BINDURA UNIVERSITY OF SCIENCE EDUCATION

***FACULTY OF COMMERCE***

***DEPARTMENT OF ECONOMICS***

AN ASSESSMENT ON THE IMPACT OF SUPPLY BASE RATIONALISATION ON ORGANISATIONAL EFFECTIVENESS (A CASE STUDY OF BULAWAYO POLYTECHNIC) 2012-2016

BY

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**DEDICAITON**

TO GOD THE ALMIGHTY, BE THE GLORY.AMEN.

To my mum AND DAD, my twin brother AND SISTER-IN-LAW THANK YOU FOR YOUR LOVE AND UNWAVERING SUPPORT.

TO my son I COULD NOT BE PROUDER.

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**ABSTRACT**

An organisation is said to be only as good as its source of supply .Without a good supplier network an organisation cannot compete effectively in any industry. This study is set to assess the impact of supply base rationalisation into the institution’s effectiveness, a case study at Bulawayo Polytechnic. The encouragement by the government of professionalism saw the institution receive more qualified purchasing professionals, hence the establishment of the purchasing function and the centralisation of the purchasing activities. In the process of centralising the procurement activities user departments were not involved .Key and potential supplier were left of the current supplier database. This resulted in the non availability of inventory as and when required by user departments .The criteria used by the Administration department, which is the procurement function, to select suppliers for the supplier database is being questioned. Findings show that stakeholders were not involved at all in the evaluation and selection process. Recommendations were made that cross functional teams be established, the supply base should also be optimised since out of the existing small supplier base, only 53% were active suppliers. This resulted in quality being compromised for the sake of keeping the existing suppliers. The respondents also suggested that an effective process of supplier optimising the supplier base supplier

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**CHAPTER I**

**INTRODUCTION**

**1.0 Introduction**

As a strategic function today, some of the most important and fundamental decisions that purchasing and supply management make concern the creation and management of their supplier base. Some argue that an organization is only as good as its sources of supply (Rajagopal and Bernard 1993). Hahn, et al (1990) supports this notion by arguing that “without a competent supplier network, a firm’s ability to compete effectively in the market can be hampered significantly” (p. 3). Fine (1998) emphasized the importance of an organization’s supply base by stating that supply chain design is the ultimate core competency. One important decision relating to the design of an organization’s supply chain is the number of suppliers that will be utilized for a given product or service Cooper, Lambert and Pagh (1997). Consequently, gaining an understanding of the tools that can be used in creating and managing a supply base should be a top priority to supply management professionals. Supply base reduction is one such tool Ogden, (2006). This study is set to assess the impact of the supply base rationalization on effectiveness of Bulawayo Polytechnic. This chapter is inclusive of the background of the study, the statement of the problem, the objectives of the study, the delimitations, limitations and assumptions of the study. Definitions and the significance of the study are also dealt with.

* 1. **Background of the study**

The State Procurement Board through its legal frameworks, has authorised the procurement of both services and inventory worthy nine thousand and ninety-nine dollars, ($9 999), at station levels. Bulawayo Polytechnic like any other public institution procures inventory and services at local level from the approved list of suppliers(Internally produced) .This is in line with the Procurement Act (chapter 22:14)Act No:2 of 1999) The encouragement by the government for civil servants to professionalise has seen almost every station establish a procurement function. Procurement professionals now make up the procurement department, hence the centralisation of the procurement activities. It is for this reason that user departments no longer purchase either services and/or inventory.

With user departments not buying anymore, the number of suppliers in the institution’s database has drastically decreased. The supply base has been rationalised with the procurement function being responsible for evaluating and selecting the potential suppliers and also determining the number of suppliers to operate with. Existing potential suppliers have been left out in the process of reducing the number of suppliers

Rationalising the supply base means utilizing both the right number of suppliers and the right suppliers. This requires the procurement function to categorise the spend and identify current and potential suppliers for each category, Dominick. At Bulawayo Polytechnic the procurement function has reduced the number of supplier without the involvement of the user departments or any other stakeholder. It is also the procurement personnel who receive the orders in the absence of the users’ representative resulting in wrong products being accepted. It is on this note that user divisions and departments are questioning the criteria upon which the procurement function has selected the suppliers and the number of the suppliers in the database. The selected suppliers are said to have fulfilled the legal frameworks that govern all public procurement, (that is subscribing to ZIMDEF ,be a holder of a ZIMRA tax clearance and lowest prices).While suppliers on the approved list meet the statutory requirements, are they the suppliers who can make the institution be the leading provider of highly empowered human capital? Have the suppliers been selected in alignment with the organization’s strategic objectives. The procurement function has not found out from the user divisions or departments who the key suppliers are. Even the optimum size of the suppliers was never deliberated on.

