance * Business performance*

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.000[a]	9	.091
Likelihood Ratio	13.322	9	.149
Linear-by-Linear Association	4.000	1	.046
N of Valid Cases	5		

a. 16 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

The table 4.6.2 above shows the chi-square results for IT Governance and business performance.

*Table 4.18 Skilled Personnel * Business performance*

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.000[a]	12	.241
Likelihood Ratio	13.322	12	.346

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Linear-by-Linear Association	2.776	1	.096
N of Valid Cases	5		

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

The table 4.6.3 above shows that the skilled personal is independent to business performance because the sig values are high which is more > 0.05.

*Table 4.19 Communication * Business performance*

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.000[a]	12	.241
Likelihood Ratio	13.322	12	.346
Linear-by-Linear Association	3.976	1	.046
N of Valid Cases	5		

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

The table 4.6.4 above presents that communication has relationship with business performance as the sig values found out that observed difference between proportions of events of communication and business performance is considered statistically significant.

4.7 Discussion of results

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The response rate is high from the research participants with an average of 86.13%. According to www.utexus.edu/academia/diia, a survey response rate of over 60% is regarded as sufficient threshold and adequate to authenticate the findings of a research. On the other hand Fincham (2008) argues that 70% is the minimum acceptable threshold level to deem research findings as acceptable and authentic. Given the 86.13% response rate in this research study the results are valid and meet the threshold level for them to be deemed authentic, reliable and representative of the sample. The high response rate is attributable to the fact that the researcher participants showed great interest of participation in the research process. The respondents from all the age groups were fairly represented by the study therefore the results indicated all age groups of the respondents.

Kolmogorov Smirnov, the K-S test was used to test if a distribution of scores significantly differs from a normal distribution.If the K-S test is significant ($p < .05$) then the scores are significantly different from a normal distribution. Otherwise, scores are approximately normally distributed. The Shapiro–Wilk test does much the same thing, but it has more power to detect differences from normality (so this test might be significant when the K-S test is not).

Critical component extracted out of the data which were analysed by SPSS using the factor analysis to measure the effect of IT and business performance. The results of the factor analysis shows that there is 1 component that explains the 96.4% of the total variance. This means that these 1 component have a major contribution of 96.4% of the total variance.

One of the sub variables under Business technology loaded strongly on component 1 with a factor loading of 0.999 to confirm that use of IT and business influences business performance. For the second sub variable, a strong factor loading of 0.993 on component 1 shows that the communication positively affect the business performance of the state owned companies. Therefore, Parastatals companies should concentrate on Business IT since it positively affect the business performance.

The researcher used Face validity, which relates to the degree to which the questionnaire is measuring what it was supposed to be measured, the researcher also recognised it, through ensuring that the questionnaire addresses the objectives of the study.

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The average Cronbach's Alpha index for the 5 items is .971 which is more than 0.70 the minimal threshold to be accepted. The average Cronbach result is a higher value which shows that there is high reliability of the questionnaires and the results for each item.

There is no multi collinearity problem since all are below <0.9 the highest being 0.37. The correlation between Business Technology and Business Performance is strong and it shows that there is positive relationships exists between the two factors. The strong relationship shows that the variables are related and they are as good as one.

Business technology predicts 97.6% relationship on business performance, meaning that there are about 2.4%% of other factors which influence the business performance. This was done by regression analysis. The results show a higher Beta value of 0.935 which is way below the t-value of 24.567. This is evidence of the existence of a positive relationship between business technology being used by state owned companies and its contribution towards business performance. There is also a 95% confidence interval ascribed to these results

.

The chi-square test gives the significance value of .241, .346 and .051 depends not only on the goodness of fit of the independence model but also on the sample size. The results present the sig values which found out that observed differences between proportions of events in two groups' business technology and business performance maybe considered statistically significant.

4.8 Chapter summary

The Chapter 4 gives a summary of the research findings and the discussions of these findings in line with the research objectives of the study. The chapter incorporates descriptive analysis, normality test, validity and reliability test, tests of relationships, correlations analysis, regression analyses and cross tabulation analysis, regression through tables, frequency distributions, scree plots and diagrams in presenting the findings. The main method used to extract data in this case is the Categorical Principal Component Analysis. It demanded categorizing data by its impact on the dependent variable. In this chapter, the aim was to provide answers to the research question while at the same time proving or rejecting the hypotheses formulated in chapter 1 of the study. Chapter 5 summarised and concluded the research.

