



**GRADUATE SCHOOL OF MANAGEMENT**

**UNIVERSITY OF ZIMBABWE**

**RESEARCH PROJECT**

**Topic: An analysis of perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.**

**By**

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## **DEDICATION**

I dedicate this dissertation to my family for the invaluable support.

## **DECLARATION**

I, Tirivashe E. Vere, do hereby declare that this dissertation is the result of my own investigations and research, except in areas indicated in Acknowledgements, References and by comments indicated in the body of the report, that this dissertation has not been submitted in part or in full for any other degree or program to any other university.

Student's Signature .....Date.....

Supervisor's Signature.....Date.....

## **ACKNOWLEDGEMENTS**

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## **ABSTRACT**

This study's aim was to analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. It focused on the current outsourcing models in the service industry supplying the mine and other side issues in the industry. The sub objectives to the study were formulated as follows: to establish outsourcing activities carried out by mining companies in Zimbabwe, to establish the perceived benefits of outsourcing by mining companies in Zimbabwe and lastly to find out the perceived outsourcing challenges faced by mining companies in Zimbabwe. The study adopted the positivist approach such that prediction of behaviour was made possible. The researcher used the survey research design that allowed collection of large volumes of data which was used in data analysis. A survey strategy allowed inferences to be made about the target population. A survey questionnaire was administered to 250 mine managers and contract managers of mining firms in Mashonaland Central in the mining sector of Zimbabwe. The researcher managed to collect back one hundred and eighty four (184) questionnaires which were eligible, resulting in 74% response rate. The response rate was very high as the questionnaires were self-distributed and collected at the convenient and agreed times. The researcher used stratified sampling and convenience sampling methods as the mining companies are geographically spaced. Descriptive statistics data was transported to an excel spreadsheet for easy manipulations and this enabled data to be presented using statistical principles such as percentages, bar graphs, and pie charts. The SPSS software was used to help in data analysis and the correlation coefficient was used to analyze the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. This study concluded that mining companies do outsource most of the activities outside their scope and they will be reducing the risk of keeping fixed assets that may be reduced in value by the wear and tear of resources. The findings indicated that the mining companies are enjoying the major four outsourcing perceived benefits namely (Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits). The results indicate that there are three main challenges of outsourcing mining activities in Zimbabwe namely; Human resources challenges; Commercial challenges and financial risk and costs challenges. This study concluded that there are outsourcing of activities by mining companies, perceived outsourcing benefits and challenges faced by mining companies in Zimbabwe.

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# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

This paper seeks to analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. It focuses on the current outsourcing models in the service industry supplying the mine and other side issues in the industry. Outsourcing is defined as contracting or subcontracting some activities that are not core to a company in order to free up time, cash and other facilities for activities that an organisation has competitive advantage (Florea, 2014). Chapter one provides the research background, the problem statement, research objectives, research questions and research hypotheses, assumptions of the study, justification of the study, scope of the research, and lastly the organisation of the research ending with the chapter summary.

### 1.1 Background

The economic impact of failing to effectively manage supplier relationships is very significant on business performance. In a 2004 survey on causes of outsourcing failures in businesses, conducted by the Outsourcing Center, sixty-two percent of all outsourcing failures were attributed to poor supplier and/or relationship management (Deloitte and Touche report). Outsourcing, or sending off a job outside the company, may seem like more recent phenomena which started after the internet boom in mid 1990s, but the fact that outsourcing history is as old as America may surprise us. During the early years of America, the manufacturing of clippers ship sails was sent to Scotland, and the raw material came from India. India was also an outsourcing destination for British textile industry during the 1800s, but eventually the British became more efficient and outsourced jobs came back to Britain. Most mining operations in Zimbabwe suffer from undercapitalisation and are, therefore, in need of recapitalisation through financial injections. Most mines are currently operating slightly above 50% of their designed capacities due to lack of finances for recapitalisation. Opportunities exist through Joint Ventures, exploration for Green Field projects, old dump retreatment, the provision of mining equipment, technical services relevant to mining, supply of goods and services by third parties (outsourcing) throughout the value chain.

The mining industry in Zimbabwe, due to its huge capital demands has mainly been attracting Foreign Direct Investments (FDI) with all the largest mining houses registering their presence.

The diversity of the investors has also brought in some diverse outsourcing models in some cases the services being outsourced to international companies that are registered outside the country. The complexity of managing the supplier and customer relationship in order to maximise value on both sides has not been investigated fully by researchers.

### **1.3 Research problem**

This research is exploratory in nature in that it tries to analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The major issue is that mining companies and their contractors have failed to realise full value of outsourcing with loss being experienced both sides. The reason for failure has not been fully explored and the generic/global issues applicable to different mines have not been investigated. Given this challenge the researcher was therefore interested in analysing the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. This exposes how outsourcing can impact business performance of the mines like Freda Rebbeca Gold Mine and Lafarge Cement. The evolving and complex mining environment requires the business to have an extensive drive to maximise shareholder value and this can be achieved if all business processes are optimised. Outsourcing is one of the dominant trends in improving business processes and therefore an in-depth study will help solve the current business challenges as it helps find solutions to the challenges.

### **1.4 Objectives of the Study**

The following are the research objectives that are used in this study:

#### **1.4.1 Overall Objective**

To analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe

#### **1.4.2 Specific Objectives**

1. To establish outsourcing activities carried out by mining companies in Zimbabwe.
2. To establish the benefits of outsourcing by mining companies in Zimbabwe.
3. To find out the outsourcing challenges faced by mining companies in Zimbabwe.

## **1.5 Research questions**

The following are the research questions that are used in this study:

### **1.5.1 Overall Research question**

What are the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe?

### **1.5.2 Specific Research questions**

1. What are the outsourcing activities carried out by mining companies in Zimbabwe?
2. What are the benefits of outsourcing by mining companies in Zimbabwe?
3. What are the outsourcing challenges faced by mining companies in Zimbabwe?

## **1.6 Hypothesis**

The following are hypotheses adopted in this study:

### **1.6.1 Overall Hypothesis**

**H1.** There are no outsourcing benefits or challenges experienced by mining companies in Zimbabwe.

### **1.6.2 Specific hypotheses**

**H1.1** There are outsourcing activities carried out by mining companies in Zimbabwe.

**H1.2** There are perceived outsourcing benefits experienced by mining companies in Zimbabwe.

**H1.3** There are perceived outsourcing challenges faced by mining companies in Zimbabwe.

## **1.7 Assumptions of the study**

Data is collected from Freda Rebecca Gold Mine, Lafarge and their Contractors and is a true representation of their views on outsourcing. A sample is taken from management levels in two mines and their contractors who are a representative for conclusions and recommendations of the study out of the whole mines established over the 40 mineral commodities mined in Zimbabwe.

## **1.8 Justification of the study**

There exist many models of outsourcing that have been implemented across the business world globally. However these models are not one size fit all for different contexts thereby requiring an

outsourcing model to be country and industry specific. This study is therefore of significance as it aims to come up with outsourcing benefits and challenges experienced by mining companies to come up with desirable outsourcing models for the mining companies under study in the Zimbabwean business context. Business benefits as it gets a much clearer understanding of factors affecting its performance as a result of the contracts. The study enhances business decision making, policy formulation as well outsourcing model definition. Employees also draw lessons on how to bridge gaps between a principal and agent to improve performance of outsourced work. The study makes reference to a lot of literature from other studies and will also be referenced in the unforeseeable future therefore becoming beneficial to the academia. The study is also part of the partial fulfilment of the Masters in Business Administration (MBA) as required by the University of Zimbabwe.

### **1.9 Scope of the study**

The research study focuses analysing the outsourcing benefits and challenges experienced by mining companies in Zimbabwe. Data is collected from Freda Rebecca Gold Mine, Lafarge Cement and their respective contractors. Employees in the mining industry are the main source of primary data in this research as they are directly involved in outsourcing. References is also be made to other relevant information sources on the subject matter. The study is done in six months only hence time factor is a constraint.

### **1.10 Organisation of the Study**

This study will be organised into five chapters. Chapter one which introduces the research through providing the background, problem statement, the overall and specific objectives, the overall and specific research questions, and the significance of the study, limitations, delimitations and the dissertation outline of the study. Chapter two provides contextualisation of key concepts, search strategy and other issues related to outsourcing frameworks used by mining companies. Chapter two also presents theoretical and empirical literature reviews. Additionally, chapter three gives the description of the target population, research design, sample size and sampling procedures, data collection methods and research instruments. Chapter three also provides data processing and data analysis techniques used in this study. Chapter four provides presentation, discussion and analysis of research findings in this study; this is done with constant reference to set research objectives, questions and hypotheses. Lastly chapter five provides

conclusions, recommendations and areas of further research with reference to set research objectives. The conclusions and recommendations given are based on the research findings gathered from the field.

### **1.11 Chapter summary**

Chapter one, covered on the introduction to the study through giving the research background, problem statement, research objectives, research questions and hypotheses. A brief background on the research problem clearly showed the research gap that exists thereby justifying the need of the present research at hand. The chapter also provides the assumptions adopted in this research, justification of study clearly pointing out the reasons that persuaded the researcher to carry out the study and clearly listing the intended benefits and beneficiaries of the study. The chapter also gives the scope of the study and lastly the organisation of the research ending with the chapter summary. The next chapter reviews existing on the perceived benefits and challenges of outsourcing in the mining sector.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The previous chapter gave an introduction on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. This chapter outlines the various schools of thought on the perceived benefits and challenges of outsourcing in the mining sector. The chapter identifies various theories put across by various scholars in relation to outsourcing. Using the research questions identified in Chapter One, the researcher highlights the findings from different authors, on the perceived benefits and challenges of outsourcing in the mining sector. Chapter two; covers the search strategy, definition of phenomenon, underpinning theories, importance of subject, discussion of existing models, discussion of key variables, literature synthesis and conceptual framework.

#### **2.1 Explanation of the search strategy**

In this research, the researcher collects all relevant existing literature from the most noteworthy authors and other empirical studies that contributed in addressing the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. Due to limited resources and time factor as the study is being done in six months only, the researcher looks only for important contributions on the subject and more emphasis is placed on major research models and frameworks. This ensures contextualization of existing literature thereby establishing a research gap and development of a theoretical framework. In gathering literature the researcher make use of the set research questions and objectives.

#### **2.2 Definitions and explanation of Outsourcing phenomenon**

Definitions on outsourcing are different depending on the source. Lysons, and Farrington, (2006) defined outsourcing as a management strategy by which major non-core functions are transferred to specialist, efficient, external providers. In other words it refers to a process by which a firm contracts another to provide services that could have been carried out by in-house employees. According to a broadest interpretation of outsourcing, it can be considered just as a reliance on external resources (Mol, 2007). If this definition is accepted, then outsourcing refers to those activities that are undertaken by outside suppliers, no matter have those activities never been

made in-house (Ibid). In this study, the concept of outsourcing refers to transferring activities previously conducted in-house to an outside supplier. However, Lonsdale and Cox (2015) provide the definition for outsourcing, which is also accepted in this study. Outsourcing is a process of moving an existing business activity, covering the relevant assets, to another entity, a third party (Lonsdale & Cox, 2015).

However, Porter (2015), defines outsourcing as the completely contracting out of a business process (this process can either be production process or service process) or operational/ non-core functions, which is usually performed inside the organization itself, to an external party/organization. This brings a different view which argues that outsourcing does not only refer to contracting out services to suppliers in return for compensation, but it broadens out to contracting out non-core activities of the organization that are deemed to be time-consuming and expensive as highlighted by Porter (2015).

Consequently, according to this definition, outsourcing always incorporates a shift in company's boundaries. However, outsourcing is not the only way of adjusting the boundaries of the company (Lonsdale & Cox, 2015). Just to clarify the concept of outsourcing to the reader, it is worth stressing, that just re-locating facilities or finding a new production plant to other country is not outsourcing if the boundaries of business remain the same. This kind of relocation of activities is sometimes confused with outsourcing.

Additionally, Gilley and Rasheed (2010) put forward the view that outsourcing occurs in two ways mainly through substitution and abstention. They argued that Substitution occurs when outsourcing replaces internal activities and abstention occurs when activities that have never been performed in-house are outsourced. Moreover, Miller (2014) categories outsourcing into four basic types namely general, transitional, business processing, and business benefit outsourcing. General outsourcing covers three alternatives namely selective outsourcing, value-added outsourcing, and corporative outsourcing. Transitional outsourcing encompasses shifting from one technological platform to another and Business process outsourcing is whereby a third party supplier performs the entire business activities for the client organisation. According to Dibbern et al., 2004, Business benefit contracting refers to a contractual arrangement that spelt

out the vendor’s contribution to the client in terms of specific benefits to the business and terms of payments the client is obliged to pay upon the vendor’s ability to deliver those benefits

### 2.3 Underpinning Outsourcing theories

#### 2.3.1 The Balance Score Card Model.

According to Xu Yang, 2014, the Balance Score Card is used to scrutinize the organization’s resources, capabilities, and competencies to determine the key assets of a firm. However Sollish F., 2012 suggests that the balance scorecard model provides the procedure of evaluation on outsourced service performance. Furthermore Sollish F, 2012 highlighted that each company should decide for themselves which factors concerning providers are crucial for them before outsourcing goods and services. Table 2.1 below proves a balance scorecard model:

**Table 2.1: Balance scorecard model**

		Rating of Providers		Ranking of providers	
Factors	Weight	Provider A	Provider B	Provider A	Provider B
Performance					
Price					
Location					
Quality					
Capacity					
Layout					
<b>Total</b>					

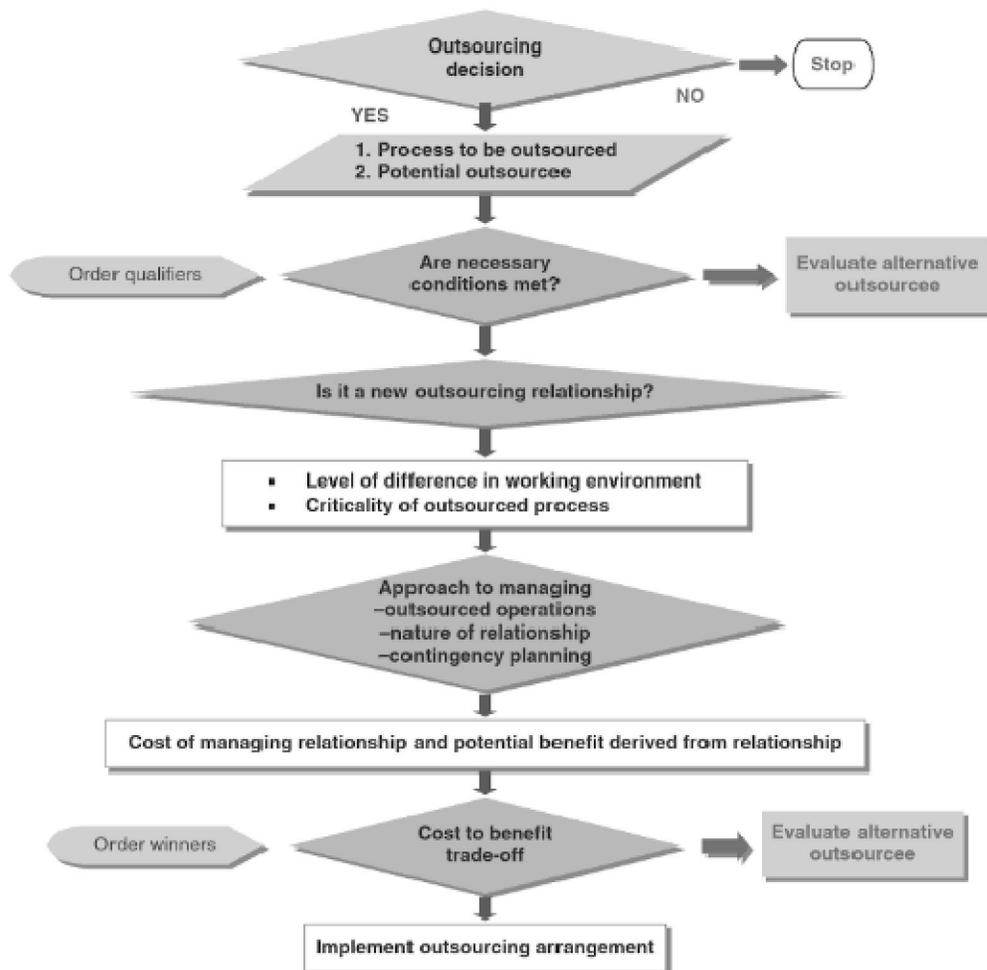
**Source: Xu Yang, (2014).**

Qureshi et al., 2013 states that each factor in the table above has a weight according to its significance and providers should be rated out of 1 to 10 for each factor. In order to calculate the ranking of the providers, the rating of the providers should be multiplied with the appropriate weight, then the rating should be summarized and the rank of each provider will be found based on their total rating. That means the provider with the highest rating will receive the first rank.

However, Weimer 2009 argues that the balance scorecard model is not an effective model to measure performance as it is not a cost-effective means of evaluation of companies during outsourcing. Basu (2010) suggests that the balance scorecard model requires the organization to first engage with different suppliers for a long period of time in order to come up with accurate supplier ratings. Basu (2010) draws our attention to the fact that the performance of a supplier purely depended on the relationship between the supplier and the contracting firm. For outsourcing projects to be successful, communication between the two contractual parties is another key for success, thus affecting supplier ratings (Seuring, 2008).

### **2.3.2 The Special Framework Model.**

According to Tales and Drury (2009), the special framework is used to evaluate potential suppliers when outsourcing. Figure 2.1 below gives a framework for evaluating potential providers:



**Figure 2.1: A framework for evaluating potential providers**

**Source: Sollish F., 2012, p 42**

Sanders et al. 2007 suggests that the first step is to define if the qualifier parameters are met. Zeng (2014), affirms that these parameters depend on the outsourced service and order qualifiers include quality certifications, conformity to discussed specifications, financial resources, reliability, availability of tracking, costs, ability to react to demand and a record of corporate social responsibility.