Ball,(2007.) ,in his article, emphasizes that supplier rationalization best practice requires the procurement team to achieve a good level of engagement with operations .While it is important that supplier relationships are not owned by individual functions or even individuals themselves, procurement must work with departments to ensure rationalization decisions are not at odds with their requirements. Otherwise rationalization has the potential to work against the business ‘goals and objectives and become a damaging factor in its own right.

Bulawayo Polytechnic‘s vision is to be the leading provider of highly empowered human capital through excellent scientific, technical, vocational and training for sustainable socio-economic development. The effectiveness of the organization’s operations can only be made possible if the procurement function avails the required training materials to user departments as and when required. User departments depend on the procurement function to provide the inventory and services necessary to effectively and efficiently execute their duties.

* 1. **Statement of the problem**

The procurement function has rationalising the supplier base, which has left out key and potential suppliers, which has had an impact on the effective operation of the institution. Of late students have not acquired sufficient skills and /or knowledge due to unavailability of training material as and when required. Engineering students have not been able to carry out continuous workshop assessment because of unavailability of the training material, for example, components, wiring and tubing rods for the electrical engineering students. There has also been some stoppage in practical subjects carried out by students at the Applied Science division, for example, there are experiments that should be done before the end of training period yet they come and leave the institution without getting the opportunity. This has affected students’ performance in the industry. The community and potential employers have lost trust in the institution’s students because of their incompetency.

**1.3 Purpose of the study**

The aim of the study is to assess the impact of the rationalization of the supply base on the effectiveness of the organization (Polytechnic). That is, whether the supplier base reduction that was done has had a positive or negative effect on the effectiveness of the institution.

* 1. **Objectives of the study**

The main objective is to assess the impact of supplier base rationalisation into organisational effectiveness at Bulawayo Polytechnic. The following additional sub-objectives will help the researcher to address key objectives in the study:

1. To establish ways of building a more efficient supply base system.
2. To determine the merits and the demerits of supply base rationalization.
3. To evaluate the criteria used to select the suppliers for the supply base.
4. To assess if the rationalization is aligned to the institution’s objectives
   1. **Research questions**

* What are the ways of building a more efficient and effective supply base system at Bulawayo Polytechnic?
* What are the benefits and demerits of supply base rationalization?
* What criteria has the institution use to rationalize its supply base?
* What has caused the institution to rationalize its supply base?
* What are the best practices regarding supply base management?

**1.7 Assumptions**

For this research, the following will be assumed:

1. That the data collection instruments used, have been used previously in a similar research topic, making them valid and reliable.
2. That the legal framework and the procurement act will not be reviewed during the process of the research.
3. That the current supply base will not be rationalised.
4. That there will be cooperation by all respondents to provide information free from bias resulting in accurate findings.
5. That 30% of the sample size chosen will be representative of the population the researcher wishes to make inference to, since these will be drawn from the institutions departments and divisions.

**1.8 Significance of the study**

**The organization**

This research is of importance to Bulawayo Polytechnic as it is going to address real problems affecting it and also problems being faced by other government institutions in Zimbabwe in regard to supplier base management. The research is also going to offer sound recommendations on best practices that can be employed.

**The researcher**

This will broaden her knowledge and gain more experience in carrying out some other research work.

**Corporate world**

The study is of benefit to all the academics who will find it useful as a point of reference for further researches. The research will also add to the literature on employee retention, at the same time adding value to the image of the polytechnic through practical recommendations.

**1.9 Delimitations**

The research was conducted at Bulawayo Polytechnic which is at Number 62 Park Road, Corner 12th Avenue, Suburbs, Bulawayo. The study centred on the teaching and learning areas, as these are the areas that affected by the purchasing function at the Polytechnic.

**1.10 Limitations**

Time constraints to pursue the study, the researcher was full time employed and so

did not have ample time. Applied for an annual leave of a full month

* Institutional policies restricting the release of some of the institution information, particularly the Official Secrecy Act. Signed the official secrecy Act.
* Probabilities of biased information as some of the managers are most likely to mislead the researcher just to protect their institution or paint the good image about the entity.

**Definition of terms**

Supplier base All suppliers being currently registered in a company’s database.

State Procurement Board A government organ responsible for the administration of procurement services for the entire government and government related institutions. Its operations are guided by an act of parliament.

Supplier base reduction The process and activities that aim at reducing the number of suppliers that are registered in a company’s database.

Supplier base optimization is the process and activities that aim at enlarging the number of suppliers that are registered in a company’s database

**Acronyms**

SB Supplier Base

SBR Supplier Base Reduction

SRM Supplier Relation Management

SCM Supply Chain management

SPB State Procurement Board

**1.11 Chapter summary**

The chapter looked at the introduction of the study, its background, the statement of the problem, the purpose why the study is being carried out, its objectives, the assumptions, the significance of the study, delimitations, limitations and definition of terms. The next chapter will look at the related literature.

**CHAPTER II**

**LITERATURE REVIEW**

**2.0 Introduction**

This chapter will review relevant literature related to the study on supplier base rationalisation. It will look at both theoretical framework and empirical evidence on the rationalisation of the supply base.