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Chapter Five

Conclusions and recommendations

5.0 Introduction

This penultimate chapter of the dissertation offers discussions on the findings of the inquiry as well as the conclusions drawn from the findings so as to cover the identified research gap in chapter two as well as providing a basis and platform for further future research. This chapter also offered recommendations as to how State Owned Entities can align their Information Technology strategy and resources to their business strategy and operations respectively.

5.1 Achievement of research aim and objectives.

The major purpose of this study was to assess the impact of IT – Business alignment on organisational performance. The research study focused on the Zimbabwean State Owned Enterprises as a case study to the research. According to the research findings and analysis presented in chapter four, the research managed to achieve its set objective. The broad objective included establishing the relationship between IT governance and business performance, establishing the role of IT based communication to business performance as well as establishing the knowledge of IT by business and the corresponding knowledge of business by IT.

5.2 Conclusion

The research study set out to assess the impact of IT-Business alignment of organisational performance with particular reference to Zimbabwean State Owned Enterprises.

The following were the objectives of the study:

- Establish the relationship between IT governance and Business performance
- Identify the benefits emanating from utilizing IT and business collaborations on ensuring IT/business alignment

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- Establish the effect of skills as a strategy for IT-Business alignment on business performance.
- Establish the effect of communication as a tool for IT-Business alignment to business performance.
- Establish the knowledge of IT by Business and the knowledge of business by IT

From the findings established from the research study a plethora of benefits of IT-Business alignment on the performance of Zimbabwean State Owned Enterprises were shown. These benefits included but were not limited to efficient operations, cost efficiency, faster communication, improved decision making, better data storage and retrieval as well as optimal usage of resources. Notwithstanding the few challenges associated with IT – Business alignment, the researcher was of the strong conviction that to a larger extent IT – Business Alignment had a positive impact on organisational performance in the Zimbabwean State Owned Enterprises. Hence the researcher accepts the null hypothesis which stated that IT – Business alignment had a positive effect on organisational performance in Zimbabwean State Owned Enterprises.

5.3 Answers to research questions.

This research dissertation unmistakeably addressed the research questions and provided concise responses to the research questions.

5.3.1 What is the relationship between IT governance and Business performance?

The major research h question sought to establish the relationship between II – Business Alignment and organisational performance in Zimbabwean State Owned Enterprises. The researcher established that there was indeed a positive correlation between an increase in the level of IT-Business alignment and business performance in Zimbabwean State Owned Enterprises.

5.3.2 How does IT- Business alignment translate to improved Organisational performance?

An important research question pertained to how the much hyped IT – Business alignment actually translated to improved business performance. The researcher established that there are a plethora of ways that IT – Business alignment culminates in improved organisational performance in the Zimbabwean State Owned Enterprises. These included process optimisation, improved decision making, cost effectiveness, data storage and retrieval among other factors.

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5.3.3 What is the effect of skills as a tool for IT-Business alignment to business performance?

The researcher also sought to establish the effect of skills as tools of IT – Business alignment to organisational performance. The researcher established that skills played an important role in as an IT – Business alignment tool aimed at improving organisational performance.

5.3.4 What is the effect of communication as a tool for IT-Business alignment to business performance?

The research findings indicate that that communication, in particular ICT based communication tools play an integral part in contributing to organisational performance through IT –Business alignment. Identified communication tools that contribute to IT – Business alignment include emails, Employee Resources Planning Software, SharePoint, intranet, Skype for business as well as social media among others.

5.4 Contributions of the research.

5.4.1 Theoretical Contribution

The researcher noted with concern that most Zimbabwean State Owned Enterprises inject huge amounts of capital in the acquisition of Information Technology infrastructure as well as in the training of Information Technology use for employees. However, there seems to be an apparent lack of interest of or will power to ensure that the investment is aligned to the strategic as well as operational objectives of the business organisation such that they translate to improved business performance of the Zimbabwean State Owned Enterprises. The researcher opines that the magnitude of benefits to be realised from IT – Business alignment can only be ascertained after a scientific inquiry into how such an alignment culminates in increased organisation performance in the Zimbabwean State Owned Enterprises. There is also need for Zimbabwean State Owned Enterprises to look into the issue of IT – Business alignment when setting periodical objectives, Key Result Areas as well as in performance appraisal. The current performance appraisal tool being used by Zimbabwean State Owned Enterprises which is the Integrated Results Based Management tool does not encapsulate such factors as IT - Business alignment.