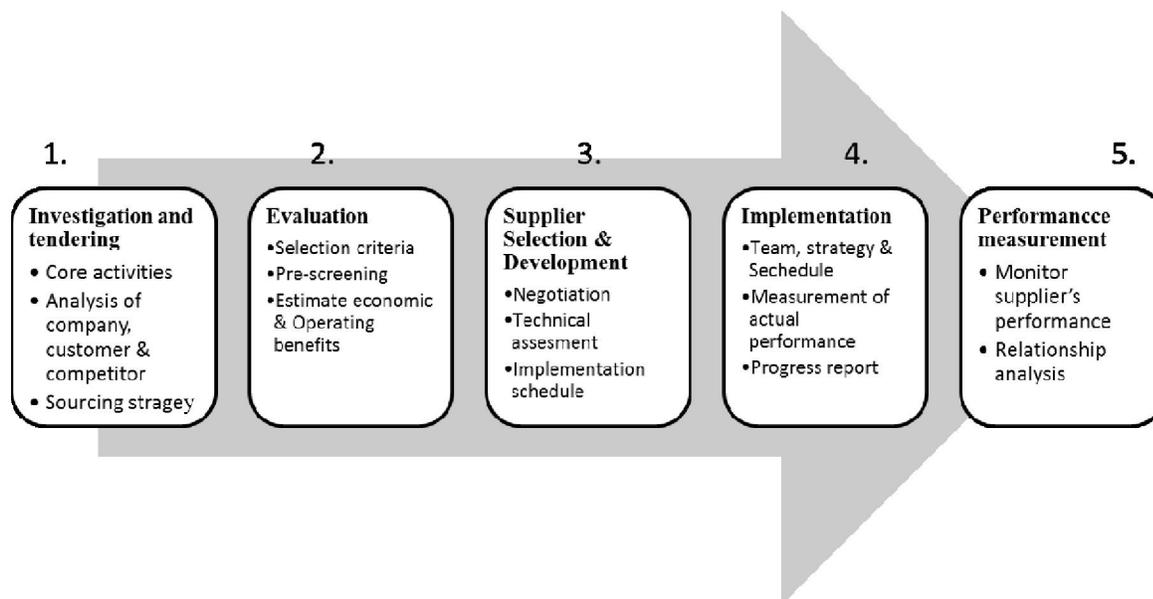
Saxena & Bharadwaj, (2013) provides in-depth analysis of the special framework and established that the necessary conditions are met but the provider does not have any experience in outsourcing, it makes sense to regard the level of difference in working environments. The environmental separation index (ESI) is used for defining the differences between the working

environments of the company and provider. Sollish F, 2012 reaffirms that the environment includes working practices, culture and business concepts.

However, Tales and Drury (2009), suggests that in some circumstances, order qualifiers may become order winners if they give cost benefits. As soon as both sides find trade-off, they are ready to implement an outsourcing agreement disregarding the need for the supplier to have experience in a particular business field.

### **2.3.3 The Four step outsourcing process model**

According to Zeng (2014), the outsourcing process is a five-stage process model as revealed in Fig 2 below. He proposes that the first stage is composed of investigation and tendering, whereby the firm recognizes the non-core and core activities and analyse the possible scope of the outsourcing as well the risks and benefits in it. Holcomb and Hitt (2007), suggest that the second stage is the evaluation where specific supplier selection criteria are developed to identify the list of appropriate suppliers. Also, the sourcing strategy is designed and cost models are finalized in this stage. Zeng (2014) highlights that on the third stage final suppliers are selected and the negotiation of an agreement is done. According to Handley & Benton (2009), different technical assessments of selected suppliers need to be identified due to the possible adaptation challenges which could hinder cost savings. He also suggests that the process implementation schedule and timelines are fixed in this stage. Zeng (2014) further analysed the fourth stage as the implementation stage, where a performance analysis should be put in place and finally, in fifth stage, the supplier's performance is monitored and possibilities for continuous improvements evaluated.



**Figure 2.2 Four-step outsourcing process model**

**Adapted from Zeng, (2003)**

Many authors engrossed their interest only on some phases of the overall process of outsourcing and concentrated more on to concerns of hidden costs and outsourcing pitfalls (e.g. Lonsdale 2010; van Weele 2012; Kremic et al 2006; de Boer et al. 2010). However, such step-by-step models fail to depict the importance of the specific outsourcing decision and the essential assessment and planning of the outsourcing process (Hätönen&Eriksson 2009). Making the right outsourcing decision requires a distinct understanding of the potential engagement options, risks and benefits, and the expedient of each conceivable arrangement for meeting business objectives (Sanders et al. 2007).

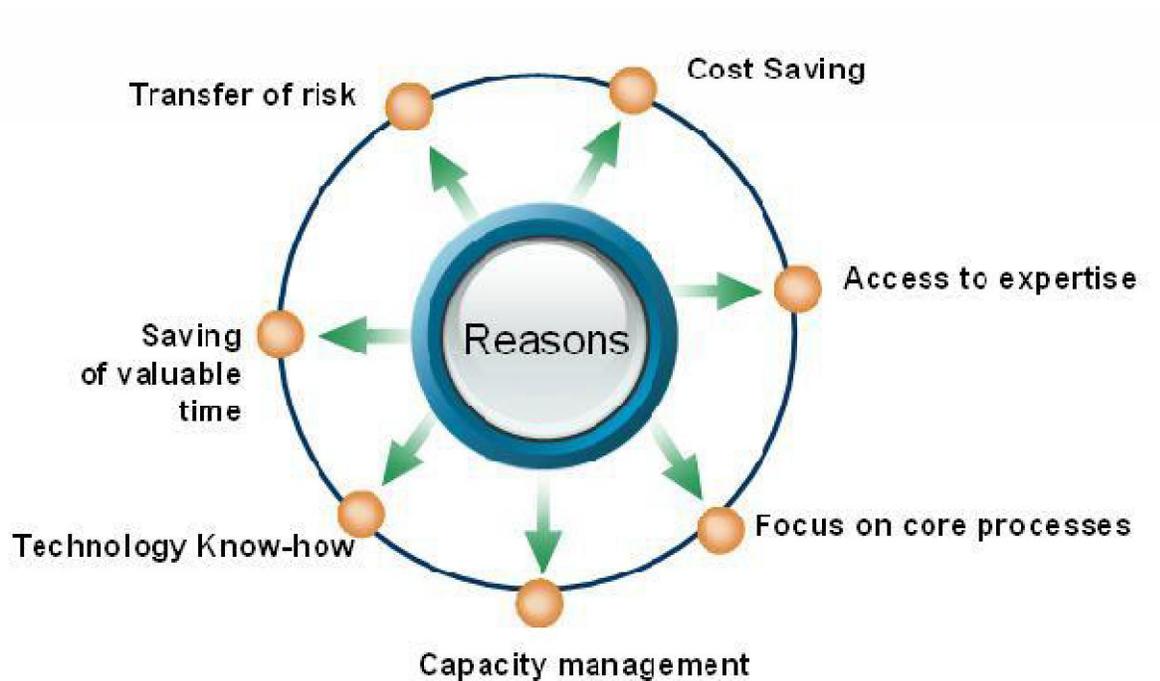
### **2.4 Why a company should do outsourcing?**

By knowing what is outsourcing, we can set about exploring why a company should do outsourcing. Surely the ultimate objective of outsourcing is to strengthen the company’s core competence and enhance the profit margin. The reason for doing it is still quite comprehensive and complicated. We would go over some of the most important ones below.

#### **(a) Top reasons or benefits for outsourcing**

1. To reduce cost from economics perspective. This one is quite simple for understanding. According to those mentioned above, the original driving force that makes outsourcing occur is

the pursuit of higher economic profits. The suppliers that provide the product/service are experts and specialists in the particular fields. The outsourcing model is now being leveraged by over 40% of the world's top five hundred companies including Apple, GE, IBM, Microsoft, ABB and etc. The offshore outsourcing, for instance, can bring about cost saving at 50% - 70% depending on the on-site and the resources that are outsourced. By the year 2015, over three million US job positions and a hundred billion dollars' worth of wages are outsourced to Asian and African countries due to cheaper labor forces.



**Figure 2.3: Top reasons or benefits for outsourcing**

**Source: (Lonsdale & Cox, 2015).**

2. The company could focus more on its core competence. In the modern world, strengthen the core business competence and build up barriers surrounding it could be one of the popular and successful competitive strategy. Doing outsourcing gives a company the chance to concentrate on its core competence.

3. Demand uncertainty transferred to suppliers. The real business world is much more complicated than its mathematical models. Only reducing the cost is not enough for a company to be successful and survive in the cruel competition. The ability to resist the unpredictability of

the market would be helpful. By doing outsourcing, a part of demand uncertainty will be transferred to the suppliers so relatively the company itself becomes stronger when facing up to the fluctuation of the market.

4. Capital investment transferred to suppliers. All the production/service process, to some extent, requires capital investment. Outsourcing of some of these processes allows a company to transfer the corresponding capital investment to the suppliers. Thus, the company is freed from the capital burden and able to optimize its cash flow.

5. Taking advantage of access to suppliers' new technologies and innovation to reduce product development cycle time. As we have mentioned above in the second point, the outsourcing process enables a company to focus more on its core competence, which also applies for the suppliers. This means each company in a mature supply chain can focus on its core competence and try to develop new technology and innovation for better efficiency. As these companies are linked together within a supply chain by outsourcing process, the advantage of such improvement in efficiency will be shared through the whole supply chain. Thus, the total surplus of the supply chain will be enhanced.

Other than those that we have stated above, outsourcing also enables the company to improve the overall quality, to obtain cash infusion, to improve its flexibility and etc. Generally speaking, it is too difficult for a modern company to survive on the market by itself. Cooperation within the supply chain is crucial for business success. Outsourcing provides a reliable pattern that companies can work together to improve the overall performance.

## **2.5 Outsourcing strategies**

### **2.5.1 Strategy for international outsourcing or Off-shoring**

According to Frazelle (2009), companies can decide to outsource their activities to third-party firms based in other countries. In this case, this is called off-shoring (Figure2.4). When regarding the risks, it is essential to take into account the type of outsourcing.



**Figure 2.4: Types of outsourcing**

**Source: (Juga J, 2015).**

**(i) Why Off-shoring is gaining prevalence**

**a) 24x 7 Competitive Strategy**

Chakrabarty (2009) pointed out that the advantage of offshoring is that business processes can be executed round the clock. By allotting the work internationally through multiple time zones, business processes can be run 24x7. In support Apte& Mason, 1995 said this can result in a quicker execution time in completing any business activities and also allow 24x7 management and supervising that is crucial for business processes. Chakrabarty (2009) argued that 24x7 services can be a competitive strategy for any client in today’s global market.

**b) Cost savings due to high availability of cheap skilled labor.**

Chakrabarty (2009) argued that the main reason for offshoring is to benefit from the cost advantage derived out of the lower pay scales of skilled professionals and the lower cost of living in some developing countries. The availability of skilled labour in such countries increases the low-cost advantage (Apte& Mason, 1995 &Apte, 1995).

**c) Modern communication and collaboration technologies**

Carmel & Agarwal, 2012 pointed out that internet has stimulated the development of off-shoring by providing a platform for the latest communication and collaboration technologies at reasonably low costs (e-mailing, teleconferencing, videoconferencing, instant messengers with text messaging, voice chat and Webcams. Chakrabarty, 2006d pointed out that due to these

lasted technologies bringing communication costs geographical distance is becoming less of a barrier for collaboration and coordination among globally distributed teams, also known as “global virtual teams.”

**d) Discipline, maturity and quality improvement.**

Outsourcing makes the vendor attempt to understand the firm's processes from a “fresh” perspective without any baggage of past or local experiences in the particular business process or firm activities (Aron & Singh, 2014.). This would bring the activities of the firm to questioning and mostly leading to improvements. Chakrabarty, 2009 demonstrated that most vendors strive to adopt the best business process maturity models or activities that can guarantee better quality and service, and hence attract more clients. Offshore outsourcing of business processes or certain activities can consequently bring into it the much needed” process discipline” that makes: (1) the process globally understood through removal of any ambiguity and improperly synthesized information, and enforcement of universally understood standards and procedures, and (2) the tasks in the process optimally sequenced - through elimination of redundant tasks and modification of defective tasks (Aron & Singh, n.d.). This evaluation of the outsourced activities or business processes from the unadulterated third-party perspective of the offshore personnel, if well utilized (by requesting and acting upon the feedback), can lead to improvements in the business process in terms of discipline, maturity, and quality. Hence, the remoteness of the vendor or offshore personnel can also turn out to be an advantage.

(Kumara S. et al, 2014; 101,105) suggested that this type of outsourcing is more risky than the domestic alternative because in this case companies should also take into account the risks they may face in another country. Risks have been divided into three parts: risks related to the company itself, risks related to the service provider and risks related to another country. He highlighted the following risks:

**e) Company's risks:**

If the company decided to offshore some activities or processes, it is necessary to regard the problems it may face afterward. At first, it is relevant to understand that the contract should be written carefully and the rights of both sides must be understandable. Nevertheless, a company cannot control all the actions of a Foreign Service provider, and this means that the provider can

cheat and act illegally behind the company's back. For instance, there is a risk of losing intellectual property. There is also a financial risk connected with unpredictable costs that can be caused by many different reasons.

**f) Risks related to service provider:**

The main risk is connected with the selection of a proper service provider, especially of a foreign one. The company may not even realise that it already has problems with its service provider as the company cannot control all the actions of a foreign provider. Despite the fact that provider plays a role of savior for the companies, still, some unpredictable situations due to different circumstances can occur, such as failures in processes, delays in delivering services or problems with technologies. These may lead to an increased number of dissatisfied customers and decrease the number of customers. On the other hand, these situations can be caused by premeditated actions of the service provider, for instance by stopping investing in employees or hiring employees whose qualification is not as high as it was agreed.

**g) Risks related to another country:**

These risks are quite understandable as each country has their own political and regulatory system. Before choosing the country for outsourcing, companies should pay attention not only to economic factors that will help to reduce costs but also to the political situation of this country. In addition, the culture should be taken into account. Different countries have different cultures, these differences concern language, values and traditions.

## **2.5.2 Business Process Migration Strategy**

### **2.5.2.1 Migration of Business Processes from Client to Vendor Site Strategy**

Chakrabarty (2009) observed that most vendors are convincing clients to take up the risk of BPO, and in some instances, it reveals aspects of the confidence of the vendor in their ability to execute third-party business processes from a far-off location.

The Wipro Service Delivery Model is a framework explicitly designed to manage the complete BPO process migration and transition management and has been established on the knowledge

gained from migrating more than 400 remote business processes to India over the past ten years (Chakrabarty, 2009). Lacity&Hirschheim, 2015 revealed that the Wipro Service Delivery Model is a proven service transfer platform crafted to guarantee process integrity and minimize inherent migration risks. The model provides a step-by-step approach for BPO execution.

Step1: Assessment – Build the case and prepare the client firm for BPO.

Step 2: Transition – Map and Move the processes, creating technology infrastructure and training resources.

Step 3: Parallel run – Stop the process running at the side of the client (site) whilst tracking and monitoring everything

Step 4: Steady State – Control and maintain the process in the steady state at the same time ensuring continuity, and continuous quality and process improvement.

If a client chooses a vendor experienced in BPO, the vendor would know the best way to migrate the business process. On the other hand, some business processes are interlinked to other business processes, and (before outsourcing) all these business processes harmonize with each other. The risk however here is that the client cannot afford to trust the vendor completely, and should remain alert on the approaches the vendor takes in transferring the business processes. The outsourced business process may be highly integrated with other business processes at the client site, and efforts must be made by the client to ensure that the interfacing between the in-house business processes and the outsourced business processes is satisfactory.

#### **2.5.2.2 Getting the Business Process Back In-House Strategy**

Hirschheim&Lacity (1998), coined the term back sourcing a term referring to a situation when a business wants to bring back in-house business process once taken to the vendors site. Sparrow (2003) argued that back-sourcing can be a something that was planned initially when the business process was moved to the vendor site. Sparrow (2003) pointed out that maybe the organization was going through a major transformation, or needed a major realignment of processes, labor, or work allocation, and had therefore decided that some of its business processes could be temporarily outsourced during that period.

Alternatively, back-sourcing could be an unplanned activity, for instance, as a result of dissatisfaction from outsourcing experiences (such as, poor customer feedback, high overhead costs, breach of contracts or trust, or simply too many conflicts with the vendor), or as a result of certain business processes turning out to be more strategic and closely associated with the client's core competence than previously thought (irrespective of the performance of the vendor). It is important to note that back sourcing as a strategy has its own risk implication. For example, the company might have lost certain expertise and tacit knowledge by taking the business process to the vendor site. Chakrabarty (2009) cautioned that putting up the business processes again and integrating them back into the organization would require significant investments of time, money, and effort.

### **2.5.3 Strategies for contracting and Alliance Building**

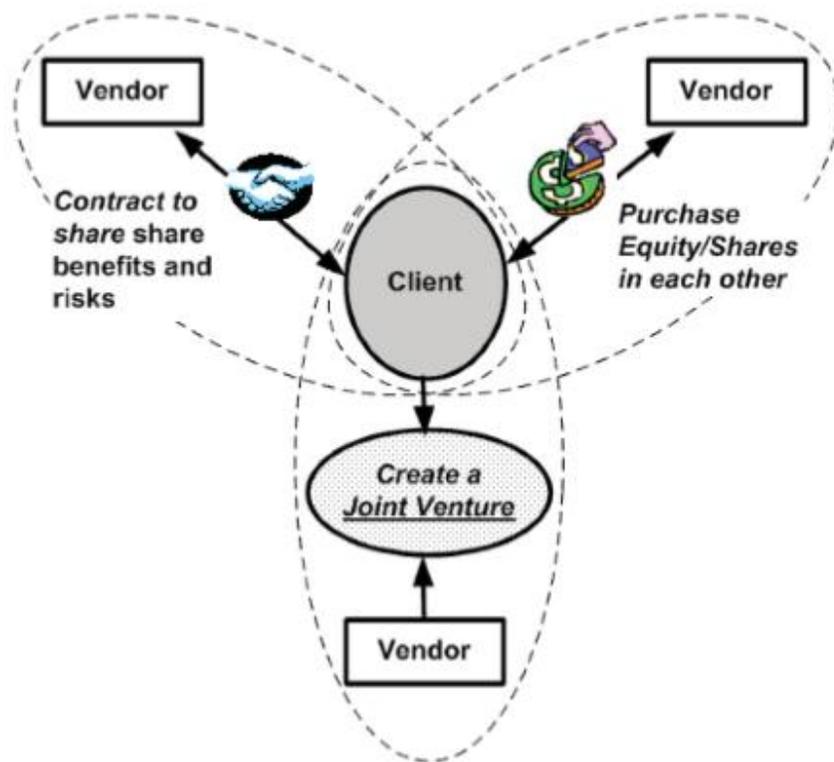
According to Bianchini (2013:28), Mining companies have always subcontracted to gain access to resources beyond their individual reach, whether it be skills, people, technology, products or materials. He further highlighted those traditional mining, companies labeled business processes such as payrolls, human relations, and administration as in-house functions, while construction companies outsource these non-core functions. The close relationship between the construction company and the outsourcing partner is subjected to confidentiality of the data and total control over the process. Greaver, (2009: 11) further suggested that the contractual arrangement should anticipate adjustments and changes as well as the possible discontinuation of the arrangement in case of a failure. He highlighted that it is important to assess and document which parts of the contract are intended to remain fixed and which are allowed to be flexible and subject to changes. Frazelle (2009) recommended that it would be helpful if the outsourcing contract could be standardized like supply contracts often are. But there are no, to all cases applicable, outsourcing contract models. He brought into light that there is, however, a lot of useful information and experience sharing out at the web.