**2.1 Theoretical framework**

Efficiency and effectiveness of the company supply base are determined by coordination across the company border. Work performed by different departments inside the company, needs to be in correspondence with the company´s external suppliers Gadde et al, (2010). Purchasing and supply function together as a business function, which manages organization´s external resources and acquire inputs by the best means possible (Lindgren et al., 2013). Company Quotation and Sales function creates the same outputs to the customer interface. Therefore the supply organization´s strategic role is to develop a global competitive supply base and to integrate these suppliers and company business strategies efficiently. Van Weele, (2005).

**2.1.2 Ways of building a more efficient supply base system**

Karljic (1983) identified four product categories for which a set of differentiated strategies can be identified. Depending on the category of the product, purchasing managers can decide the minimum required number of suppliers and other purchasing approaches. First, a strategic product is a product that is critical for a buyer and is characterized by a high supply risk caused by scarcity or other factors. Second, leverage product is a product that generates great profit to a buyer and is readily available from different suppliers. With these products, it is easy to switch suppliers since the quality is standard.

Third, bottleneck product is characterized by a high supply risk since it is acquired from only one supplier or its delivery is unreliable and has a limited impact in the profit. Karljic recommends in this case over ordering when the product is available and looking for more than one supplier (multi-sourcing). Forth, non-critical product is a product that is easy to buy and also has a low impact on profit. It is recommended to reduce time and money spent on these products using standardization or optimizing inventory levels.

Purchasing portfolio models have in the last years been given a great deal of attention from the academic and business world Dubois and Pedersen (2002). Van Weele (2005) argues that a purchasing portfolio model is preferred when creating a commodity strategy.

The first comprehensive portfolio model for purchasing was created by Kraljic in 1983 Gelderman and Van Weele (2005). Kraljics portfolio model is based upon two dimensions; *financial impact of the purchase* and *supply risk*. By the two dimensions the products are divided into four groups; routine products, leverage products, bottleneck products and strategic products. Examples of factors that affect the supply risk are; number of suppliers on the market, cost of changing supplier and competitive structure on the supply market Van Weele,(2005). The portfolio model is illustrated in figure 2 after Van Weele, (2005).

**Figure 1**



**Kraljic’s purchasing portfolio matrix**

Each type of group requires a certain approach towards the suppliers. Routine products require efficient processing, product standardization, order volume and inventory optimization. Leverage products allow the buying company to exploit its full purchasing power, for instance through tendering, target pricing and product substitution. Bottleneck items cause significant problems and risks which should be handled by volume insurance, vendor control, security of inventories and backup plans Geldman and Van Weele, (2005). Strategic products require close buyer-supplier collaboration and the purchasing strategy is to maintain a strategic partnership Myung and Drake, (2010). The power balance between the buyer and supplier plays an important role from the buying company perspective when deciding upon which approach towards the supplier it should take.

Van Weele (2005) is also emphasizing the importance of including the right aspects in a supplier selection decision. He concludes that the selection of a new supplier is a cross functional matter that ideally should include the following functions; purchasing, design, production and production planning.

**2.1.2 Merits and demerits of supply base rationalisation.**

Conceptually, the perceived benefits of the SBR could be assimilated to the benefits of the single-sourcing approach since the latter implies the use of limited number of suppliers. Taken to its limits, the SBR will inevitably lead to a single-sourcing policy and the reverse is true (Jessop 1997:45). But what are the empirical benefits of SBR? A number of studies have looked at this and it seems that the main effect of a reduced supplier base is that it leaves the buyer more time to develop closer relationships with the remaining suppliers Goffin et al. (1997:4;) Jessop (1997:45). Jessop (1997) argues that working with a smaller number of suppliers reduces the costs and increases the quality and innovation which ultimately leads to a competitive advantage for companies.

However, Goffin et al. (1991) argue that a closer buyer-supplier relationship, which is one of the main benefits of reducing the number of suppliers, brings sometimes drawbacks. They found that among the companies that conducted a SBR, one company’s purchasing manager was particularly concerned about the closer buyer- supplier partnership that the SBR has brought. This manager stated: “it makes little sense for our company to enter into long-term contracts with suppliers on commodities because of the possible downward market fluctuations”. Other business practitioners argue that the benefits from a SBR initiative are not easily achievable and very rarely measurable. They concluded that many companies are reducing the number of suppliers just for the sake of doing it and that they neglect the long-term implications of such initiative Goffin et al. (1997:10).

SBR is often viewed as a prerequisite for advanced sourcing strategies such as supplier development Hahn et al., (1990) and Krause, (1997) and supplier integration in product development activities Koufteros et al, (2007). The rationale behind this is that resources can be freed and reallocated to more effective usage when the number of suppliers is reduced Ogden and Carter (2008).