While a multiplicity of previous literature discussed in Chapter two seems to concur that IT – Business alignment culminate in improved organisational performance, the researcher felt

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compelled of the need to bring to the fore the fact that aligning IT with business strategy in a horizontally and vertically integrated manner is arguably the most important and first step in the process of business realising value from investments made in Information Technology. The researcher noted with concern that though Zimbabwean State Owned Enterprises had made tremendous investments in terms of Information Technology, most had not fully utilised it and realised the benefits thereof through IT – Business alignment. Some Zimbabwe State Owned Enterprises that had fully embraced Information Technology and aligned it with their businesses had experienced a surge in terms of business performance. This apparent lack of alignment and use may render the investment futile and the acquisition of Information Technology equipment may be in vain.

Conclusively, the researcher noted that while Information Technology is in itself an enabler and that whilst IT – Business alignment is a hybrid approach to try and spruce up business performance, their apparent importance do not invalidate the need for professionalism as well as intricate knowledge of both business and IT despite one being a specialist in only one field. By having knowledge of both professionals in the Zimbabwean State Owned Enterprises are able to make informed decisions pertaining to the alignment itself and / or ways of implementation.

5.4.2 Methodological contribution.

The researcher recognised that prior research looked into a far much wider scope and research sample as compared to the current researcher. However the researcher noted that more focused as well as intensive approach by the use of a case study yields more accurate research findings which have a high level of data integrity. A concentrated survey as the one the researcher carried out creates better rapport between the researcher and the respondents. Thus the respondents are in a better position to divulge information that they would have otherwise not divulged to researcher whom they would not have rapport with.

5.5 Practical Managerial Recommendations

Having embarked on a detailed research, the researcher come up with some recommendations that if adopted could steer Zimbabwean State Owned Enterprises to dizzy heights.

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5.5.1 IT assets integration to the business

The researcher recommends that management of State Owned Enterprises find ways of vertically and horizontally aligning the technology that they currently posses with their business strategy and business operations such that they realise value from their otherwise underutilised assets.

5.5.2 Inclusion of IT – Business Alignment in Organisational Objectives

The researcher recommends the inclusion of IT – Business alignment issues in the drafting of periodic objectives of Zimbabwean State Owned Enterprises as well as inclusion of issues to do with IT – Business alignment as Key Result Areas for performance management purposes.

5.5.3 Monitoring and Evaluation

The researcher recommends the setting up of monitoring and evaluation plans to ensure that Information Technology equipment invested in is being optimally utilised towards the achievement of organisation performance. Such a plan would enable management to better utilise as well as make corrective action if need be to ensure that organisational objectives are achieve through the maximum utilisation of IT – Business alignment initiatives.

5.5.4 Paperless Offices

Management and decision makers at Zimbabwean State Owned Enterprises are recommended to adopt paperless technology through the full adaptation and implementation of Information Technology based telecommunication tools and aligning them to their operations. Virtually all State Owned Enterprises have adopted the SAP ERP and in that vein they should be able to fully utilise their investment and adopt paperless offices. The adoption of paperless offices also vastly increases turnaround time and decision making as communication neither has to be physical nor location based.

5.6 Generalisation of Findings.

The study was restricted to an assessment on the impact of IT – Business alignment with particular reference to Zimbabwean State Owned Enterprises. The research results, observations and findings therefore primarily relate to Zimbabwean State Owned Enterprises and due care should be exercised when generalising research results to other organisations, business contexts or geographical contexts.

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5.7 Research Limitations.

5.7.1 Wide scope

The research sample and area of study was wide and the researcher felt that he could have gotten more intricate research results had he focused on a single organisation as a case study. The researcher did not have sufficient time to create rapport with research respondents in multiple organisations thus he was of the opinion that the findings might not have been up to his desired standard of detail.

5.7.2 Time Constraints

The researcher being a full time employee at the Zimbabwe Power company where he worked for 5 days in a week was left with little time to conduct the research. The fact that the research looked into various state owned enterprises further strained the researcher in terms of time. The researcher was thus on a constrained time schedule to juggle between work commitments, family commitments as well as the research dissertation.

5.7.3 Resource Constraints

The fact that the research needed to be conducted in multiple locations at multiple organisations put a strain of the financial resources of the researcher. This led to the researcher relying on emails to reach out to some research participants and some of the emailed targeted research respondents failed to return completed questionnaires

5.8 Areas of possible further study.

The jury is still out to deliberate on possible plausible factors that impact on business performance of Zimbabwean State Owned Enterprises. The researcher in not oblivious to the fact that there are a multiplicity of factors whose careful and succinct implementation can easily translate to an improvement in performance in Zimbabwean State Owned Enterprises. Thus research on what could potentially lead to increased performance in Zimbabwean State Owned Enterprises can still be conducted, with the IT – Business alignment component of future research informed by this current research.