Corbett (2011: 39) concluded that the contract has to define the relationship between the parties, it has to be business orientated and document the outsourcing business plan including to the extent applicable pricing, performance criteria, potentially with upside/downside sharing, it must define the scope of the outsourced activity, it has to deal with strategic considerations such as exclusivity, duration. He further highlighted that it has to define responsibilities, rights and

remedies; it has to define who owns the rights to the results of joint work and it needs to govern the termination situation and different jurisdictions.

### 2.5.4 Strategy for sharing Ownership

Business contracting, a strategy previously discussed, is a method of sharing benefits and risks. On the other hand, its main drawback lies in the challenges involved in measuring the specific benefits or benchmarks in the contract. Sharing of ownership is perceived as a better effective BPO strategy, and would ultimately result in sharing of risk (see Figure 2.5)



**Fig 2.5 Sharing of Ownership**

**Source: Aron & Singh (2015)**

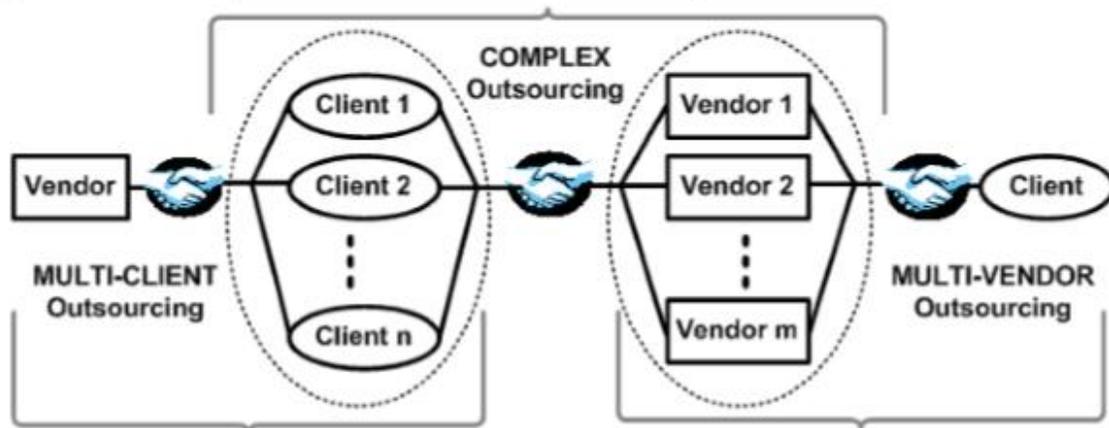
A strategy for sharing ownership can be implemented by 1) contracts with clauses of risk sharing, and reward 2) creating a joint venture company with the vendor and 3) both the client and vendor have shares in each other (Willcocks & Lacity 2016). Currie & Willcocks (2014) argued that revealed that when the client and the vendor form a joint venture, it makes both

parties committed and dedicated towards the success of the BPO. Such a strategy also enables the client to tap into the capabilities of the

## 2.5.5 Client – Vendor Relationship Strategies

### 2.5.5.1 Single vs multi Supplier Strategy

It is often difficult for a firm to find vendors with all the capabilities in the areas a firm needs to outsource. Hence a firm might opt to go for many vendors, thus engaging different vendors in areas that they are good at. Gallivan & Oh (2009) called this multi-vendor sourcing.



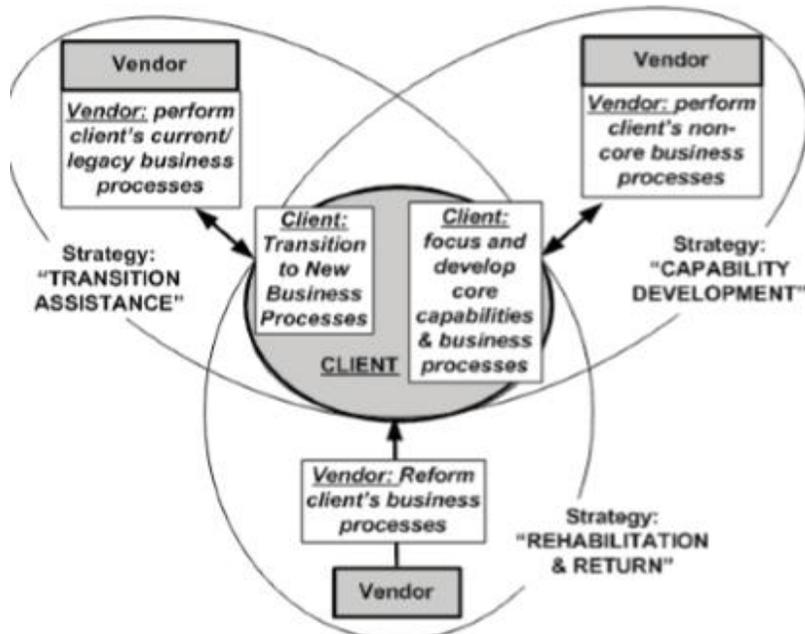
**Figure 2.6: Outsourcing**

**Source: (Klotz & Chatterjee, 2015).**

The risk of having multiple relationships lies in difficult of cooperation and the need for good communication amongst the many vendors and the client. It is the client role to take the first steps in ensuring and verifying the presence of proper coordination amongst the vendors. The client can also encourage completion amongst different vendors by giving them the same business processes with contracts. On the other hand, if the perceived risk associated with a business process is high, the client can spread the risk by giving portions of the business process to different vendors (Klotz & Chatterjee, 2015).

### 2.5.5.2 Strategy for utilising vendor relationships for business growth

Figure 2.7 below provides the strategy for utilising vendor relationships for business growth:



**Figure 2.7: Strategy for utilising vendor relationships for business growth**

**Source: Montiea, 2015.**

A cement manufacturing firm can make use of the vendor’s experience and knowledge for growth of its own business process. Dibbern et al., 2004, made use of solid which made use of three strategies to retain its business processes in-house over the long term and use the vendor’s expertise to improve them. Namely (a) rehabilitation and return, (b) transition assistance, and (c) capability development, and each strategy can be adapted to BPO (see Fig above).

“Rehabilitation and return” includes getting inefficient processes back to life, “transition assistance” involves a changeover to newer processes, and “capability development” involves the strengthening of a client’s business processes and core competencies. In the first strategy of “rehabilitation and return,” the vendor (or an external consultant) who has the required expertise in the relevant business processes would assist the client in reforming its business processes at the client site. Here the presumptions are that (1) the client’s business processes are in bad shape and need restoration, (2) the client does not want to outsource its business processes, and (3) the client wants to “learn” directly from the experts. This is not strictly “outsourcing” since no

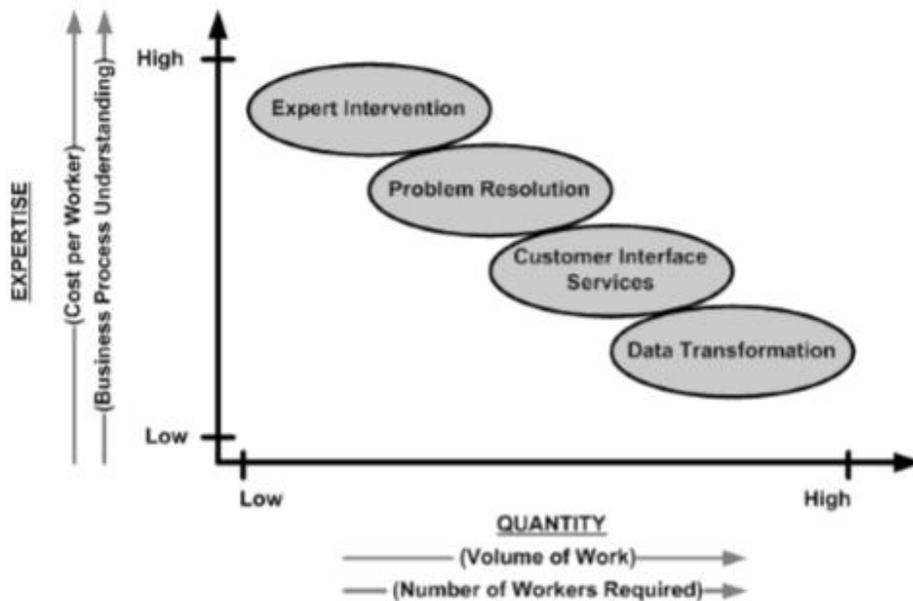
business process is really transferred over to the vendor. However, the vendor uses its own expertise to help the client gain operational effectiveness in its business processes by actively suggesting and implementing various changes. Foreexample, if the client feels that it is not performing a certain business process (such as smelting) efficiently, and at the same time does not want to outsource it (probably because of its strategic nature, security issues, core competence related nature, etc.), then the client can engage a specialist vendor (for smelting) that would send over its personnel to the client site on a temporary basis. The vendor personnel would go to the client site, assess the relevant business processes of the client, suggest changes, possibly oversee or actually implement the suggested changes, gauge if the changes are actually leading to desired improvements, and then return.

In the third strategy, of “capability development,” the focus of the vendor is to build on its core capabilities (and related business processes) that maximize its competitiveness in the marketplace. This implies that the client keeps its focus on its “core” capabilities, and at the same time attempts to add newer capabilities to strengthen this “core” with the aim of making itself more competitive in the marketplace. Additionally, the business processes that are not strictly related to their core capabilities are then candidates for temporary or permanent outsourcing. In other words, the client can focus and build on its strengths (core capabilities) by (1) handing over some non-core activities to a vendor, and/or (2) making use of a vendor’s help to further develop its own core capabilities. After the client has confidently consolidated and built on its core capabilities, the client will have the option of discontinuing or renegotiating the extent of its engagement with the vendor. The risk lies in getting blinded by the urge to focus on the core capabilities and forgetting the importance of monitoring the vendor’s activities during that period.

#### **(a) Strategy Basing on Task**

Hence, it is important to consider the following three factors before outsourcing or offshoring business processes: (a) the tasks involved in the business process, (b) the expertise required for the tasks, and (c) the number of workers required. After these three factors have been considered, a decision on the viability of outsourcing to vendors and/or offshoring to another country must be made, based on (1) the availability of workers with the required expertise, (2) the cost of

workers with the required expertise, and (3) various other outsourcing and off-shoring related considerations discussed in this chapter. Figure 2.8 below gives a strategy basing on task.

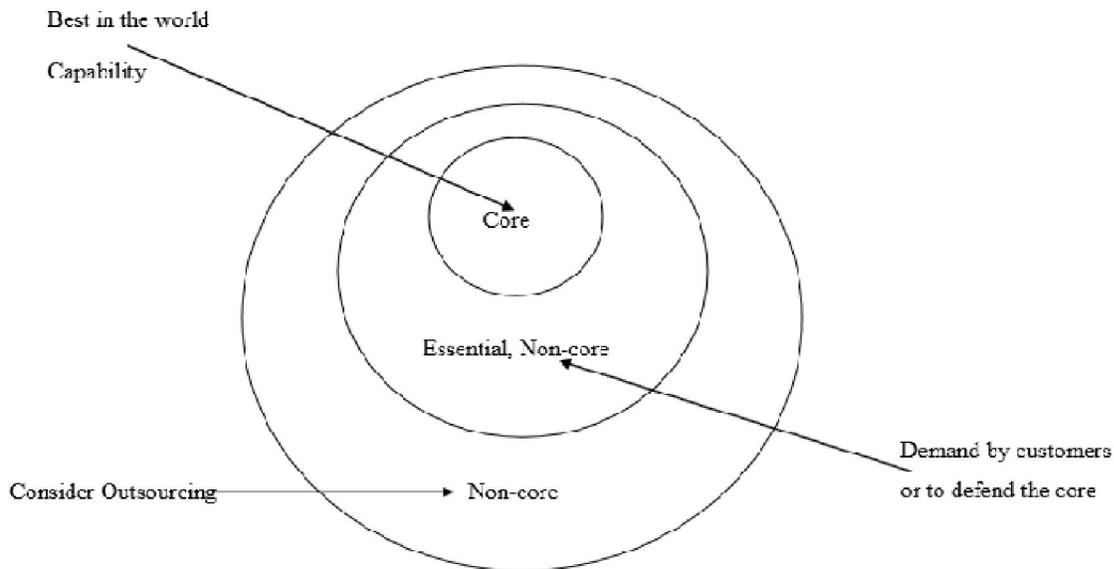


**Figure 2.8: Strategy basing on task**

**Source: Aron& Singh (2015)**

**(b) Strategy basing on Core and Non-Core Activities**

Every company should decide how many and which particular activities to outsource. This decision is based on the definition of core and non-core activities. Core activities are activities which determine the competitive success of the company. Core activities are relevant for the companies in order to gain high customer value and that is why it is obvious that non-core activities should be outsourced (Figure 6). However, it is essential to regard the company’s ability to compete in performing the core activities and make cost analysis (Kenneth Lyons, 2012, 158-159).Figure 2.9 below gives Core and non-core activities.



**Figure 2.9: Core and non-core activities.**

**Source: (Quinn, 2010)**

According to the information in Figure 3, the list of activities that are better not to outsource can be created:

1. Core activities which bring company the biggest profit.
2. Activities in which company is specialized and has a good knowledge base.
3. Functions with high customer impact, because in case of outsourcing company loses a part of the control for customers' feedbacks and has no possibility to react fast.
4. Activities that are inefficient and currently cause different challenges for a company. It is better initially to solve all problems in-house.
5. Activities that requires specialized knowledge. For example, company may have a specific technology, which was created particularly for some activities. Moreover, this technology is the property of the company.

Companies can outsource their mining activities completely or just partly. It is their decision, but the issue that all the companies should regard in order not to fail is core activity which provide them with biggest profit. That is the concept of outsourcing activities that are demanded by the organization.

## **2.6 Outsourcing in the mining sector**

Embleton and Wright (1998) pointed out that the mining industry rarely outsource due to the fact that it's a protected industry with few competitors. The authors argued that competition forces the industry to be innovative. However, recent studies show that the mining industry is beginning to outsource some activities (Scott Dunbar pers. comm., 2016). Sivakumar et al (2014) argue that outsourcing is now common in the mining sector and firms are outsourcing mine construction via engineering, procurement, and construction management contracts as well as outsourcing underground construction, maintenance and the design of mine waste management facilities. Firms even outsource the mining such as drilling and blasting. According to Mining Weekly, the outsourcing industry for mining is increasingly competitive as companies struggle to find quality contractors in some parts of the world (Montiea, 2015).

In 2009 detailed research was undertaken and completed in Zambia on “Strategic Outsourcing and the degree to which it may support the successful growth in the Zambian Copper Mining Industry”. Based on a 70% response rate across the different mining companies and associated organizations, the information acquired was collated and is presented here as being representative of the opinion and situation in the Zambian Copper Mining Industry in 2009.

**Table 2.2: Schedule of Outsourced Business Functions**

<b>PRIORITY</b>	<b>BUSINESS FUNCTION</b>
1	Underground equipment (Loaders and Hydraulic drill rigs) repair and maintenance
2	Underground equipment refurbishment and rebuilt
3	Development
4	Light vehicle maintenance
5	Raise boring
6	Diamond drilling (Underground exploration drilling)
7	Cleaning of offices
8	Rolling stock repair and maintenance (Granby cars, locos, axels, etc.)
9	Transport of employees and ore
10	Security
11	Horticultural maintenance (Parks and gardens)

The participants were very consistent that only functions deemed as non-core functions are outsourced with one exception, development. Development was declared as core function by most of the participants but then repeatedly reported as having been outsourced.

Although in its totality, development is an ongoing process, it can be a discontinuous function. It is also one function where cutbacks are quickly implemented when cashflow problems or similar financial situations occur. This would give some explanation why development has been outsourced in most cases.

The important factors taken into consideration when deciding to outsource were:

- Reduce and control operating costs.
- Improve company focus.
- Improved quality.
- Improved availability.
- Reduce labour and interlinked responsibilities and liabilities.
- Reduce theft.

- □ Reduce internal stock holding without impacting on availability.
- □ Lack of skills.

## 2.7 Effectiveness of outsourcing relationships

After starting a relationship with a provider, it makes sense to evaluate the effectiveness of this outsourcing relationship. This index of effectiveness defines the ability of providers to satisfy clients' needs in particular services. The evaluation of this effectiveness includes many criteria such as timeliness of providing services, correspondence of amount of provided services, quality of customer service according to customer feedbacks and efficiency of provided services. There are different levels of effectiveness of outsourcing relationships and each of them requires particular actions (A. Kurbanov., 2012, 102-105). Table 2.3 below gives the effectiveness of outsourcing relationships:

**Table 2.3: Effectiveness of outsourcing relationships**

Level of effectiveness of outsourcing relationships	Actions related to the relationship
A very high level	The relationship works successfully, but there is still a need to make a plan of preventive actions.
A high level	The relationship works successfully, but there is still a need to make a plan of small corrective actions.
An average level	The relationship works successfully, the targets are partly achieved, but there is a need in corrective actions.
A low level	The relationship is not successful, there is a need in great corrective actions.
A very low level	The relationship is not successful, targets were not achieved, and there is a need in radical managerial decisions.

**Source: (A. Kurbanov., 2012, p 105).**

According to Table 3, despite the level of effectiveness of outsourcing relationships, there is always a need to have a plan of actions. It can be simply preventive actions for the future or corrective actions.