A reduced supplier base will also lead to the possibility to reward substantial business to a limited number of suppliers Downlatshahi, (2000). By doing this price reductions can be achieved since prices can be negotiated based on economics of scale Cousins, (1999). This is however a short-term approach which can backfire, if the supplier relations is not managed properly, when the supplier realizes he is the only one supplying a given product or service and starts pressuring the buying company Cousins, (1999).

By reducing their supplier base firms will be able to reduce their transaction costs since buying from fewer suppliers means less administration Choi and Krause, (2006). But there are implications to focus on the transaction cost. Cousins (1999) claims that organizations, when focusing on administrative transaction cost, forget the managerial and strategic exposure costs. An example of managerial cost is the new purchasing competences (competence to manage closer buyer-supplier relationships) needed when handling a reduced supply base. The strategic exposure cost refers to the strategic problem whether to use single, dual or multiple sources. Cousins (1999), also concludes that Parker and Hartley (1997) as well as Cox (1997) agree on the fact that purchasing organizations need to know when to use either a competitive or collaborative strategy.

It is clear that the decisions that are taken in a SBR project have to derive from the purchasing strategy and at the same time the purchasing strategy, as all functional strategies, must derive from the overall corporate strategy (Van Weele 2005). The purchasing strategy’s subordinated strategies, for example, supplier selection strategy and sourcing strategy, must in turn be derived from the purchasing strategy. By doing this the subordinated strategies will support the overall corporate strategy (Nolleta, et al. 2005).

A much decentralized purchasing organization will likely drive unique supplier bases for isolated sites, non-standardized processes and a wide range of bought components. To succeed with a SBR initiative it is crucial to take a company-wide grip and perspective to find opportunities for streamlining and to be able to take the correct decisions. This leads to the fact that collaboration between sites is a cornerstone if decentralized companies want to successfully reduce their supplier base. Pooling is the starting form of purchasing collaboration, succeed by the capturing of all purchasing synergy.

Goffin, Szwejczewski and New (1997) did four case studies at manufacturing companies chosen from the Best Factory Award database of UK manufacturing companies. Two of the studied companies were from the electronics industry and two from the process industry. All of the companies had a high percentage of bought-in materials purchased from suppliers. One of the findings was that a supplier base reduction initiative should not be carried out in isolation, instead it should be a part of a well thought plan for purchasing. It was also found that supplier performance is much based upon how the suppliers are treated. It is important to give the suppliers a full view of the business needs like the right information at the right time and clear specifications. It is also important to remove suppliers in a professional and ethnical correct manner. Finally Goffin et al. (1997) found that there can be drawbacks of soul sourcing. For example on commodities were multiple sources can be a protection against market fluctuations. To only have one source of supply will also increase the risk.

**2.1.3. To evaluate the criteria used to select the suppliers for the supply base.**

Another important success factor is the correct selection of suppliers. Before proceeding with the supplier reduction, it is of prime importance to identify supplier selection criteria that would help the company to successfully select suppliers based on these criteria. Ogden (2006) argues that when shifting larger volumes to fewer suppliers, companies need to ensure that the selected suppliers have the capacity and capability to support larger volumes and within the expected requirements in terms of quality and lead-time. Good communication with key stakeholders is another important success factor of SBR project. It is essential that project objectives and benefits are communicated throughout the company. Moreover, the changes that result from the SBR such as new ordering process or new suppliers list need to be communicated to internal users directly or indirectly affected by the initiative.

Pryjma, 2011, page 2, recommends systematic elimination as a criteria for selecting suppliers, systematic elimination is a method in which suppliers are eliminated based on clearly defined supplier reduction criteria. In practice, once these criteria are applied to a supplier database, it is possible to distinguish suppliers to be kept in the database from the ones to be eliminated (Pryjma 2011: 22). Research shows that most companies tend to choose the systematic elimination option (Ogden 2003b; Carter et al. 2008). In his study, Ogden (2003b) observed that some companies suddenly eliminated suppliers from the supply base while others preferred to take a gradual approach

**2.1.4 To assess if the rationalisation is aligned to the institutions objectives.**

According to business practitioners, having the correct number of suppliers cannot arbitrarily be decided upon. On the contrary, companies are required to go through a formal process to arrive at their targeted supplier base numbers (Carter et al. 2008:5). Such a process needs to be formed in accordance with the company’s structure and business strategy and should support the purchasing strategy. One of the challenges in defining a purchasing strategy is to determine the number of suppliers a company should use for the supply of a particular product. For this reason, the Single Source versus Multiple Sources decision is considered as a prerequisite for defining a winning purchasing strategy.

Much debate has taken place concerning the number of suppliers a company should utilize. One side of the debate stands for the multiple-sources approach. This involves the use of two or more suppliers to purchase a product. The other side of the debate is in favour of the single-source approach, in which only one supplier is utilized to supply a particular product (Benton 2010:175). In both approaches, the objective is to ensure a continuous, an efficient and quality supply of products; however what differs is the number of suppliers to utilize.