5.9 Chapter summery

This chapter looked at the research objectives and established that the research managed to do justice to both the research objectives and the research questions.

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Appendix A: Introductory letter and Questionnaire

Dear sir/madam,

RE: Research Questionnaire

I am a student of Masters in Business Administration at The University of Zimbabwe Graduate School of Management. In partial fulfillment of the course, I am currently carrying out a research study on the IT-Business Alignment in State Owned Enterprises. Please find attached an introduction letter from University of Zimbabwe Graduate School of Management.

I would appreciate if you participate in the study as a respondent. The information you provide shall be treated entirely for academic purposes and shall strictly be treated as private and confidential. Your participation will make this study a success and will also add value to State Owned Enterprises in trying to create IT-Business Strategy Alignment and can be a catalyst for future studies.

Your co-operation will be highly appreciated.

Yours sincerely,

Liberty Manhongo

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UNIVERSITY OF ZIMBABWE

GRADUATE SCHOOL OF MANAGEMENT

My name is Liberty Manhongo, I am currently doing a research on the topic "**The Impact of IT-Business Alignment on Organisational Performance: A Case Study of Zimbabwean State Owned Enterprises"** in partial fulfillment of my Masters in Business Administration degree with the University of Zimbabwe. I kindly request you to attend to the questions below relating to the collection of my data. I undertake to treat the information that will be provided with utmost confidentiality and will be solely for the purpose of this research only.

IT – Business Alignment is the synchronizing or integrating of IT initiatives, products and services to the functional and overall activities of the business organization.

Every response will be treated with the uttermost confidentiality. No names, registration numbers, job tittles or any other form of identification are to be written on this questionnaire.

Please tick or mark with an X in the appropriate box to indicate the most suitable response.

SECTION A: DEMOGRAPHIC CHARACTERISTICS

1. Gender Male Female ☐ ☐
2. Age in (Years) Below 25 ☐
   25-34 ☐
   35-44 ☐
   45-54 ☐
   55 and above ☐

.

3. What is your current position in your organization?

Information Technology Technician

Information Technology Manager

Departmental Manager

Director

Executive

Other (Please Specify) …….

4. How long have you been working at a State Owned Enterprise?

Less than 1 Year

1 – 3 Years

4 – 10 Years

11 – 15 Years

More than 15 Years

SECTION B: IT BUSINESS ALIGNMENT

5. Do you think there is a relationship between IT-Business Alignment and Organisational Performance?

Very Strong Relationship	Strong Relationship	Somewhat there is a Relationship	Weak Relationship	No Relationship

6. An increase in IT – Business Alignment in an organization will correlatingly translate to an increase in Organisational productivity. To what extent do you agree with this statement?

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

7. What other top 5 factors of a business do you think their increase correlatingly translate to business productivity? (**Please rank them in order of importance**)

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

8. Are there any benefits of IT-Business Collaborations to Organisational performance?

Yes ☐ No ☐ I do not know ☐

9. If Yes what are the top 5 benefits of IT-Business Alignment to Organisational Performance? (**Please Rank in order of impact/importance**)

……

(1)……
(2)……
(3)……
(4)……
(5)……

10. Do skills have an impact on IT-Business Alignment?

Yes ☐ No ☐ I do not know ☐

11. How would you rank the importance of skills in IT-Business Alignment?**(0 being the least important and 10 being the most important.)**

1	2	3	4	5	6	7	8	9	10

12. May you please explain your ranking.

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……

13. What impact does communication have as a tool for IT-Business Alignment to Organisational performance?**(0 being the least impact and 10 being the most impact.)**

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1	2	3	4	5	6	7	8	9	10

14. What ICT based communication tools can be aligned to business strategy for improved communication in the organization?

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    ……
    ……
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    ……
    ……

15. How does communication in IT-Business alignment lead to improved Organisational performance?

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    ……
    ……
    ……
    ……

16. As an expert in IT or Business how do you rate your understanding of the other (IT or Business)?

1	2	3	4	5	6	7	8	9	10

17. May you please explain why you rated understanding of IT to Business / Business to IT in that rate?

    ……
    ……
    ……
    ……

18. Any other information that you perceive as relevant to this study

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    ……

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………
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………

Thank you