## **2.8 Challenges associated with outsourcing**

This section seeks to provide challenges associated with outsourcing:

### **2.8.1 Interruptions to supply**

There is always an opportunity that supplier ceases supplying. Dependency issue is related to the risk of supply interruptions (Lonsdale & Cox, 2012). Dependency and the lack of alternative suppliers are the key factors which determine the level of the risk. However, shortage of supply can occur without the dependency (Ibid). Supplier may have difficulties of its own like technical problems or supplier can go into liquidation (Ibid). Interruption may, of course, happen because of an accident or other reasons not caused by supplier. Whatever the reason is, sudden interruption to supply may cause serious difficulties (Aron et al, 2005; Kumar & Eickhoff, 2005). It is not to say that, outsourcing always entails greater risk of interruption of supply. Risk of accident etc. exists no matter who carries out the activity. Rather it is to say, that the risk of interruption should be taken into account. One way to assess this risk is to think what would happen if supply of goods suddenly stops (Power et al, 2004).

If supplier goes into bankruptcy, the buyer may also be one to blame. That would be the case if the buyer squeezes supply prices too hard and supplier's business becomes unprofitable (Lonsdale & Cox, 2012). It should be remembered that supplier needs its margins too (Ibid).

### **2.8.2 Poor quality of supply**

Poor quality of supply can manifest itself in many ways. Again, issue of dependency plays a role with this risk (Lonsdale & Cox, 2012). In the case of high dependency, supplier may take an advantage of it and supply only at that level of quality, which only just satisfies the buyer (Ibid). Deliberate underperformance by supplier is called shirking by Aron et al (2005). Aron et al (2005) base their thinking on the limitedness of resources. They argue that shirking occurs because the supplier may have alternative use for its limited resources (Ibid). Of course, it is possible that supplier's quality does not satisfy, no matter how hard it tries (Lonsdale & Cox,

2012). One factor that may cause suppliers underperformance, is misaligned objectives (Aron et al, 2005). Supplier's incentives should be aligned with those of the buyer (Ibid). Sometimes companies find it surprisingly difficult to document their needs to their supplier because some of the knowledge is tacit knowledge (Kumar & Eickhoff, 2005). For this reason, insufficient quality may sometimes be due to the buyer's incapability to transfers appropriate information to supplier.

As it is important that supplier provides products with sufficient quality, perhaps, it is more important that supplier possesses capabilities to develop in the future. If a supplier lacks these capabilities, according to Quelin& Duhamel (2014), many problems may occur. It is a risk if supplier does not have these capabilities. Lonsdale &Cox (2012) and Hoecht&Trott (2006) point out the same issue. A buyer can suffer from an insufficient quality if supplier cannot stay up to date with technological development (Lonsdale & Cox, 2012). Case Mattel illustrates, what can happen if supplier fails to provide adequate quality.

### **2.8.3 A fall in employee morale**

Belcourt et al (2006), consider the effect on employee morale as one of the primary risks of outsourcing. Outsourcing always results in displaced employees (Belcourt et al, 2006; Power et al, 2004). Basically, there are three options for the employees that previously carried out the outsourced activity: they are either transferred to the outsourcing company, transferred internally to other functions or they are laid off (Belcourt et al, 2006). Probably, most of the employees are not happy with any of those options (Ibid). Furthermore, the morale of the remaining employees can be affected too (Kumar &Eickhoff, 2005; Lonsdale & Cox, 2012). They may feel that nobody is safe in the company and that managers do not care about their well-being. Particularly, if there is not a clear pattern for outsourcing, a feeling of insecure may dominate (Ibid). Low morale may affect productivity of the company and it can lead skilled workers seeking a new job (Ibid). Outsourcing always incorporates changes. Most people have a natural tendency to resist changes (Kumar &Eichhoff, 2005). Consequently, in outsourcing, managers will always encounter a wall of resistance (Ibid). Fortunately, most of these problems can be avoided with proper management (Lonsdale & Cox, 2012).

#### **2.8.4 A loss of internal coherence**

According to Quinn & Hilmer (2014) and Lonsdale & Cox (2012), one essential risk of outsourcing is the loss of cross-functional skills. New insights and solutions often develop in interaction between people in different functions (Quinn & Hilmer, 2013). Lonsdale & Cox (2012) also argue that interaction between people from different divisions is one of the main sources of innovation. There is a risk that those important cross-functional interactions may diminish (Quinn & Hilmer, 2014). Supplier's employees often do not have same commitment to the company and they have their own interests (Lonsdale & Cox, 2012). On the other hand, innovativeness may be even higher if effective communication with supplier's experts is ensured (Ibid). However, if activities are outsourced at different locations, effective interaction may be difficult (Ibid).

One form of organizational learning is learning-by-doing. If the company does not perform the activity, it cannot learn from it either. It is possible that supplier learns from doing the activity and provides that tacit knowledge to the buyer. But, it is unsure whether this scenario is going to happen. Transferring tacit knowledge is not the easiest task to do. In summary, if an activity is outsourced, learning-by-doing will decrease. (Mol, 2007) Company's internal coherence may be weakened because of outsourcing, making the company more difficult to manage. Case Thornton equipment demonstrates this risk (it demonstrates as well the risk of unexpected costs, which is discussed later), (Lonsdale & Cox, 2012).

#### **2.8.5 Confidentiality leaks and loss of intellectual property rights**

Risk of losing confidential information is always incorporated in outsourcing and more the company outsources, the greater the risk will be (Lonsdale & Cox, 2012). The risks are especially inherent in IT outsourcing (Desouza et al, 2004). Intellectual property (IP) rights comprise a great deal of the company's value. Thus, protecting IPR is an essential concern. Those include, for instance, trade secrets, copyrights, trademarks and patents (Power et al, 2004). If supplier is involved in product development, revealing of some confidential information to supplier is necessary (Lonsdale & Cox, 2012).

How much and what information to share is an issue that ought to be carefully assessed (Ibid, 2016). Confidential information may end up to competitors through supplier. Hoechst & Trott

(2006), in fact, argue that there is a trade-off between access to supplier's new technology and knowledge and the risk of losing commercially sensitive knowledge. Besides, according to them, this risk cannot be controlled by traditional management or by legal contracting (Hoecht & Trott, 2006). To manage this risk, it calls for high level of mutual trust (Ibid, 2016). Lonsdale & Cox (1998) point out another risk concerning IPR. The risk occurs if IPR relating to outsourced activity are not properly protected. There may be a debate that has rights for the co-developed or co-produced products. Disagreement may emerge especially when the contract is under re-evaluation (Lonsdale & Cox, 2012).

### **2.8.6 Unexpected costs**

In most cases, cost saving is the main reason for outsourcing. Ironically, unexpected costs are one of the most common drawbacks of outsourcing (Deloitte, 2005). Too often, managers overestimate the cost savings and underestimate the costs (Belcourt, 2006; Kumar & Eickhoff, 2005; Kremic et al, 2006). According to Jennings (2002) by outsourcing companies commonly seek cost-saving around 15-25 percent. However, materialized cost savings are often lower, on average 9 percent (Ibid). Similar result was found in the survey of Deloitte Consulting. They discovered that anticipated benefits often do not materialize (Deloitte, 2005). For example, 38 % of the respondents said they have paid additional cost, despite the fact that cost savings was their primary motive for outsourcing (Deloitte, 2005). There are no guarantees that expected cost savings can be achieved (Kremic et al, 2006).

Many managers forget that outsourcing is a complex process (Power et al, 2008). If the outsourcing is implemented without sufficient resources and planning, the additional costs may surprise. All possible effects of outsourcing should be taken into account. There are many possible reasons for unexpected costs, for example, layoffs, language and cultural differences, additional quality control, decreased warehouse turnover, increased transportation, and incompatibilities (Belcourt, 2009; Kumar & Eickhoff, 2010; Olsztynski, 2010). However, sometimes not even the most painstaking planning is enough to avoid being surprised by unexpected costs. As Heikkilä & Cordon (2009) put it: even when outsourcing is strategically appropriate, the devil is in the detail. Case Thomas Medical Systems illustrates such risk.

## **2.9 Empirical evidence of outsourcing and its challenges**

This section seeks to provide empirical evidence of outsourcing and its challenges:

### **2.9.1 Case Portland cement**

Portland is a major cement manufacturer. In order to reduce labor and transportation costs, the company decided to outsource its hose operations to Mexican supplier. But, Portland was faced with a language barrier. Another concern was the fact that, Mexican government had a tendency to change business rules and laws at short notice. However, the biggest threat was a constant fluctuation in currency exchange rates.

Fluctuation was constant and it had severe impact on the company's calculations. Apparently, the company knew these dangers prior to outsourcing and had considered the risks. Thus, in this case, the point is not in illustration of unsuccessful outsourcing, rather, in demonstration of the risks that might be ahead when outsourcing to abroad (International outsourcing, 2009).

## **2.10 Chapter summary**

The literature in this chapter highlighted the impact of adopting outsourcing strategies to enhance profitability, production efficiency and customer service. The forces fuelling the adoption of outsourcing were also highlighted. These include economic forces such as the need to reduce cost, the need to be flexible, the need to be innovative and the need to improve customer services. The literature also reviewed the benefits to firms adopting outsourcing strategies and these include reduction of the organisation's logistics costs, the increase in expertise and technology which leads to increased service efficiency. The following chapter is the research methodology which outlines how the research was carried out.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

The previous chapter reviewed existing literature on “An analysis of perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.” This chapter accordingly identifies the procedures and techniques utilised in the collection, processing and analysis of data. The procedures, methods and instruments used to carry out the study are emphasized. The sampling method used and steps taken in collecting data are highlighted. The validity of these procedures, methods and research instruments are outlined.

#### **3.1 Research philosophy**

Saunders et al (2012) defined a research philosophy as a development of research background, research knowledge and its nature. Malhotra (2009) pointed out that a research philosophy is a theory used to direct the researcher for conducting the procedure of research design, research strategy, and questionnaire design as well as sampling methods. Saunders et al., 2012 pointed out that a research philosophy can be positivism, pragmatism, realism or interpretivism. This study adopted a deductive approach. This approach is concerned with the development of a hypothesis from existing theory and then research is conducted to confirm or reject the hypothesis (Snieder&Larner 2009). The deductive approach is frequently referred to as the top-down approach since the reasoning start at the top, where there is an existing theory and ends at the bottom with specific conclusion from research (Saunders et al. 2009; Snieder&Larner 2009).

#### **3.2 Research design**

A research design is defined as a blueprint for conducting a study with maximum control over factors which may obstruct the soundness of findings (Burns and Grove, 1997). Parahoo, Barr, and McCaughan (2000) defined a research design as a plan that explains how, when and where data is to be collected and analysed. Yin (2013) viewed a research design is a strategy that is used to acquire solutions to a certain problem. For this study, a descriptive research design was considered as it gives a picture of the outsourcing models in the Zimbabwean mining industry. A descriptive research design was selected because it is the most appropriate for collection of both qualitative and quantitative data through the use of a descriptive survey hence it enabled the researcher to interview respondents on research subjects face to face and self-administering questionnaires to respondents to fill them out. Furthermore, descriptive research design was used by the researcher because it helps to provide a true and relevant presentation of

factors that pertain to the research problem and is also regularly used for quantitative research designs for giving valuable pointers as to what variables are worth testing quantitatively. According to Jones (2010) cited that a descriptive research design allows the researcher to use both qualitative and quantitative data in order to gather concerning a problem that is being researched on.

### **3.3 Study population**

There is consensus among several authors such as: (Saunders, Lewis and Thornhill, 2008; Zikmund, 1997; Fraenkel and Wallen, 1996; Wegner, 1993) that a study population is the set of all members about which a study intends to make inferences, that is all possible observations of the random variable under study. In this study the study population includes: all individuals concerned with the outsourcing of mining activities in the cement mining industry. The study population included employees working at: Larfarge and Freda Rebecca. A total of 653 people were identified as the total study population of this research. The total study population all employees in the selected mining companies.

#### **3.3.1 Sampling procedure**

Sampling procedure is a method of selecting a sub-set of a study population for the purpose of gathering data or experimental purposes (Saunders, Lewis and Thornhill, 2008; McPhail, 2001). It is expensive and time consuming to collect data from the entire study population. As provided for by Krathwohl (1993) that a sample is “a smaller (but hopefully representative) collection of units from a study population used to determine truths about that study population”, sampling was used to determine the respondents in this research. There are basically two broad categories of sampling techniques namely the probability and non-probability sampling. A probability sampling method is one that utilises random selection techniques where the total population is known and all subjects have equal opportunity of being selected. On the other hand non probability sampling methods are the ones that allow the non-random and subjective selection of subjects “on the basis of their accessibility or by the purposive personal judgment of the researcher” (Explorable.com). The study adopted both probability and non-probability sampling techniques in the selection of the respondents as the characteristics of the population required both probability sampling and non-probability sampling.

##### **(i) Stratified Random Sampling**

Stratified sampling is a probability sampling procedure in which the target population is first separated into mutually exclusive, homogeneous segments (strata), and then a simple random sample is selected from each segment (stratum) (Levy & Lemeshow, 2008). The population under consideration consisted of different groups namely: senior managers, middle managers and low level employees. It was necessary to stratify the population into the three groups involved in strategizing in organisations. According to De

Vries (1986) populations can be split into various sub-populations that in some respect or others are mutually different and each sub-population (called stratum) is more homogenous than the population as a whole (refer table 3.1 below). The number of participants to the study was chosen from the strata making sure it was large enough to yield reliable and valid results.

**(ii) Purposive Sampling**

Purposive sampling, is a non-probability sampling technique, it was used in selection of 27 managers in the various departments. These were included in the sample taking into consideration the department they represented as opinions and views of senior managers from finance, IT, Mining, and Procurement were of importance in establishing a balance to the study. This is in line with Saunders & Thornhill’s (2007) proposition that the researcher can apply non-probability sampling technique which permits the researcher to consciously select particular elements or subjects for addition in the study so as to make sure that the elements had certain characteristics pertinent to the study. Thus in order to get the best quality of information the researcher used personal judgment to screen the sample population.

**(iii) Convenient sampling**

Convenient sampling, is a non-probability sampling technique, it was also used in the selection of 15 senior management employees. These were chosen on the basis of their availability and willingness to be part of the study as some were engaged in different commitments during the time of the investigations. Table 3.1 below is the summary of the population and sample for this research:

**Table 3.1: Population and Sample size**

<b>STRATA</b>	<b>POPULATION SIZE</b>
Senior Management	30
Finance	60
IT	38
Mining	500
Procurement	25
<b>TOTAL</b>	<b>653</b>

**Source: Author 2019**

Using the total population  $N=653$ ,  $n=N/(1+N(e))^2$  the sample size became 248 and the researcher rounded up to 250.

### **3.4 Research instruments**

In this study the researcher used a structured questionnaire which was divided into sections. Section A covering general information about the organisation and the respondents and Section B to D covering the outsourcing benefits and challenges experienced by mining companies in Zimbabwe. The questionnaire enabled the researcher to collect data in response to the problem under study through answering research questions. Several considerations were taken in developing the research instruments. Validity, reliability and objectivity were the benchmarks on which research instruments were measured (Saunders, Lewis and Thornhill, 2008).

#### **3.4.1 Questionnaires**

The Self-administered questionnaires were not only cheap but they were also easier to coordinate as they could easily be distributed through email, handed over as hard copies and collected at a later date. The three days to one week time lag was given to respondents allowed adequate time to give well thought out answers.

In a bid to minimise cases of questionnaires not being responded to, the researcher tagged emails with a receipt and read request instruction so as to enable feedback from the recipient's computer when respondent had open the mail and follow up phone calls were made to gently remind the respondents to attend to the instrument. This tactic also helped to minimise the time period the responded had the possession of the questionnaire and in turn minimised the possibility of having to discuss it with other colleagues before responding. Also to minimise contamination of data in the hands of the respondents, questionnaires were sent across different locations and departments making it difficult for the respondents to discuss the instrument. In order to minimise the possible negative effect of ambiguous replies or omission of replies altogether to certain questions follow up interviews were then used to clarify the ambiguous or omitted responses.

### **3.5 Data collection procedure**

The researcher used semi-structured questionnaires for data collection. An introductory letter from University of Zimbabwe was used to seek permission from the mining industry to distribute questionnaires. The researcher then administered questionnaires to selected respondents to collect in-depth information. Questionnaires to solicit information were sent in advance to all study respondents by emails. Most of the Self-administered questionnaires were easily distributed through email. The researcher did not solicit the help of research assistant, as the administration of questionnaires through emails enabled time saving as well as convenient approachability of those respondents that are normally not easily accessible. Promised anonymity and confidentiality resulted in a high response rate. The

returned questionnaires were then printed and read through to establish whether all questions were attended to with clarity. All questionnaires were then locked away in a safe cabinet pending data analyses.

The researcher scanned historical documents namely: Journals, Lafarge diamond annual reports, strategy documents, strategic planning meetings minutes, minutes of strategic planning review meetings, financial budgets, minutes of appointed sub-committees and performance review meetings minutes, company websites and newspaper articles to collect historical data. Most of the company's internal documents were accessed through the human resources manager and some were downloaded from the internet. The researcher went through the documents before administering the questionnaire and this enabled the researcher to clarify some of the ambiguous issues.

### **3.6 Data processing, analysis and presentation**

Information from questionnaires was processed and analysed. Quantitative data was processed and presented using applicable techniques.

#### **3.6.1 Quantitative Data Processing, Analysis and Presentation**

Statistical Package for Social Sciences (SPSS) was used in the coding and analysis of quantitative data collected from the research. Data was initially edited to detect errors and omissions and to correct these where possible. After the process of editing the researcher used the numerals assigned to answers on the questionnaire to capture the responses into limited number of categories with exhaustive as well as mutually exclusive characteristics. The researcher personally captured all quantitative information on SPSS so as to avoid omission. Since the questionnaires had used both closed and open ended questions, those closed ended questions were analysed using SPSS. The responses to these questions were captured in their chronological order using the assigned numerals to define them in SPSS package. After data processing a number of tests were done on the data using the SPSS package to determine the type of statistical tests that could be used in the data analysis. Non Parametric tests were then done to establish the relationships in the data set that would enable the researcher to draw conclusions. Thus quantitative analysis of data included the analyses of frequencies of variables, differences between variables and statistical tests that estimated the significance of the results and the probability that they did not occur by chance. Frequency tables, bar graphs and pie charts from SPSS were then used to present the respondents' outcomes and facilitate for the discussion of the findings.