Traditionally, companies used multi-sourcing as a way to ensure safe and cheap supply of products but the main arguments in favour of this approach are based on the fact that having many suppliers encourages competition among them which reduces the prices. In addition, when buyer-supplier relationships lacks trust, the purchasing company tries to protects itself from any supply failures related to lead-time, quantity and quality by having multiple sources for the same product.

Recently, there has been a shift from the traditional adversarial buyer-supplier relationship to the use of a limited number of qualified suppliers with deeper relationship (Axelsson et al. 2005:62). The documented benefits of single-sourcing such as quantity discounts from order consolidation, reduced management efforts, and reduced supplier base can explain this trend.

The other important success factor in Ogden’s study (2006) was the win-win relationships with the suppliers. Five of the ten companies conducted the SBR in order to form closer relationships where mutual benefits are shared between the buyer and the suppliers. Ogden (2006) argues that just reducing the supplier base without establishing contractual relationships with suppliers, could disrupt the supply of products. As discussed earlier, granting long-term contract is perceived as a reward by suppliers and enhance commitment as well as trust between both parties.

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Depending on the characteristics of the supplier base, its degree of complication, the type of the products involved, companies can choose the approach that best suits their goals. Millington (2011) argues that, sometimes, the systematic elimination involves nothing more than cleansing a company’s supplier database from duplicates, bankrupt suppliers, unused suppliers, or inactive suppliers. He adds that the large number of suppliers that many companies have in their database may be misleading and quiet often removing duplicate, errors and one-time purchases could slash down the supplier base by 50%. He, therefore, concludes that one of the pre-requisites for reducing the supplier base is to have access to accurate data that reflects the current state of the supplier base. At most other times, the systematic elimination requires deep analysis of the supplier base and demands much time and efforts. Generally, business practitioners suggest not proceeding with sudden elimination of suppliers. Instead, they recommend implementing a SBR over a relatively long period of time in order to avoid a supply risk and to allow selected suppliers time to increase their capabilities. As a result, gradually phasing out suppliers and gradually phasing in new suppliers prevent any negative impact on the business or supply disruption.

Another criteria for reducing the supplier base is by standardisation, it is a technique used to replace several products by a single product that has all the functionalities of the product it replaces (Ogden 2003: 131). The approach is more complicated and time consuming than the systematic elimination as it requires the collaboration of multiple departments within the company (sourcing, R&D, and technical support). According to Sollish et al. (2011), quiet often companies have many products or components with minor differences that are destined for similar use. Typically, companies acquire products dedicated to a particular need, e.g screw (length 10 mm), and when later on a similar need arises for another screw (length 11 mm), they overlook the similar available product (10mm screw) and possibly proceed with a new purchasing from a different supplier. If the 10 mm screw could be used instead of the 11 mm screw then in such a situation, there is an opportunity to consolidate volume to a single supplier and achieve price reduction while eliminating suppliers.

Tiering consists of outsourcing the supplier management to important suppliers. The concept was first applied in the automotive industry during the 1990’s whereby automakers deliberately assigned responsibility for modules and systems to so-called 1st tier suppliers. The latter acted as integrators, with the task of managing 2nd tier suppliers and thus improving quality and efficiency. To put differently, tiering allows companies to deal with a smaller number of suppliers and to invest enough time and efforts on developing them. The approach is shown in Figure 1. Figure 1. The tiering approach (modified from Pryjma 2011).

In situation (a), the company X has three suppliers in its base and has to manage directly the three suppliers to ensure an efficient supply of products. In situation (b), after tiering, the company has transferred the management of supplier 2 and 3 to its supplier 1. In this situation, supplier 1 becomes the 1st tier supplier and supplier 2 and 3 become 2nd tier suppliers. In some situations, this does not necessarily reduce the number of suppliers since supplier 2 and 3 are not systematically eliminated, but it reduces the number of relationships that the company must manage.

First, Carter et al. (2008) observed that most of the studied companies have established a cross-functional team as the first step of a SBR initiative. The aim of the crossfunctional team was to obtain inputs and collaboration from relevant stakeholders that are necessary for the implementation phase. Second, most of the studied companies developed a commodity sourcing strategy prior to the implementation phase. This was done on the basis of rigorous spend analysis and corporate goals reflection. As mentioned earlier when discussing the success factors of a SBR, reducing the number of suppliers needs to be taken strategically but not as a quick fix. The third step consists of identifying a list of potentially qualified suppliers based on the defined criteria. The forth step consists of narrowing down the list of potential suppliers and selecting the suppliers that match the company’s requirements. The fifth step of SBR initiative was the actual implementation of changes. According to Carter et al. (2008: 20), this step is the most critical and time consuming of all. During this phase, suppliers are eliminated and others selected, and if the transition period does not allow a smooth transfer of responsibilities from the old to the new suppliers, the company risks disrupting its operations. The final step consists of benchmarking and measuring the impact of the SBR initiative on the purchasing prices, the supplier relationships and the company’s supply operations as a whole.