### **3.7 Reliability**

Reliability assesses the level to which data collection techniques and analysis procedures provide consistent findings in a study. Data was collected from various sources with a degree of understanding of benefits and challenges of outsourcing in the mining sector in Zimbabwe. Both qualitative and

quantitative data was collected for this study. Standardized instruments with the same wording and structures were administered on all respondents. Standardised instruments would ensure "repeatability" or "consistency" of investigation outcome even if it were to be administered on different group as it would still solicit the same information. That was the same reason why the interview guide assumed the same structure and questions as those of the questionnaire so that respondents would still be required to provide same information so as to enable comparability. Closed ended question used in the instruments provided a trend that would clearly produce a person's opinion that could easily be cross referenced to the open ended questions' responses to ensure consistency of findings.

The interpretation and coding of the data made during analysis and presentation was cross referenced with other colleagues to ascertain if they would have the same interpretation as the researcher. Also a pilot test of ten interviews and 50 questionnaire respondents (5 managers and 45 fellow students) was conducted to test the data collection enabled appraisal of instruments for internal consistency, and ability to elicit the required information using Cronbach's alpha test. The pilot test revealed that due to the nature of study emotions and behaviours of respondents were an important component that was required in establishing the different opinions of respondents something which was not being catered for when using a questionnaire. Thus to overcome this challenge the researcher had compensate this gap by doing follow up interviews with respondents to gain a better understanding of their emotions and behaviours.

### **3.8 Validity**

According to Saunders, Lewis and Thornhill, 2009; Hyndman, 2008; Eysenck, 2004, one of the key requirements of a research study is that all findings obtained should be valid. Also the sample should represent the study population.

#### **3.8.1 Internal Validity**

Internal validity refers to the issue of whether the findings gathered are genuine. Respondents were provided with same questions and under same conditions. The questionnaires were short and simple and care was taken to remove ambiguities. Respondents from the pilot study were not involved in the final sample. Exploratory Factor Analysis was used to test for the construct validity of the questionnaires. The researcher ensured Face and content validity by liaising with research supervisor and fellow students. Comments were also given by pilot test subjects.

#### **3.8.2 External validity**

External validity refers to the extent to which the findings of a study can be generalised to situations and samples other than those used in the study. Standardisation, counterbalancing, and randomization reduced threats to internal validity. Standardised questionnaires were used for this study. The population was first

stratified according to management levels and the final sample included all categories. The researcher can state with confidence that the findings can be generalized to similar settings.

### **3.9 Ethical considerations**

The researcher used internationally recognised codes of conduct for conducting an educational research. The first step that was taken by the research before commencing the study was to acquire authority from the organisations used to carry out the study. Approval was granted in the form of a letter that was signed by Top management. The approval letter was given to the researcher and circulated in the organisation authorising the staff to assist with the study (Refer to appendix 3). The researcher also sought informed consent by informing the participants of the nature of the study, purpose and the method of data collection. The roles of the participants were explained to them to solicit maximum cooperation. The researcher was honest and truthful and respected confidentiality and anonymity by making sure that the questionnaires did not solicit for names and addresses. The information collected was not used for other purposes other than for the research.

#### **3.9.1 Seeking Consent**

For the purposes of the interviews and questionnaires due diligence was made to get free will and consent of the participants before any information was collected. The objectives of the study were clearly spelt before any information was collected.

#### **3.9.2 Choice of participants**

The participants took part in the study freely and voluntarily and no threatening language was used in the questionnaire. The use of friends or relatives in the study was avoided in order to minimize undue influence on them to be part of the study against their will.

#### **3.9.3 Sensitive material**

All data collected was treated as sensitive and was specifically used for academic purposes only and no other objectives. Documents availed were safely kept and used only by the researcher and no other persons.

### **3.10 Chapter summary**

The chapter covered the philosophy adopted in the research as well detailing the research design and tools used in the collection of data. The different types of data used were also explained and how they were employed in the study. It also provided for the way the data was to be analysed and reported as well as how research instruments and data were to be validated in order to ensure reliability. Lastly it covered the ethical consideration with which the research and the data were handled. The following chapter will

present the findings of the study which are the answers to the questions raised in chapter one detailing them in relation to the literature that was reviewed previously in Chapter 2.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **4.1 Introduction**

Chapter three discussed the methodology that was used in the study and this current chapter looks into data analysis, presentation and interpretation of results of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. In order to statistically test and evaluate the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe the researcher used Statistical Package for Social Sciences software (SPSS) version 25 for processing of data and manipulation of results. Data was captured from the returned questionnaires of the selected sample and processed through SPSS, Microsoft Excel and Microsoft word for easy analysis and interpretations. Lastly the chapter discussed the results in line with the proposed hypothesis to confirm the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

#### **4.2 Descriptive analysis**

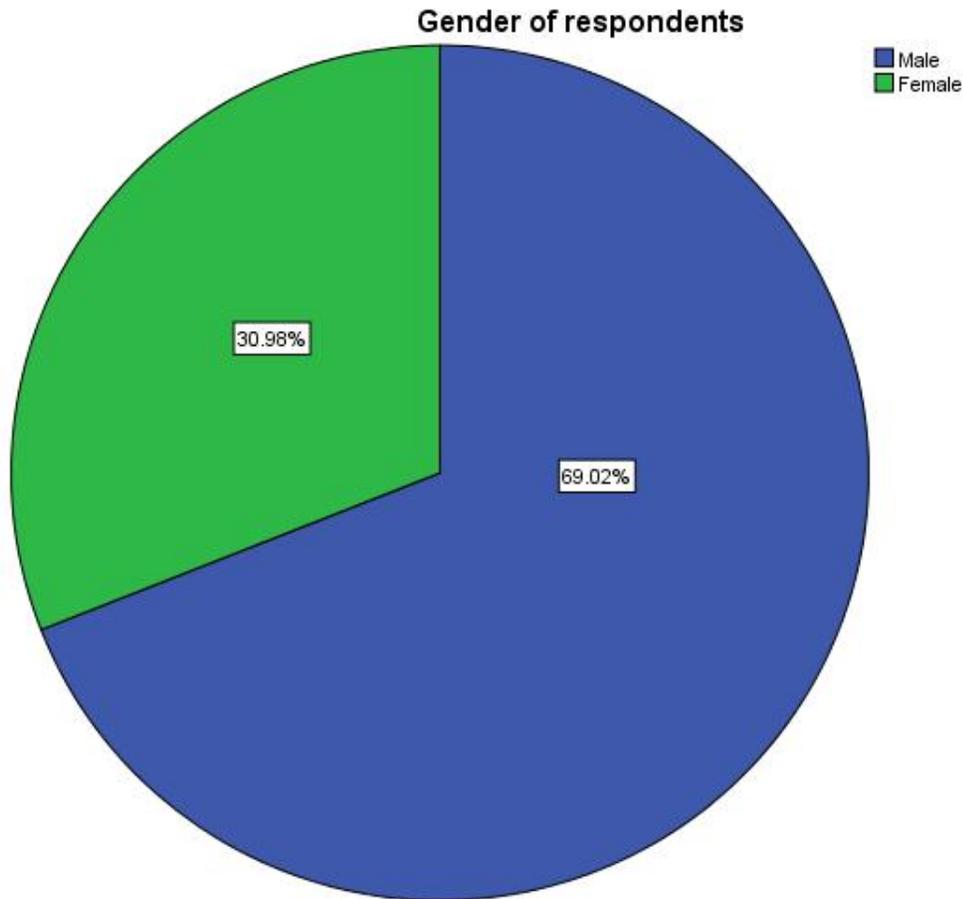
The section covers the response rate from the respondents as well as their demographic information as presented in sections below containing gender, age, level of education, years of experience, current position, product manufactured and activities being outsourced.

##### **4.2.1 Response rate**

Two hundred and fifty (250) structured questionnaires were distributed to Mine Manager and Contract Managers of mining firms in Mashonaland Central in the mining sector of Zimbabwe. The researcher managed to collect back one hundred and eighty four (184) questionnaires which were eligible, resulting in 74% response rate. The response rate was very high as the questionnaires were self-distributed and collected at the convenient and agreed times. The mine managers and contract managers were easily reached through the offices in Bindura mining town.

#### 4.2.2 Gender of respondents

The sample consists of 127 (69.0%) males and 57 (31.0%) female respondents. Figure 4.1 below illustrates the distribution of gender from the respondents.



**Figure 4.1 Gender distributions of respondents**

From the results it is noted that gender distribution is skewed towards male respondents, the results are considered reasonable as they are a representative of the mining sector employees, their employees in most cases are males due to the nature of the job. Moreover, the results are more useful to the study as they do not show the views of males only when dealing with perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

### 4.2.3 Age of respondents

The results indicates that most of the employees are aged between 35 and 44years (n=80; 43.5%), followed by those aged between 25 and 34 years (n=45; 24.5%), then those aged from 45 to 54 years (n=32; 17.4%) and those below 25 years (n=15; 8.2%) and lastly those aged from 55 years and above (n=12; 6.5)The information about age profile is as presented in figure 4.2 of the age ranges of respondents below.

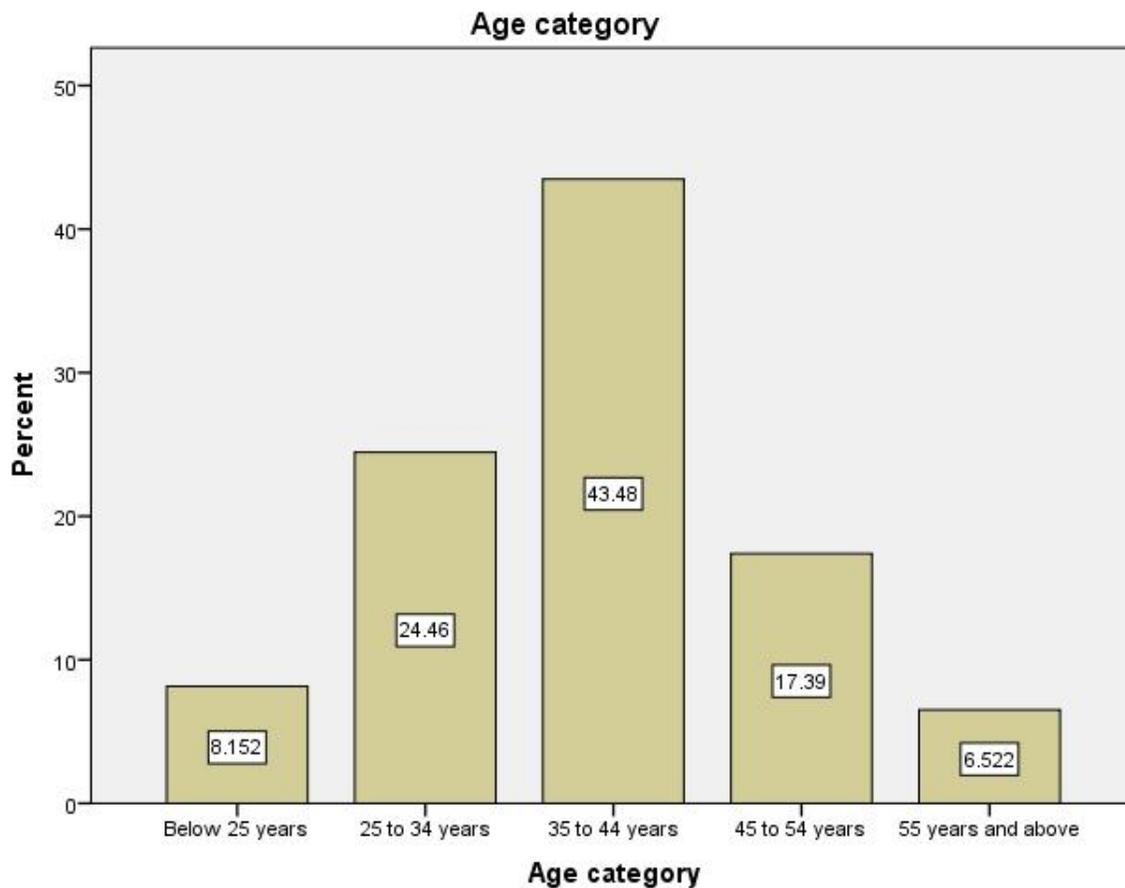
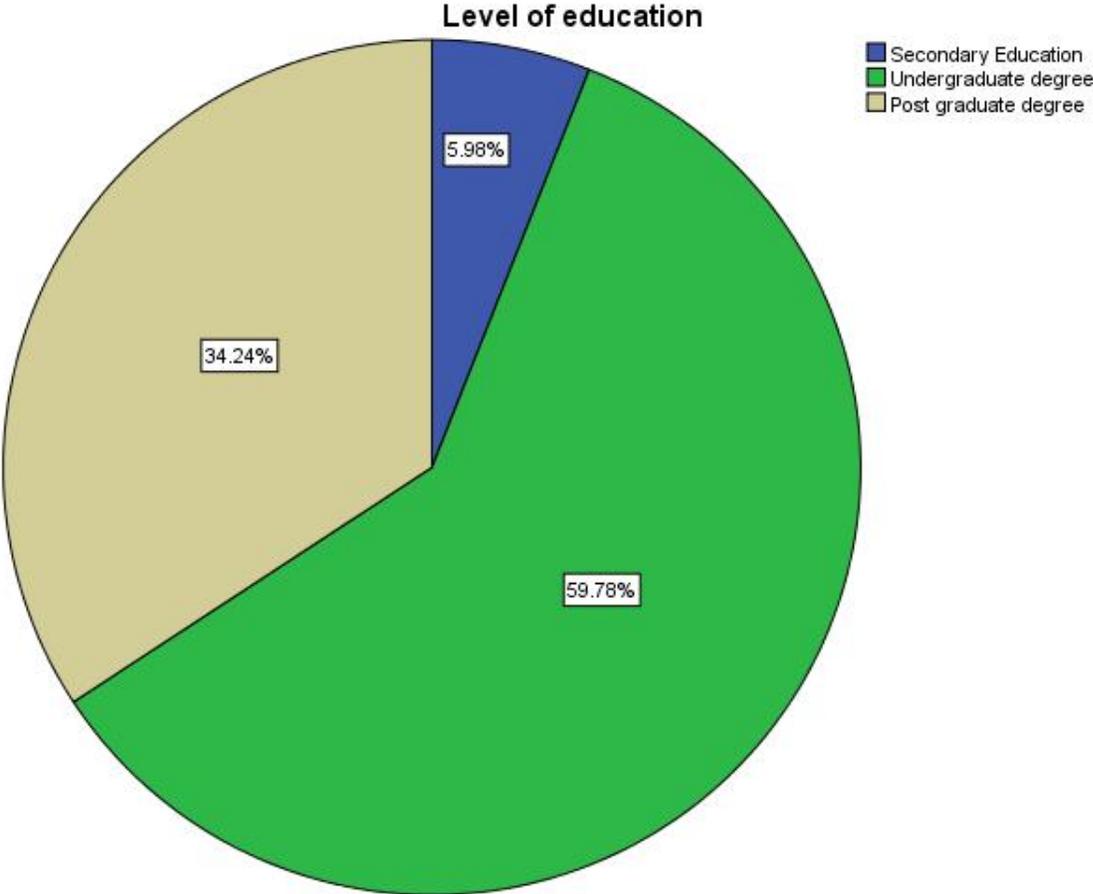


Figure 4.2 Age of respondents

### 4.2.4 Highest level of education

From the information presented in figure 4.3 below, it is clear that most of the respondents have undergraduate degrees as their highest qualification (n=110; 59.8%) followed by those with post graduate qualifications (n=63; 34.2%) and lastly those with secondary education constituting (n=11; 6.0%). The result shows that the mining sector firms' employees contract managers and

mining managers with a first degree so as to enhance the productivity and efficiency of the mining processes. Figure 4.3 below indicates the distribution of the level of education of the respondents.



**Figure 4.3 Level of education of the respondents**

#### 4.2.5 Years of experience in the organisation

Most of the respondents have been in the organisations for a period between 10 and 20 years (n=98; 53.3%) followed by those above 20years of experience (n=81; 44.0%) and last those with less than 10 years of experience (n=5; 2.7%). The results indicate that the mining sector employs do stay for a longer time with the organisation. Table 4.1 below shows the results of the years of experience of the respondents.

**Table 4.1 Years of experience of the respondents**

Years of experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10 years	5	2.7	2.7	2.7
	10 to 20 years	98	53.3	53.3	56.0
	Above 20 years	81	44.0	44.0	100.0
	Total	184	100.0	100.0	

#### 4.2.6 Current position in the organisation

From the information presented in figure 4.4 below, it is clear that most of the respondents are in the middle management (n=73; 39.7%) followed by those in the junior management (n=65; 35.3%) then senior management (n=28; 15.2%) and lastly those in the non-managerial positions (n=18; 9.8%). The result indicates that most of the employees are given positions so that they can improve on the production processes and efficient utilisation of resources.

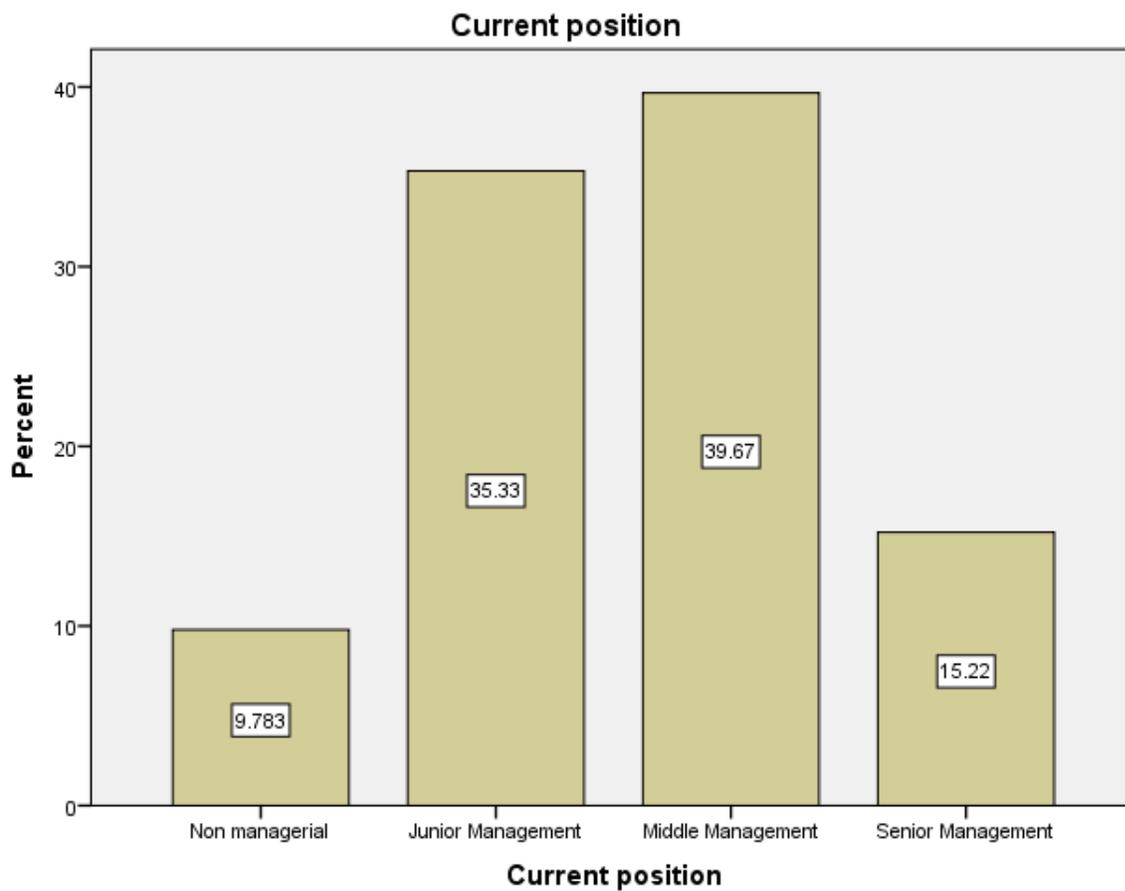


Figure 4.4 Current Position of the respondents

#### 4.2.7 Product mined

From the information presented in figure 4.5 below, it is clear that most of the respondents are in the Gold mining firms (n=110; 59.8%) followed by those in the cement manufacturing firms (n=71; 38.6%) and last those in the other category representing the Quarry stones processing (n=3; 1.6%). The result shows that the mining sector firms in Bindura mining area are concentrating in the gold mining and extraction as evidence by the results presented in figure 4.5 below.

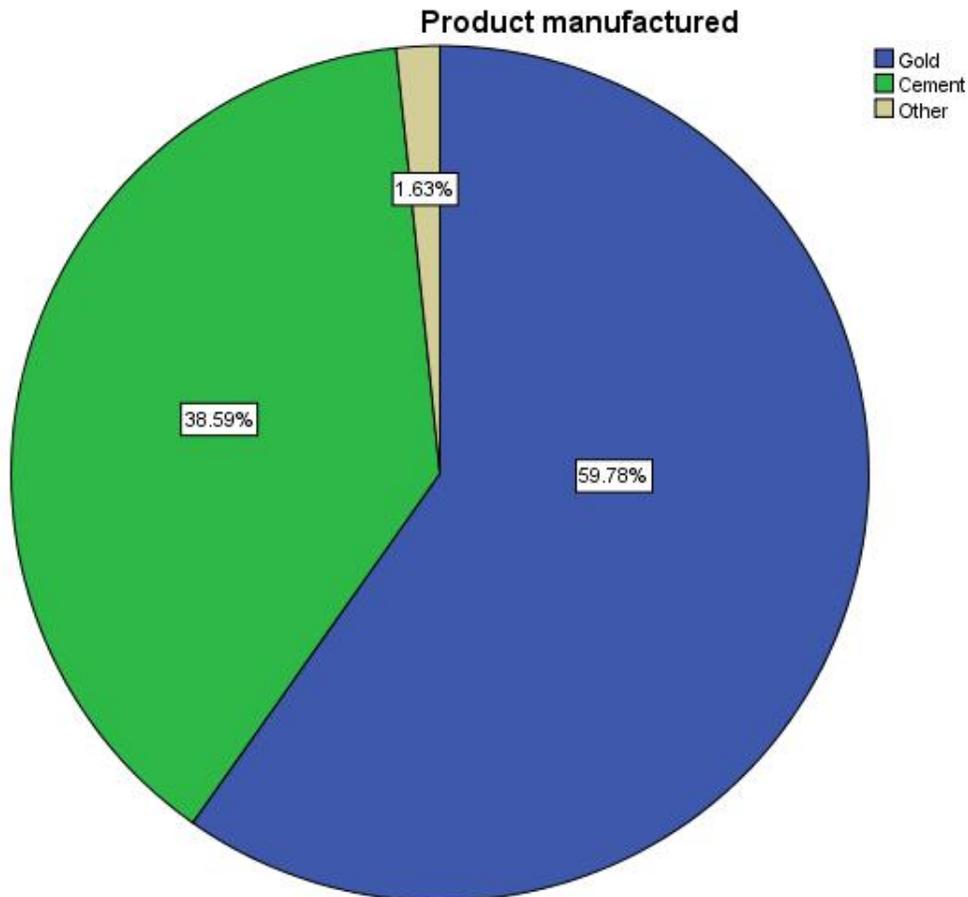


Figure 4.5 Product manufactured

#### 4.2.8 Outsourcing activities

The firms in the mining sector as presented in table 4.2 below are outsourcing a combination of activities such as (Production drilling, material and loading, planning and design as well as all the mineral processing activities). The most outsourced activity is all mineral processing (n=51; 28%) followed by mine planning, design and modelling (n=31; 17%) the Production drilling and blasting(n=29; 16%),material loading and hauling (n=26; 14%), construction services during mine operation (n=17; 9%), Catering and hostel maintenance (n=9; 5%), then waste management (n=9; 5%), human resources management and environmental engagement with both (n=3; 2%). On the other hand some respondents provide that they are not outsourcing some activities (n=6; 3%), this was due to the contractors who did not respond well to the line items on outsourcing activities. However, the mining firms are not outsourcing legal services, financial services and accounting, health, safety and environment as evidenced by the (n=0; 0%) for all the three activities.

**Table 4.2 Outsourcing Activities**

<b>Outsourcing Activity</b>	<b>Frequency</b>	<b>Percentage</b>
Production drilling and blasting	29	16%
Material loading and hauling	26	14%
Mine planning, design and modelling activities	31	17%
Catering and hostel maintenance	9	5%
All mineral processing activities	51	28%
construction services during mine operation	17	9%
Waste management	9	5%
Human resources management	3	2%
security, environmental and community engagement	3	2%
legal services	0	0%
financial services or accounting	0	0%
health, safety and environment	0	0%
No service outsourced	6	3%
<b>Total</b>	<b>184</b>	<b>100%</b>

### 4.3 Reliability and validity

Reliability of the instrument measuring the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe was assessed using the Cronbach's alpha. The minimum expected alpha coefficient of 0.7 and above was used (Saunders, Lewis and Thornhill, 2009). The study was evaluated by computing the coefficient of alpha and checking on the internal consistency of the line items used in the current study. Table 4.3 below shows the reliability statistics and those of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe with reference to the result of the current study.

**Table 4.3 Reliability analysis**

<b>Variables</b>	<b>Number of Items</b>	<b>Cronbach's Alpha value</b>
Strategic benefits	4	0.920
Operational efficiency benefits	5	0.906
Human resources benefits	5	0.876
Financial benefits	5	0.773
Human Resources challenges	5	0.874
Commercial challenges	5	0.819
Financial risk and costs challenges	3	0.825
<b>Overall reliability</b>	<b>46</b>	<b>0.953</b>

The overall reliability of the instrument as presented in table 4.3 above indicates that a high internal consistency to the instrument items with total scale reliability of 0.953 which is greater than the minimum acceptable benchmark of 0.7 (Saunders, Lewis and Thornhill, 2009). Moreover each perceived benefit and challenge was assessed for reliability and to confirm if the items loaded to each of the factors were sufficient to the instrument to make them reliable. The perceived benefits and challenges have alpha coefficients greater than 0.7, with the following results, strategic benefits (0.920), operational benefits (0.906), human resources benefits (0.876) and financial benefits (0.773). On the other hand all the challenges are reliable

with human resources challenges (0.874), commercial challenges (0.819) and financial challenges (0.825).

The internal and external validity to the study was assessed by the researcher through the use of content validity, face validity, use of subject experts and the pilot testing. The content validity of the research instrument was ascertained by distribution of the questionnaire to employees of the mining sector firms in Bindura mining area through a pilot study. The researcher further consulted the subject experts to establish face and content validity of the research instrument. Adjustments and corrections were carried out on the instrument and that enhanced the validity. Convergent and divergent validity of the variables measuring the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe was checked from the factor analysis communalities and factor loadings.

#### **4.4 Factor analysis**

The second objective of the study sought to establish the benefits of outsourcing by mining companies in Zimbabwe. Factor analysis was carried out to check the factor loadings and number of factors to be extracted for the perceived benefits and the perceived challenges of outsourcing in the mining sector in Zimbabwe. The measure of sampling adequacy (KMO and Bartlett's test of Sphericity) was used to test the confirmatory factor analysis, this was done to check for the discriminant cross loading of line items into other perceived benefits of challenges because the instrument variables were adopted (Li et al. 2011).

##### **4.4.1 Factor Analysis for perceived outsourcing benefits**

The Measure of Sampling Adequacy (MSA) for the perceived benefits of outsourcing in the mining sector in Zimbabwe to explain and confirm whether the factor analysis was appropriate for the data set. Kaiser-Meyer-Olkin Measure of Sampling Adequacy statistic of (0.766) which is significant as presented in table 4.4 below with a p-value of less than 0.05 ( $p=0.000$ ) for the perceived benefits of outsourcing implies that the items loaded to the current research instrument has a strong correlation structure and good enough to conduct factor analysis for the mining sector perceived benefits.

**Table 4.4 Perceived benefits Measure of sampling adequacy**

<b>KMO and Bartlett's Test</b>
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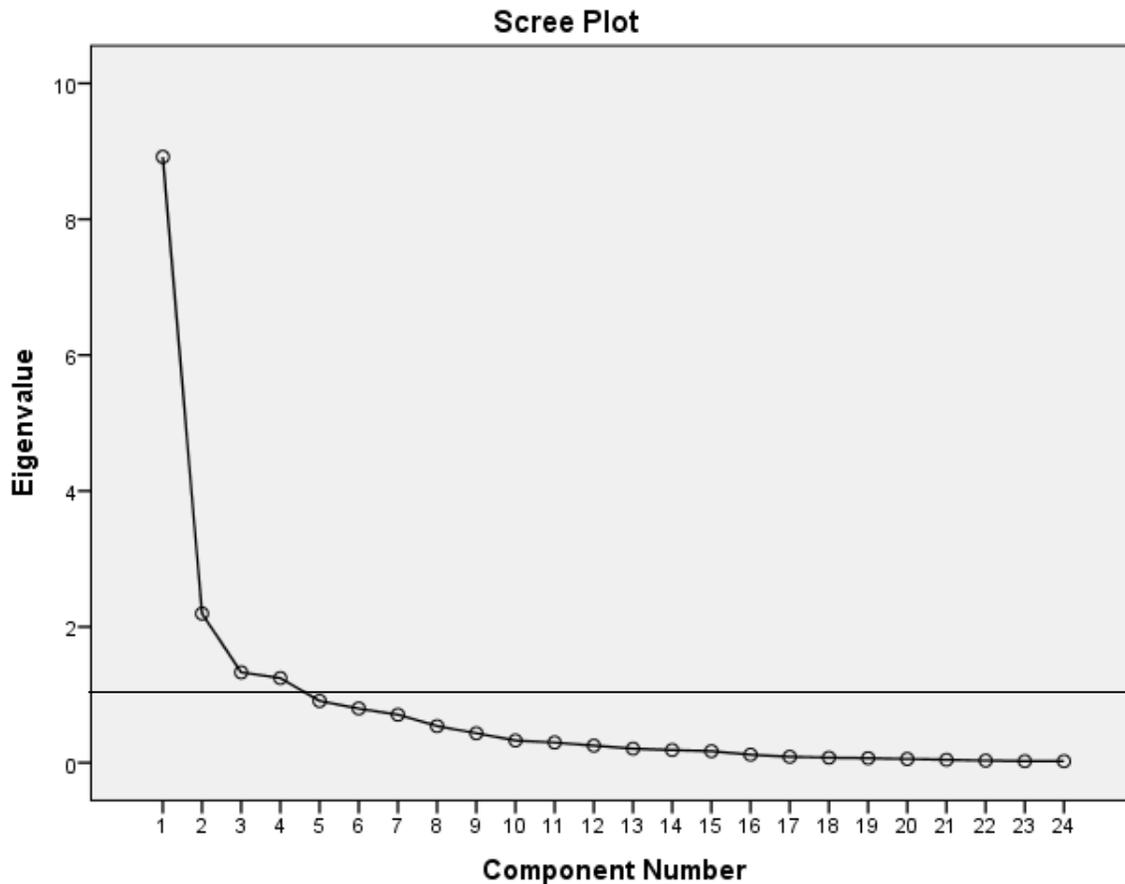
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.766
Bartlett's Test of Sphericity	Approx. Chi-Square	4,855.263
	df	276
	Sig.	.000

#### 4.4.2 Perceived benefits factor extraction and naming

The total variance explained results from the factor analysis of the perceived benefits of using outsourced activities in the mining sector in Zimbabwe is presented in table 4.5 below. The researcher used the Eigen values of greater than 1.0 for the extraction of the number of benefits of outsourcing (Faes and Matthyssens, 2009). The first four factors has an Eigen values of greater than 1 and cumulatively loading 57.78% of variance in the assessment of the perceived benefits of outsourcing mining activities in the mining sector in Zimbabwe. The information is presented in table 4.5 below and the scree plot in figure 4.6 below.

**Table 4.5 Total variance explained for perceived benefits**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.918	46.876	46.876	3.148	16.547	16.547
2	2.194	11.534	58.410	3.010	15.824	32.371
3	1.330	6.992	65.403	2.956	15.540	47.911
4	1.245	6.544	71.946	1.878	9.873	57.784
5	.909	4.780	76.726	2.186	11.492	69.276
6	.797	4.191	80.917	2.215	11.641	80.917
7	.706	3.711	84.627			



**Figure 4.6 Perceived Benefits of outsourcing mining activities**

#### **4.4.3 Perceived Benefits Factor Extraction and Naming**

Table 4.6 below indicates the extracted factors of the rotated component matrix with the extracted four perceived benefits factors. The rotated component matrix variables were considered very significant and are included in a factor when the factor loading is equal to or greater than 0.50 (Saunders et al., 2012). From the list of twenty four items, only nineteen were adopted in the instrument have loadings greater than 0.5 with cross loading less than 0.4 which confirms that these instrument variables converged well on their corresponding factors and therefore are acceptable measures the perceived benefits of outsourcing the mining sector activities.

**Table 4.6 Perceived Benefits Factor Extraction and Naming**

<b>Rotated Component Matrix</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
B5: Business continuity	<b>.812</b>			
B7: Specialised knowledge	<b>.792</b>	.302		
B9: Innovative and creative ideas	<b>.682</b>		.316	
B11: Access to wider technology	<b>.575</b>			.352
B8: Quick solution to project start up	.335	<b>.734</b>		
B6: Increased productivity		<b>.728</b>		
B12: Diversity and growth opportunity		<b>.680</b>		
B4: Reduced capital expenditure	.396	<b>.665</b>		
B10: Increased flexibility		<b>.573</b>		
B23: Access specialised skills			<b>.915</b>	
B21: Added expertise			<b>.759</b>	
B22: Focus on core competencies			<b>.695</b>	
B24: Division of labour			<b>.641</b>	
B19: Enforcing compliance	.309		<b>.461</b>	
B2: Reduced fixed costs				<b>.787</b>
B1: Reduces company overheads				<b>.626</b>
B14: Guaranteed quality				<b>.589</b>
B13: Independent decisions			.322	<b>.588</b>
B3: Investment in fixed assets				<b>.523</b>

The names of the perceived benefits are as follows:

- a) **Perceived benefit 1: Strategic benefits**
- b) **Perceived benefit 2: Operational efficiency benefits**
- c) **Perceived benefit 3: Human resources benefits**
- d) **Perceived benefit 4: Financial benefits**

#### **4.4.4 Factor Analysis for perceived outsourcing challenges**

The Measure of Sampling Adequacy (MSA) for the perceived challenges of outsourcing in the mining sector in Zimbabwe employed to confirm whether the factor analysis was very appropriate for a data set concerning the perceived challenges. Kaiser-Meyer-Olkin Measure of

Sampling Adequacy statistic of (0.792) which is significant as presented in table 4.7 below with a significance of less than 0.05 for the perceived challenges of outsourcing in the mining sector.

**Table 4.7 Perceived challenges Measure of sampling adequacy**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.792
Bartlett's Test of Sphericity	Approx. Chi-Square	3,068.617
	df	231
	Sig.	.000
Based on correlations		

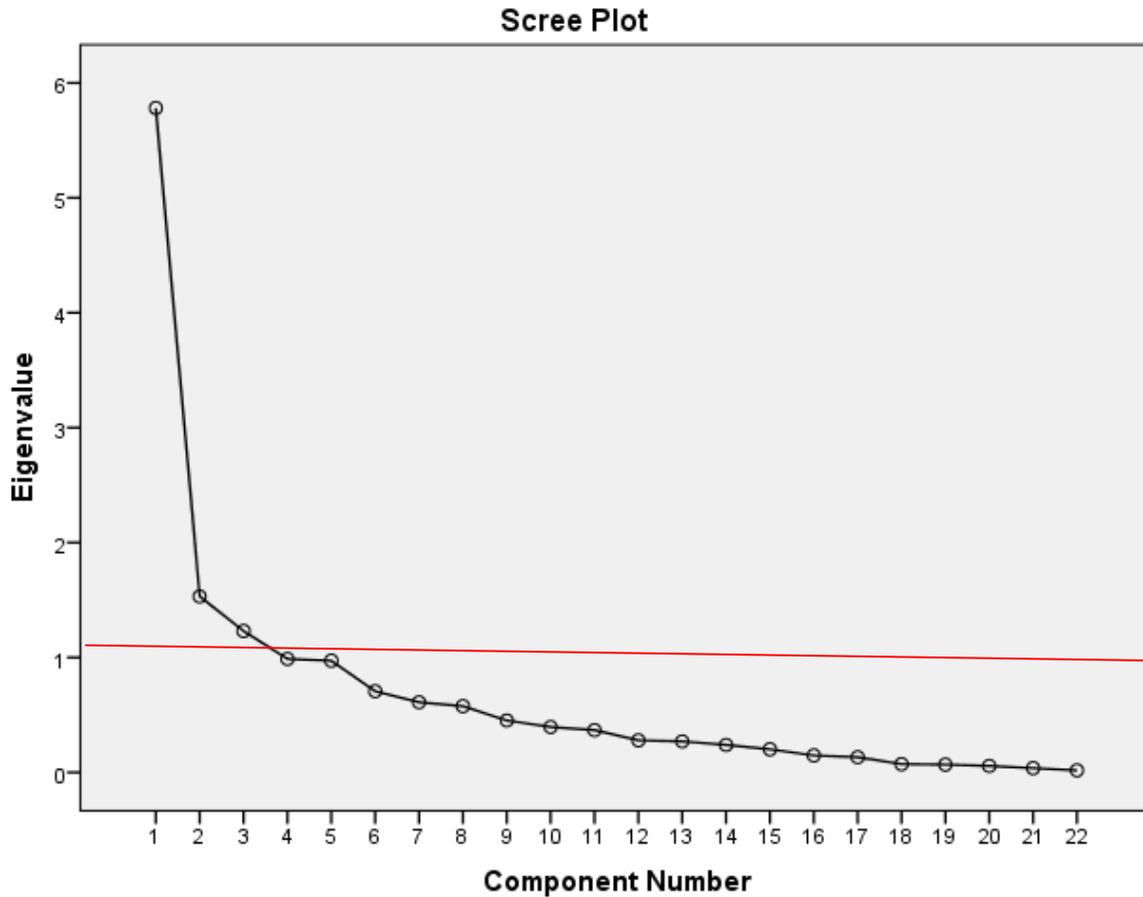
#### 4.4.5 Perceived challenges factor extraction and naming

The total variance explained results from the factor analysis of the perceived challenges of using outsourced activities in the mining sector in Zimbabwe is presented in table 4.8 below. The researcher used the Eigen values of greater than 1.0 for the extraction of the number of benefits of outsourcing (Faes and Matthyssens, 2009). The first three factors has an Eigen values of greater than 1 and cumulatively loading 46.19% of variance in the assessment of the perceived challenges of outsourcing mining activities in Zimbabwe. The information is presented in table 4.8 below and the scree plot in figure 4.7 below.