However the analysis of this process reveals several important findings. Firstly, it describes broadly the steps to be taken when reducing a supplier base, but does not provide detailed instructions or activities on how to perform each step. Secondly, the process emphasizes the supplier selection of new suppliers, but does not suggest any method of targeting suppliers for elimination. In fact, having a short-list of candidate suppliers for elimination is a pre-requisite for implementing this process, whereas in practice determining which suppliers should be eliminated is often one the most challenging step in the SBR initiative.

Firstly, during the supplier database analysis step, Pryjma (2011) suggests analyzing the company’ supplier base in order to determine the scope of the SBR initiative. Since the company has several divisions and multiple component categories, he limits the scope of his actions to only one division which resulted in a sample of 60 suppliers. Once the scope is limited, Pryjma (2011) applies the SBR criteria developed in Stage1 to identify the candidate supplier for elimination. Out of the 60 suppliers, 20 suppliers were targeted for elimination. Secondly, once the targeted suppliers for elimination are identified, Pryjma (2011) proceeds with the analysis of the components for replacement.

**2.4 To evaluate the criteria used to select the suppliers for the supplier base.**

Criteria for Supplier Selection

Based on the MOB analysis, once a company decides to buy products externally, it then needs to search and select a supplier who best satisfies its requirements. The supplier selection decision has long been regarded of strategic importance Carter et al. (2008: 5). Howards (1943) already discussed the importance of supplier selection in one of the very early purchasing texts. He stated: “it is probable that of all the responsibilities which may properly be said to belong to the purchasing managers, there is none important than the selection of suppliers” Benyoucef et al.(2003:20). In recent times, the analysis of criteria for supplier selection has become even more important and has taken the attention of many business practitioners and purchasing managers Tahriri et al. (2008:56).

This rising importance of supplier selection decision could be explained by the following factors: the increased globalization the world is witnessing today; the increased value of purchased components as percentage of total revenue for manufacturing firms between 40 and 80% according to Beneton (2010), and the expansion of companies’ supply chain in a way that it incorporates suppliers or customers that are geographically distant. More importantly, defining the key criteria for supplier selection concerns and requires the intervention of various departments within a company. In fact, the decision is extremely important because it ought to reflect the consensus of multi-actors and optimise the performance of the company as a whole but not a specific actor in the chain Benyoucef et al. (2003:21).

Usually, the supplier selection is a multi-objective task which includes both qualitative and quantitative factors. Tahriri et al. (2008) argue that sometimes, companies are obliged to make trade-offs between tangible and intangible factors in order to select the most convenient suppliers. For example, the quality of a product and its cost constitute a dilemma in some cases and companies are required to select the supplier who establishes a compromise between the two criteria.

In view of the fact that companies are required to ensure an efficient and continuous supply of products, defining key criteria for supplier selection appears to be of great necessity. The defined criteria will not only help the company to select new suppliers but also to evaluate the existing ones or/and, in some case, eliminate suppliers. However, it is worth mentioning that the supplier selection criteria may differ slightly from the supplier base reduction criteria (supplier elimination criteria). For example a company may select a supplier based on price and eliminate another supplier based on the amount of past purchases. The coming paragraphs present the finding of different academicians since the 1960’s in respect to supplier selection criteria. Surprisingly, the literature is abundant in this field and one can easily abstract an extensive list of distinct criteria that are found to be important in the supplier selection decision.

As far as the supplier reduction initiative is concerned, it is of prime importance to make the difference between the criteria for selecting new suppliers and the criteria for eliminating existing suppliers. In practice, the major difference is that some of the criteria that are heavily important for eliminating existing suppliers (amount of past purchases, historical performance, quality) cannot easily be applied to select new suppliers. Conversely, some of the criteria for selecting new suppliers can be applied when eliminating existing suppliers. But despite this difference, business practitioner strongly advice to define clearly both the supplier elimination and supplier selection criteria since phasing out suppliers implies phasing in new suppliers or redirecting purchases to other existing suppliers.

To summarize, in this Section, the best practices related to the supplier selection and supplier base reduction as well as various tools for reducing the supplier base were examined. Additionally, two empirical SBR processes were studied and combined together with the finding from the literature review. The outcome makes a conceptual process of SBR that will be utilized to build the proposed process for GSS.

Cox et al. (2005) added to the findings of Gadde and Snehota (2000) by introducing risk and power balance. Both the cost and the benefit side of a relationship involve risk, for example might time invested in searching the supply market yield no return and the cost reduction in a collaborative effort might end up much lower than original calculated. When looking at the cost and return of investment the power balance between the buying and the supplying firm needs to be taken in consideration. According to Cox et al. (2005, p. 32) the power balance will: “Power it is said, determines (a) which side assumes what proportion of the up-front risk in a relationship and (b) which side obtains the majority of the subsequent gains”.