**Table 4.8 Total variance explained for perceived challenges of outsourcing**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.782	38.217	38.217	2.986	19.739	19.739
2	1.531	10.121	48.338	1.698	11.226	30.965
3	1.230	8.133	56.471	2.303	15.227	46.191
4	.987	6.526	62.997	1.730	11.439	57.630
5	.972	6.424	69.421	1.208	7.986	65.615

The scree plot on figure 4.7 below indicates the confirmed number of challenges that emanates from the outsourcing of activities in the mining sector in Zimbabwe.



**Figure 4.7 Perceived Challenges of outsourcing mining activities**

#### **4.4.6 Perceived Outsourcing challenges Factor Extraction and Naming**

The extracted factors of the rotated component matrix with the three perceived outsourcing challenges are presented in table 4.9 below. The rotated component matrix variables are considered for further analysis and to be significant when its factor loading is equal to or greater than 0.50 (Saunders et al., 2012). From the list of twenty two line items, only thirteen were adopted in the current study as the challenges of outsourcing activities in the mining sector in Zimbabwe. The components in the instrument have loadings greater than 0.5 with cross loading less than 0.4 which confirms that these instrument variables converged well on their corresponding factors and therefore are acceptable measures the perceived outsourcing challenges in the mining sector in Zimbabwe. Table 4.9 below represents the information on rotated component matrix of the perceived challenges.

**Table 4.9 Perceived Outsourcing challenges Factor Extraction and Naming**

<b>Rotated Component Matrix</b>	<b>1</b>	<b>2</b>	<b>3</b>
C19: Cultural diversity affecting production and safety	.841		
C21: Difficult to standardise remuneration packages	.809		
C22: Conflict in application of codes of conduct	.775		
C20: Duplication of duties	.675		
C11: Growth through integration does not offer flexibility	.444		
C8: Risk of dependency		.790	
C6: Delays and interruptions in ore production		.785	
C4: Reduced balance sheet and reduced borrowing capacity		.776	
C2: Stocking of inventories is a tie up of working capital		.619	
C9: Risk of dependency		.432	
C18: Difficult to estimate total costs of compliance			.840
C16: Increased injuries and accidents due to selection process			.740
C14: Effects of vendor financial challenges on mining firm			.733

The names of the perceived outsourcing challenges are as follows:

- a) Perceived challenge 1: Human resources challenges**
- b) Perceived benefit 2: Commercial challenges**
- c) Perceived benefit 3: Financial risk and costs challenges**

The extracted factors were transformed into the perceived outsourcing benefits and challenges and the reliability of the factors was tested as presented in table 4.3 of the reliability analysis above.

#### **4.5 Cross tabulations**

To test for the association between products manufactured and perceived outsourcing benefits as well as the association between products manufactured and the perceived outsourcing challenges in the mining sector in Zimbabwe, the researcher selected the crosstabulation of the results so as to have a better understanding of the most affected products. The Chi-Square tests and symmetric measures were used to assess if the correlation from the cross tabulations were not due to chance. Information of the cross tabulations between the products manufactured and perceived outsourcing challenges together with those of products manufactured and perceived benefits are presented in sections to follow.

#### 4.5.1 Cross tabulation product manufactured and perceived outsourcing benefits

Table 4.10 below indicates that, of those respondents who are gold mining, 5.5% agreed, with 19.1% disagreeing, 61.8% strongly disagreeing and 13.6% remaining indifferent to the view that outsourcing mining activities will result in the strategic benefits, operational efficiency, human resources benefits and the financial benefits. Of those who are in cement mining 53.5% strongly disagreed, 39.4% disagreed, 7.0% remained indifferent with less than five agreeing to the fact that outsourcing of mining activities bring perceived benefits. These results confirm that outsourcing of mining activities has little perceived benefits to the mining sector in Zimbabwe.

**Table 4.10 Cross tabulation between Product manufactured and Perceived benefits**

Product manufactured * Perceived benefits Crosstabulation			Perceived Benefits				Total
			Strongly disagree	Disagree	Indifferent	Agree	
Product manufactured	Gold	Count	68	21	15	6	110
		% within Product manufactured	61.8%	19.1%	13.6%	5.5%	100.0%
		% within Perceived benefit	64.2%	42.9%	75.0%	66.7%	59.8%
		% of Total	37.0%	11.4%	8.2%	3.3%	59.8%
	Cement	Count	38	28	5	<5	71
		% within Product manufactured	53.5%	39.4%	7.0%	n<5	100.0%
		% within Perceived benefit	35.8%	57.1%	25.0%	n<5	38.6%
		% of Total	20.7%	15.2%	2.7%	n<5	38.6%
	Quarry stones	Count	<5	<5	<5	<5	<5
		% within Product manufactured	n<5	n<5	n<5	n<5	100.0%
		% within Perceived Benefits	n<5	n<5	n<5	n<5	n<5
	Total		Count	106	49	20	9
% within Product manufactured			57.6%	26.6%	10.9%	4.9%	100.0%
% within Perceived Benefits			100.0%	100.0%	100.0%	100.0%	100.0%
% of Total			57.6%	26.6%	10.9%	4.9%	100.0%

Moreover the researcher checked for the significance of the results on the relationship between product manufactured and perceived benefits, the Chi-Square test results of 70.87 indicated in table 4.11 below shows the significance value of ( $p < 0.05$ ). The relationship between product manufactured and perceived outsourcing benefits is significantly related and the results about the association are not due to chance.

**Table 4.11 Chi-Square tests**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	70.874	6	.000
Likelihood Ratio	33.883	6	.000
Linear-by-Linear Association	1.464	1	.226
N of Valid Cases	184		

The symmetric measures of the perceived outsourcing benefits in the mining sector were analysed using the Cramer’s V, which is a measure of association that is calculated based on the Chi-Square for nominal data. Table 4.12 below shows the details of the results from symmetric measures between products manufactured and perceived benefits in the mining sector of Zimbabwe.

**Table 4.12 Symmetric Measures**

<b>Symmetric Measures</b>			
		Value	Approx. Sig.
Nominal by Nominal	Phi	.621	.000
	Cramer's V	.439	.000
N of Valid Cases		184	

There is a moderate association between products manufactured and perceived benefits in the mining sector of Zimbabwe, Cramer’s V (0.439) and we can accept the relationship between products manufactured and perceived benefits in the mining sector of Zimbabwe at every significant ( $p < 0.05$ ).

#### **4.5.2 Cross tabulation between product manufactured and perceived challenges**

Table 4.13 below shows that, of those respondents who are in the gold mining firms 67.3% strongly disagreed, 27.3% disagreed and 5.5% remained indifferent that outsourcing has perceived challenges to the mining sector in Zimbabwe. Of those who are in the cement manufacturing, 53.5% strongly disagreed and 43.7% disagreed that outsourcing of mining activities results in the perceived challenges to the mining sector in Zimbabwe. However none of those in the Quarry stones processing respondent to the fact that outsourcing of the mining activities results in the perceived challenges.

**Table 4.13 Cross tabulation between Product manufactured and Perceived Challenges**

Product manufactured and Perceived Challenges Crosstabulation			Perceived Challenges				Total
			Strongly disagree	Disagree	Indifferent	Agree	
Product manufactured	Gold	Count	74	30	6	<5	110
		% within Product manufactured	67.3%	27.3%	5.5%	n<5	100.0%
		% within Perceived Challenges	66.1%	49.2%	66.7%	n<5	59.8%
		% of Total	40.2%	16.3%	3.3%	n<5	59.8%
	Cement	Count	38	31	<5	<5	71
		% within Product manufactured	53.5%	43.7%	n<5	n<5	100.0%
		% within Perceived Challenges	33.9%	50.8%	n<5	n<5	38.6%
		% of Total	20.7%	16.8%	n<5	n<5	38.6%
	Quarry stones	Count	<5	<5	<5	<5	<5
		% within Product manufactured	n<5	n<5	n<5	n<5	100.0%
		% within Perceived Challenges	n<5	n<5	n<5	n<5	n<5
		% of Total	n<5	n<5	n<5	n<5	n<5
Total		Count	112	61	9	<5	184
		% within Product manufactured	60.9%	33.2%	4.9%	n<5	100.0%
		% within Perceived Challenges	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	60.9%	33.2%	4.9%	n<5	100.0%

Information in table 4.14 confirms that there is a relationship between product manufactured and the perceived challenges of outsourcing mining activities in Zimbabwe. In addition to the association, the significance of the relationships between product manufactured and the perceived challenges of outsourcing was confirmed by checking the Chi-Square test of the results as presented in table 4.15 below.

**Table 4.14 Chi-Square Tests**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.911	6	.000
Likelihood Ratio	33.608	6	.000
Linear-by-Linear Association	8.582	1	.003
N of Valid Cases	184		

The Chi-Square test as presented in table 4.14 above shows the coefficient of (69.911) which is statistically significant at ( $p < 0.05$ ), confirming that the relationships between product manufactured and the perceived challenges of outsourcing are statistically significant. The relationship between product manufactured and the perceived challenges of outsourcing is not due by chance. A further analysis to the results of product manufactured and the perceived challenges of outsourcing crosstabulation was done by checking the results of the symmetric measures using the Cramer's V statistic. Table 4.15 below provides information about the symmetric measures between product manufactured and the perceived challenges of outsourcing mining activities in Zimbabwe.

**Table 4.15 Symmetric Measures**

<b>Symmetric Measures</b>			
		Value	Approx. Sig.
Nominal by Nominal	Phi	.616	.000
	Cramer's V	.436	.000
N of Valid Cases		184	

The symmetric measures as presented by Cramer's V statistic (0.436) with a significance of  $p < 0.05$  shows that the association between product manufactured and the perceived challenges of outsourcing is moderate, therefore the association between product manufactured and the perceived challenges of outsourcing can be accepted.

#### 4.6 Discussion of results

The purpose of the study was to analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The researcher had four major objectives to the study which are;

- i. To establish outsourcing activities carried out by mining companies in Zimbabwe.
- ii. To establish the benefits of outsourcing by mining companies in Zimbabwe.
- iii. To find out the outsourcing challenges faced by mining companies in Zimbabwe.
- iv. To establish how to manage pre, during and after outsourcing process flow issues faced by mining companies in Zimbabwe.

The results of factor analysis in section 4.4 of this current study indicated that there are four outsourcing perceived benefits (Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits) and three outsourcing perceived challenges (Human resources challenges; Commercial challenges and financial risk and costs challenges). The objectives are further discussed below in order to have a full analysis of each perceived benefit of challenges of outsourcing the mining activities in Zimbabwe.

**The first Hypothesis (H1)** predicted that there are outsourcing activities carried out by mining companies in Zimbabwe. The findings presented in section 4.2.8 under table 4.2 indicated that The most outsourced activity is all mineral processing (n=51; 28%) followed by mine planning, design and modelling (n=31; 17%) the Production drilling and blasting (n=29; 16%), material loading and hauling (n=26; 14%), construction services during mine operation (n=17; 9%), Catering and hostel maintenance (n=9; 5%), then waste management (n=9; 5%), human resources management and environmental engagement with both (n=3; 2%). The results are consistent with studies carried out by activities (Lonsdale & Cox, 2015 and Quelin & Duhamel, 2010) who indicated that most of the activities that are outsourced by companies are: technology, maintenance, management of waste, transport and logistics, as well as telecommunications. Therefore, this study concludes that mining companies in Zimbabwe are outsourcing activities that involves mostly all the mineral processing.

**The second hypothesis (H2)** anticipated that there are perceived outsourcing benefits experienced by mining companies in Zimbabwe. The findings indicated that the mining

companies are enjoying the major four outsourcing perceived benefits namely (Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits). Different organizations in different circumstances will expect different benefits (Kremic et al, 2009). Therefore, this study concludes that, mining companies are enjoying perceived outsourcing benefits such as Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits.

**The third hypothesis (H3)** predicted that there are perceived outsourcing challenges faced by mining companies in Zimbabwe. This hypothesis was supported by the factor analysis results in section 4.4.4; 4.4.5 and 4.4.6 of this current study which indicates that there are three main challenges of outsourcing mining activities in Zimbabwe namely; Human resources challenges; Commercial challenges and financial risk and costs challenges. Lonsdale & Cox (1998) indicated that the highest risk of outsourcing is losing core activities. Hence, based on these findings, this study confirms that outsourcing of the mining activities bring in challenges such as; Human resources challenges; Commercial challenges and financial risk and costs challenges for the mining sector companies in Zimbabwe.

#### **4.7 Chapter summary**

The chapter looked into the current study's data analysis, presentation and interpretation of results on the analysis of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The sections were arranged as follows; introduction, descriptive analysis covering the response rate, gender of respondents, age, level of education, work experience and product being mined. Reliability and factor analysis of the perceived benefits and challenges of outsourcing in the mining sector were tested and presented. Cross tabulations of the perceived benefits and challenges together with the products being mined by the companies was tested. Lastly the discussion of results was done in accordance to the hypotheses that was stated in chapter one section 1.6 of this current study. Chapter five to follow will look into conclusions and recommendation of the study an analysing the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The previous chapter four on data analysis, presentation and interpretation results on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. This current chapter five discusses and makes conclusion together with the recommendations on the analysis of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The study sought to analyses the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The conclusions that are presented are based on the empirical findings of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe and they are used to recommend some policy implications to the study to enhance the knowledge on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

#### **5.2 Achievement of research aim and objectives**

The study aimed to analyse the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The sub objectives to the study were formulated as follows:

- v. To establish outsourcing activities carried out by mining companies in Zimbabwe.
- vi. To establish the perceived benefits of outsourcing by mining companies in Zimbabwe.
- vii. To find out the perceived outsourcing challenges faced by mining companies in Zimbabwe.

The research results as presented in chapter four concludes that the research aim and the sub objectives were achieved from the factor analysis and reliability statistics as presented in sections to follow, hence, the following conclusions about the perceived benefits and challenges were made:

**Objective 1: To establish outsourcing activities carried out by mining companies in Zimbabwe**

The findings presented in section 4.2.8 under table 4.2 indicated that The most outsourced activity is all mineral processing (n=51; 28%) followed by mine planning, design and modelling (n=31; 17%) the Production drilling and blasting(n=29; 16%), material loading and hauling (n=26; 14%), construction services during mine operation (n=17; 9%), Catering and hostel maintenance (n=9; 5%), then waste management (n=9; 5%), human resources management and environmental engagement with both (n=3; 2%). Therefore, this study concludes that the research objective was satisfied in that the mining companies do outsource most of the activities outside their scope and they will be reducing the risk of keeping fixed assets that may be reduced in value by the wear and tear of resources. Moreover, most of the companies outsource intellectually-based service activities, like logistics, marketing or research. The major benefits of outsourcing these activities are, to reduce cost from economics perspective. This one is quite simple for understanding. According to those mentioned above, the original driving force that makes outsourcing occur is the pursuit of higher economic profits. The suppliers that provide the product/service are experts and specialists in the particular fields.

**Objective 2: To establish the perceived benefits of outsourcing by mining companies in Zimbabwe.**

To achieve the second objective factor analysis and reliability of factors was tested to analyse the perceived outsourcing benefits experienced by mining companies in Zimbabwe. The findings indicated that the mining companies are enjoying the major four outsourcing perceived benefits namely (Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits). The reasons why companies outsource depend on many factors. Motives for outsourcing peripheral activities are in most cases different than they are for activities closer to the core of business. In addition, different organizations in different circumstances will expect different benefits (Kremic et al, 2009). This study therefore concludes that, mining companies are enjoying perceived outsourcing benefits such as Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits.

**Objective 3: To find out the perceived outsourcing challenges faced by mining companies in Zimbabwe.**

The third objective in the current study together with the research question and hypothesis sought to find out the perceived outsourcing challenges faced by mining companies in Zimbabwe. The results indicate that there are three main challenges of outsourcing mining activities in Zimbabwe namely; Human resources challenges; Commercial challenges and financial risk and costs challenges. Lonsdale & Cox (1998) indicated that the most important outsourcing risk is losing core activities. Hence, based on these findings, this study confirms that outsourcing of the mining activities bring in challenges such as; Human resources challenges; Commercial challenges and financial risk and costs challenges for the mining sector companies in Zimbabwe.