Supplier selection is a complicated area that involves a lot of criteria and tradeoffs (Amid, Ghodsypor and O‟Brien, 2009). Dickson (1966) identified quality, cost and delivery performance as the three most important criteria for supplier selection. Ho, Xu and Dey (2010) conclude that these criteria are still valid and they are the three top ranked criteria for evaluating suppliers in the industry today. Technical out-put, e.g. quality, price/cost and delivery speed is according to Ting and Cho (2008) the traditional criteria to use when evaluating suppliers. They point out that recent research suggests that supplier selection should be based upon the supplier‟s global performance as the buyer-supplier relationship becomes closer and long term based, and the numbers of criteria used for supplier selection decisions increases.

**2.5 To recommend the best practices**

**2.2 Empirical evidence**

The supply base reduction process: an empirical investigation

Ogden and Carter (2008) conducted ten case studies on US companies that had conducted supplier base reduction; eight Fortune 500 companies, a large private university and a large government contractor. They found that the three major approaches derived from literature – systematic, standardization and tiering were also used in practice. By analyzing the findings a overarching supply base reduction process was created (to be used regardless of chosen approach) that includes six major steps; establish cross-functional teams, develop commodity sourcing strategy, identify potential suppliers, supplier selection process, implement changes, continuous improvements. There were also lessons to be learned from the studied companies:

* Reducing the supplier base is not something that should be taken lightly since it requires a lot of time and resources from the organization (most of the studied projects took between 6 – 12 months).

* It is important to seek buy in from potential stakeholders, like R&D, purchasers and manufacturing units, to be able to identify problems and enable a smooth implementation process. One way of doing this is to use cross functional teams.

* Properly address the risks involved when reducing old suppliers, e.g. one supplier could have a critical impact on a certain manufacturing unit that is not seen on an aggregated level. This is of particular importance for manufacturing companies buying direct material.

* See the process as continuous so that the supplier base will not get out of control again. Use lessons learned from previous reduction project (s), benchmarking and continuous improvements.

**2.7**

Supplier management in German manufacturing companies: an empirical investigation

Goffin, et al (2001) did a telephone survey on 34 companies derived from the Best Factory Awards data base of German manufacturing companies. The aim of the study was not to find best practice but to identify trends in supplier management of German manufacturing companies and compare this to UK companies. However they did find that not many companies had gained better supplier relations and communication from the SBR initiative. Only 27 % had improved their supplier relation and communication compared to that 53 % had lowered their administration costs and reduced prices. This gave the conclusion that improved communications and relations are a result from the company working with the suppliers rather than just a result from a reduced supplier base. They also found that for the majority of the respondents the actual savings were perceived rather than factual (only 7 of 34 measured the savings). None of the respondents had examined the qualitative benefits.

Supply base reduction within supply base reduction

Ogden (2003) studied a company in the US transportation industry. The product examined in the study was characterized by a highly fragmentized supply base, not leveraged volumes, no centralized purchasing process, big spend and opportunities for standardization. The company wanted to leverage the size of the company and the potential buying power to be able to realize savings and discounts through the consolidation and reduction of the number of suppliers used. The study proposes a six step supplier selection process to be used when conducting a reduction of the supply base. It includes: form the sourcing team, develop sourcing strategy, generate supplier portfolio, RFP process development, and negotiate/select competitive suppliers (s), operational integration, benchmarking and improvements. Six critical success factors were also found: (1) Get top management support. (2) Hire the right people for the project. (3) Utilize cross-functional teams – get input from everyone involved so that they can buy into the outcome. (4) Understand the organization‟s needs, goals, objectives prior to making changes. (5) Get good/accurate information on the spend prior to making changes. (6) Pick the right suppliers.

**Chapter summary**

The chapter reviewed both theoretical framework and empirical evidence on the impact of supplier base rationalisation by different authors. The criteria, the advantages and disadvantages of rationalisation were also reviewed. Information was drawn from various sources, from text books, internet and journals. The next chapter will look at the research methodology.

**CHAPTER III**

**RESEARCH METHODOLOGY**

**3.0 Introduction**

This chapter discusses the research methodology adopted for this study. According to Kothari (2006: 7) methodology is, “a way to systematically solve the research problem.” In it, the various steps that are generally adopted by the researcher in carrying out the research problem are clearly outlined. The major concepts guiding this discussion include identifying the research design, target population, sources of data, research instruments, data collection procedures and analysis.

**3.1 Research Design**

This research uses a qualitative research strategy and applies the action research as its research approach. The qualitative research methodology was chosen because the studied business phenomenon needs deeper understanding of interactions and is subject to interpretations Collis et al. (2009:4). Therefore, quantitative research does not seem to be appropriate since the questions in this research deal with exploratory issues, rather than frequencies or incidences.