**5.3 Conclusion**

The hypotheses to the study that sought to analyse the perceived benefits and challenges of outsourcing mining activities in Zimbabwe as presented in chapter one section 1.6 of this study are as summarised in sections below. Information in table 5.1 below was considered to be the conclusion and decision making to the study which states mining companies to outsource mining actives and there are perceived benefits and challenges associated with outsourcing the mining activities. Based on the results in chapter four sections 4.3; 4.4 and 4.5 of this current study together with tables 4.2; 4.3; 4.4; 4.5; 4.6; 4.7; 4.8; 4.9; 4.10 and 4.11 as well as figures 4.6 and 4.7 have the following decisions made for each the stated sub hypothesis:

**Table 5.1 Hypothesis testing and decision making**

<b>Hypothesis</b>	<b>Decision</b>
H1: There are outsourcing of activities carried out by mining companies in Zimbabwe.	Hypothesis accepted
H2: There are perceived outsourcing benefits experienced by mining companies in Zimbabwe.	Hypothesis accepted
H3: There are perceived outsourcing challenges faced by mining companies in Zimbabwe.	Hypothesis accepted

## Main Hypothesis

**H0:** The mining companies in Zimbabwe are outsourcing the mining activities and they have perceived benefits and challenges **is fully accepted** because of the results which ascertains that the companies in the mining sector are outsourcing activities and the meet the perceived benefits and challenges. To this end the researcher can summarise the information in table 5.2 below indicating the activities being outsourced and the perceived benefits and challenges of outsourcing.

**Table 5.2: Summary of results obtained**

<p><b>Major Activities outsourced by the mining firms</b></p>	<ul style="list-style-type: none"> <li><b>i.</b> Production drilling and blasting</li> <li><b>ii.</b> Material loading and hauling</li> <li><b>iii.</b> Mine planning, design and modelling activities</li> <li><b>iv.</b> Catering and hostel maintenance</li> <li><b>v.</b> All mineral processing activities</li> <li><b>vi.</b> construction services during mine operation</li> <li><b>vii.</b> Waste management</li> </ul>
<p><b>Perceived benefits of outsourcing</b></p>	<p>Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits</p>
<p><b>Perceived challenges of outsourcing</b></p>	<p>Human resources challenges; Commercial challenges and financial risk and costs challenges</p>

## 5.4 Answer to research questions

Primary and secondary data research findings of the study analysing the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe is sufficient to conclude that research questions formulated in chapter one section 1.5 have been answered. The findings from the study identified seven key outsourcing activities in the mining sector in Zimbabwe and four major perceived outsourcing benefits together with three major perceived challenges of outsourcing in the mining sector in Zimbabwe. The conclusion to the main and sub-questions is

that the mining firms in Zimbabwe are outsourcing activities such as Production drilling and blasting; Material loading and hauling; Mine planning, design and modelling activities; Catering and hostel maintenance; all mineral processing activities and Construction services during mine operation as well as waste management. The perceived outsourcing benefits are: Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits. On the other hand the perceived outsourcing challenges are: Human resources challenges; Commercial challenges and financial risk and costs challenges.

## **5.5 Contribution**

### **5.5.1 Theoretical Contribution**

The study has made significant theoretical contributions to the existing body of knowledge on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. The theoretical contribution of the study is that it produced seven key activities being outsourced by the companies in the mining sector in Zimbabwe namely; Production drilling and blasting; Material loading and hauling; mines planning, design and modelling activities; Catering and hostel maintenance; all mineral processing activities and Construction services during mine operation as well as waste management. The perceived outsourcing benefits are: Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits. On the other hand the perceived outsourcing challenges are: Human resources challenges; Commercial challenges and financial risk and costs challenges.

The major contribution is that the study sought to come up with major outsourcing activities and their perceived benefits and challenges in the mining sector in Zimbabwe. This was the first study to be carried in the mining sector in Zimbabwe. This was one of the gaps as most similar studies were done in developed countries where the the perceived benefits and challenges of outsourcing in the mining sector in are more efficient due to the availability of infrastructure and resources to enhance productivity.

This study has therefore generated a wealth of knowledge that will benchmark future studies on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. Another important contribution of the study is that it has established a positive association between the products being mined by the companies and the perceived benefits and challenges of outsourcing

in Zimbabwe. This is a landmark finding underlining the dynamics the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. This aspect did not come out clearly in previous studies as the non-managerial employees such as general workers and support staffs were not part of the studies. This is also another important contribution that the study has made to the existing body of knowledge on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

### **5.5.2 Methodological contribution**

The different ways that were used to collect, process, interpret and analyse data in this current study made a substantial contribution to the framework of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. On the academic side, this study provides substantial input to the balanced score card model, the special framework model and the four step outsourcing process model. The study produced seven key activities being outsourced by the companies in the mining sector in Zimbabwe namely; Production drilling and blasting; Material loading and hauling; mines planning, design and modelling activities; Catering and hostel maintenance; all mineral processing activities and Construction services during mine operation as well as waste management. The perceived outsourcing benefits are: Strategic benefits; Operational efficiency benefits; Human resources benefits and financial benefits. On the other hand the perceived outsourcing challenges are: Human resources challenges; Commercial challenges and financial risk and costs challenges. Furthermore, the study findings offer a cautious backing to the argument the perceived benefits and challenges of outsourcing in the mining is an important aspect mining companies in Zimbabwe should consider.

### **5.5.3 Empirical contribution**

The study made numerous empirical contributions to be body of knowledge on the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. Currently, empirical case studies analyzing the the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe are not available. The major milestone of the study is that it is the first one of its kind to the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

This is an initial contribution which provides mining companies in general and the Freda Rebecca Gold Mine, Lafarge Cement and their respective contractors in particular with

information on how to achieve the perceived benefits of the outsourcing of mining activities in Zimbabwe. This assertion is in line with Porter (2015), defines outsourcing as the completely contracting out of a business process (this process can either be production process or service process) or operational or non-core functions, which is usually performed inside the organization itself, to an external party or organization. This brings a different view which argues that outsourcing does not only refer to contracting out services to suppliers in return for compensation, but it broadens out to contracting out non-core activities of the organization that are deemed to be time-consuming and expensive (Lonsdale & Cox, 2015).

### **5.6 Practical policy recommendations**

The following recommendations are proposed by the researcher after analysing the information about the perceived benefits and challenges of outsourcing the mining activities to the policy-makers:

- i. The Mining Industry can lay down policies and standards that all players in the mining sector mainly the gold and special stones mining companies should follow to improve the quality of services in Zimbabwe. These policies will include among other things, the processing and value addition mechanisms and enhance quality management together with the environmental impact assessment.
- ii. The mining industry should carry out some random checks for the inspection and ascertain the compliance of the firms in the mining sector of Zimbabwe. The issues of compliance will ensure that contractor who will be outsourced do not cause a negative impact on the environmental management of the mining companies.

### **5.7 Practical Managerial Recommendations**

The findings from the current study are significant and when duly considered may enable the companies in the mining sector to achieve better outsourcing benefits and reduce the perceived outsourcing of mining activities challenges in Zimbabwe. Based on these findings about the outsourcing activities and there perceived benefits and challenges to the companies in the mining sector in Zimbabwe, the following managerial recommendations are made:

### **5.7.1 Perceived outsourcing benefits**

The results of the factor analysis in table 4.6 indicates that strategic benefits are the most important aspect to the outsourcing of the mining activities done by the companies in the mining sector in Zimbabwe. More resources should be channelled towards; business continuity, specialised knowledge, innovation and creative ideas as well as access to wider technology.

The study recommends that the companies in the mining sector to be able to reduce capital expenditure, enforce compliance, reduce fixed costs and enhance quality of the output by outsourcing some of the mining activities in Zimbabwe.

### **5.7.2 Perceived outsourcing challenges**

Table 4.9 of this current study provides that human resources challenges are the major outsourcing of mining activities challenges in Zimbabwe. These findings indicate that cultural diversity affecting production and safety there is also difficulty to standardise remuneration packages, conflict in application of codes of conduct and duplication of duties. The mining companies' strategic decision makers must channel resources for pursuing the cost reduction strategies in the human resources department by having internal recruitment policies. Other resources can be channelled towards training management in areas of risk and financial costs management. The study, therefore, recommends that senior management of the mining companies should prioritise capacitating it is managerial and the non-managerial employees through in-house training and development in the minerals processing as a way to reduce overhead costs and other costs associated with outsourcing of the mining activities.

### **5.8 Research limitations**

Although this research study offers fruitful insights concerning the perceived outsourcing benefits and challenges in the mining sector in Zimbabwe, it has its own limitations. One of the limitations is that the study only focused on the two major mining companies in Bindura mining area of Zimbabwe namely (Freda Rebecca Gold Mine and Lafarge Cement together with their respective contractors). These results could have some limitation on the generalisation of the perceived benefits and challenges of outsourcing of activities on the Zimbabwe mining sector at large. Furthermore, the adoption of quantitative research methods and data collection techniques through the use of structured questionnaire alone present limitations. Structured questionnaire alone does not allow for probing and some in-depth interviews were necessary so

that the actual reasons for the companies to outsource can be elaborated. To mitigate the effects of this limitation, the researcher designed the questionnaire in a way that the entire line items used in the question would capture all the details required. The variable under study had sufficient information or questions to acquire as many details as possible. Moreover, the research was carried out on limited time constraint of less than six months which limited the researcher to the quantitative research design though a longitudinal research design and triangulation of research designs and data collection techniques could have been used to measure the outsourcing activities and their perceived benefits and challenges in the mining sector of Zimbabwe.

### **5.9 Generalisation of findings**

The study covered the Freda Rebecca Gold Mine, Lafarge Cement and their respective contractors; hence, these findings can be generalized to the population of the Gold mining and Cement manufacturing companies in Zimbabwe. The findings of perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe may only be generalized to other gold mining and cement manufacturing companies in Zimbabwe, with similar characteristics and circumstances to the Freda Rebecca Gold Mine and Lafarge Cement.

### **5.10 Areas of further research**

Throughout the research, the researcher has noticed several areas that need to be further attended to in the area of perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe. To this end, the study on perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe recommends that future researchers should consider researching on the following issues:

- i. Future researchers might also consider undertaking a longitudinal study on perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe to establish if the perceived benefits and challenges of outsourcing can vary with time.
- ii. Study of a similar nature could also be conducted in other gold mining and cement processing companies to investigate the 42.22% of variance that was not explained by the perceived benefits of outsourcing as well as the 55.81% of the variance not explained by the perceived challenges of outsourcing mining activities in Zimbabwe.

- iii. There is a need to conduct a comprehensive study to all mining companies in Zimbabwe so that a holistic picture on the analysis of the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe can be established. Moreover, sample size data was collected from only two hundred and fifty participants at Freda Rebecca Gold Mine, Lafarge Cement and their respective contractors using a structured questionnaire. Results would be more informative if data from all the players in the mining sector was considered using interviews, observations and other data collection techniques.
- iv. Future studies can also extend the current conceptual framework analyzing the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe on a larger set of variables that includes the mediating and control variables. These mediating and control variables can be used to immensely contribute substantial knowledge, to the existing body of the perceived benefits and challenges of outsourcing literature in the mining sector and mostly the gold mining and cement manufacturing in Zimbabwe and other countries.

## References

Cochran WG & Cox GM (1992), *Experimental Designs* (2nd Edition). New York: John Wiley & Sons.

Collis, J. & Hussey, R. (2003), *Business Research: a practical guide for undergraduate and postgraduate students*, second edition. Basingstoke: Palgrave Macmillan.

Creswell, J. (2009), *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.

Deloitte, Touché (2013). *Doing business in Zimbabwe: The jewel of Africa*, Deloitte Studi Johannesburg,

John W. Creswell (1994), *Qualitative, Quantitative, and mixed methods approaches*, SECOND EDITION, Sage Publisher.

Kirk, J. and M.L. Miller (1986), *Reliability & Validity in Qualitative Research*. Beverly Hills, CA: Sage Publications

Sandada M, Pooe D, Dhurup M (2014). Strategic planning and its relationship with business performance among small and medium enterprises in South Africa, *Int. Bus. Econ. Res. J.* 13(3): 659 – 670.

Saunders, Lewis & Thornhill (2003), *Research Methods for Business Students*, 5th edition. pp.315-6.

Sharp, J.A. & Howard, K. (1996), *The management of a student research project*. Second Edition. England: Gower publishing Ltd.

Wilkinson, A. M. (1991), *The scientist's handbook for writing papers and dissertations*. Englewood Cliffs, NJ: Prentice Hall.

**APPENDIX 1: QUESTIONNAIRE**

**SECTION A: GENERAL INFORMATION ABOUT THE RESPONDENT AND THE ORGANISATION**

This section seeks to gather data concerning respondents' gender, age group, highest level of education attained, work experience in years, current position in the organisation and lastly product.

**1. Gender (please tick where appropriate):**

Male                       Female

**2. Age group (please tick where appropriate):**

Below 25 years   
Between 25 and 34 years   
Between 35 and 44 years   
Between 45 and 54 years   
Above 55 years

**3. Highest Level of Education Attained (please tick where appropriate):**

A level & below   
Undergraduate degree   
Postgraduate degree & above

**4. Work experience in years (please tick where appropriate)**

Below 10 years   
Between 10 and 20 years

Above 20 years

5. What is your current position in your organisation? *(please tick where appropriate)*

Non Managerial	Junior Management	Middle Management	Senior Management

6. Product *(please tick where appropriate)*

Gold [ ] Cement [ ] Other specify [ ]

7. For the questions that follow may you indicate the activity that you are currently outsourcing by ticking the outsourcing activity and put N/A where you are not:

Outsourcing activities	Yes	N/A
<ul style="list-style-type: none"> <li>• Production drilling and blasting</li> <li>• Material loading and hauling</li> <li>• Mine planning, design and modelling activities</li> <li>• Catering and hostel maintenance.</li> <li>• All mineral processing activities</li> <li>• Construction services during mine operation</li> <li>• Waste management (tailings dam operation)</li> <li>• Human resources management</li> <li>• Security, environmental and community engagement services;</li> <li>• Legal services</li> <li>• Financial services or accounting</li> <li>• Health, safety and environment systems (or any activities)</li> </ul>		

**SECTION B: BENEFITS OF OUTSOURCING**

8. Do you think outsourcing is beneficial to mining companies in Zimbabwe? Indicate the extent to which you agree or disagree to the following statement on outsourcing benefits in the mining industry.

*Where: 1=Strongly disagree, 2=Disagree 3= indifferent 4=Agree 5= Strongly agree*

<b>B: BENEFITS OF OURSOURCING</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
B1) Does outsourcing reduce Company overheads?					
<b>B2)</b> Have you reduced fixed costs through outsourcing?					
<b>B3)</b> Assets can be easily disposed and investment in fixed assets can be done?					
<b>B4)</b> Company reduced capital expenditure and fixed costs?					
B5) Business continuity is guaranteed through outsourcing?					
<b>B6)</b> There is increased productivity through outsourcing?					
<b>B7)</b> We now have access to specialised knowledge from outsourced activities?					
<b>B8)</b> Contractors provide a quicker solution to project start up?					
B9)The company benefits for more innovation and					

<p>creative ideas?</p> <p><b>B10)</b> There is increased flexibility in changing service providers as business environment changes?</p> <p><b>B11)</b> The Company now has access to wider and better technology?</p> <p><b>B12)</b> The diversity due to outsourcing presents growth opportunities for the company?</p> <p>B13) Outsourcing allows the company to be independent on decision making?</p> <p>B14) Quality is guaranteed from outsourcing?</p> <p>B15) The freedom of choice on service provider?</p> <p>B16) Companies will have more bargaining power when outsourcing services?</p> <p><b>B17)</b> We get Comprehensive services from contractors?</p> <p><b>B18)</b> The response to changes in the environment is quick if we outsource?</p> <p><b>B19)</b> Enforcing compliance is not difficult on outsourced activities?</p> <p><b>B20)</b> Employee safety and health is enhanced as this is monitored by two parties involved?</p>					
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<b>B21)</b> We can access added expertise at a favourable cost on outsourced activities?					
<b>B22)</b> Enables mining companies to focus on core competencies?					
<b>B23)</b> Allows mining companies to access specialised skills?					
<b>B24)</b> Division of labour and better working hours?					

**SECTION C: CHALLENGES OF OUTSOURCING**

9. Do you agree that mining companies are facing challenges when they outsource some services? Indicate the extent to which you agree or disagree to the following statements on outsourcing challenges.

*Where: 1=Strongly disagree, 2=Disagree 3= indifferent 4=Agree 5= Strongly agree*

<b>C: CHALLENGES OF OURSOURCING</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>C1</b> Sourcing a service provider comes with relative longer lead times for project start?					
<b>C2</b> The stocking of inventories is a tie up of working capital?					
<b>C3</b> The operations encounters unexpected mobilisation and transportation costs due to tight conditions attached to availability of equipment?					

<p><b>C4</b> The Company's balance sheet is reduced which entails that borrowing capacity can be reduced?</p> <p><b>C5</b> Communication and coordination difficulties is often encountered when outsourcing?</p> <p><b>C6</b> Delays and interruptions in ore production because the vendor does not share the risks of the mine?</p> <p><b>C7</b> It takes long to induct and train new service provider and risk of accidents is increased</p> <p><b>C8</b> Performance measurement and evaluation of work is difficult as each party involved serves own interest?</p> <p><b>C9</b> The business faces risk of dependency on the outsourcing vendor?</p> <p><b>C10</b> The business strategy is often shared with vendors which makes it vulnerable to competitive rivalry?</p> <p><b>C11</b> Growth through integration with vendors does not offer flexibility to the Company?</p> <p><b>C12</b> Loss of proprietary information, allowing outsourcing vendors to enter the market on their own account?</p> <p><b>C13</b> There is risk of loss of control as the suppliers can withhold certain information and data.</p>					
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<p><b>C14</b> If the vendor faces financial and other challenge to close business unexpectedly this can affect business for the Client?</p> <p><b>C15</b> The outsourcing vendor may not adhere to health and safety, environmental and social standards raising issues in terms of social license to operate or sustainable development?</p> <p><b>C16</b> Employment of unqualified and incompetent people is done to reduce costs but this increases injuries and accidents.</p> <p><b>C17</b> Certification of the vendors by reputable Standards board is often impossible depending on their size.</p> <p><b>C18</b> It is difficult to estimate total costs of compliance with standards on inception of a long lead project?.</p> <p><b>C19</b> Cultural diversity can affect both production and safety?</p> <p><b>C20</b> There is some duplication of duties with some vendor employees.</p> <p><b>C21</b> It is difficult to standardize remuneration packages with the various vendors</p> <p><b>C22</b> Applying industry code of conduct and Company's code of conduct often conflict with vendor's practices.</p>					
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10. Any other information you may wish to provide relating to the perceived benefits and challenges of outsourcing in the mining sector in Zimbabwe.

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**THANK YOU**