According to Collis et al. (2009), an action research is a methodology used in applied research. The latter describes a study that is designed to apply its findings to solving a specific and existing problem. This research aims to solve a business problem encountered within a real-life context of a single institution, Bulawayo Polytechnic. It aims to investigate the impact of the supplier rationalisation on the effectiveness of the organisation. Thus, the action research approach is chosen as the most appropriate research methodology.

According to Quinton et al. (2006: 47), the research design means the logic that links the data to be collected (and the conclusions to be drawn) to the initial objective of study.

At the beginning of the cycle, the business problem and the research objectives are identified. In the second step, a conceptual process of the supplier base reduction is developed based on the literature and other empirical best practices. The purpose of the conceptual process is to describe the activities for conducting a supplier base reduction (SBR) initiative as well as to serve as a generic roadmap on which the proposed process is built. In the third step, different data (internal manuals, numerical data, finding from interviews) are collected and deeply analyzed in order to assess the current state of the Bulawayo Polytechnic supplier base. This analysis helps in planning further actions of the SBR initiative and gives insights on how to build the proposed process for Bulawayo Polytechnic. In the fourth step, multiple interviews are conducted in order to analyse the conceptual process developed in step 2. The resulting analysis is utilized to tailor the conceptual process to the Bulawayo Polytechnic environment. The outcome is a proposed process of SBR that could be implemented by Bulawayo Polytechnic to reduce its supplier base. In the fifth step, the proposed process is tested into practice. The researcher implements the process on a pilot scale environment. Finally, at the sixth step, the results are evaluated and recommendations suggested on how to implement the process.

The researcher acknowledges the existence of a number of research designs. These include descriptive survey, case study research design and exploratory research design and explanatory designs.

**3.1.1 Case study research design**

Bryman and Bell (2003) defines a case study as the detailed and intensive analysis of a single case which is concerned with the complexity and particular nature of the case in question. Kothari (2004) on the same vein, argues that a case study is a form of qualitative analysis which involve a careful and complete observation of a social unit, be that unit a person, a family, an institution, cultural group or even the entire community.

Advantages of a case study research design

* case studies allow a lot of detail to be collected that would not normally be easily obtained by other research designs. The data collected is normally a lot richer and of greater depth than can be found through other experimental designs
* case studies tend to be conducted on rare cases where large samples of similar participants are not available.
* within the case study, scientific experiments can be conducted.
* case studies can help experimenters adapt ideas and produce novel hypothesis which can be used for later testing

Despite the noted advantages, this design was not deemed necessary due to the following reasons,

* one of the main criticisms is that the data collected can not necessarily be generalised to wider population. This lead to data being collected over longitudinal case studies not always being relevant or particularly useful.
* some case studies are not scientific.
* case studies are generally on one person, but there also tends to only be one experimenter collecting the data. This can lead to bias in data collection, which can influence results more than in different designs.
* it is very difficult to draw a definite cause/effect from case studies

**3.1.2 Exploratory research design**

In order to evaluate the effectiveness of the institution’s operations following the rationalisation of the supplier base, the researcher chose to use the exploratory research design. Hair et al (2006) describes an exploratory research as one that focuses on collecting either primary or secondary data using unstructured format to gain background information about the general nature of the research problem. The research methods are highly flexible, unstructured and qualitative but with little prior knowledge as to what will be found (Aaker et al (2007).

Exploratory design renders itself suitable for this study because:

* descriptive surveys are useful in describing the characteristics of a large population. No other method of observation can provide this general capability.
* consequently, very large samples are feasible, making the results statistically significant even when analysing multiple variables.
* ability to distinguish small differences between diverse sample groups;
* easy of administering and recording questions and answers; increased capabilities of using advanced statistical analysis; and abilities of tapping into latent factors and relationships.

**3.2** **Target population**

Saunders, Lewis and Thornhill (2000), said that a population or universe comprises all elements or units under investigation for a specific study. Kothari (2004) concurs with this by defining population as all items in any field of inquiry. A population is a group of individuals, persons or objects from which a sample is taken for measurement. The total population for this study comprised of 100 members of the Bulawayo Polytechnic, which is 30% of the institutions population. These were divided into strata according to their different departments that are shown in table 3.1. Table 3.1 Target population

|  |  |  |  |
| --- | --- | --- | --- |
| **Department** | **Target population** | **Number of respondents** | **Sample size** |
| Senior management | 17 | 15 | 88 |
| Lecturing staff (Users) | 22 | 20 | 90 |
| Admin staff | 9 | 8 | 88 |
| Accounts personnel | 4 | 4 | 100 |
| Support staff | 7 | 7 | 100 |
| Students | 10 | 10 | 100 |
| **Totals** | **64** |  |  |

*Source: Primary data*

**3.3 Sample Size**

Bulawayo Polytechnic has ten divisions from which one hundred (100) participants were drawn for the study. All the questions that were administered were grouped according to the issues raised in the research questions. Responses to open-ended questions were coded for analysis.

**3.4 Sampling Technique.**

Sampling techniques is the process by which inference is made to the whole by exam-inning only a part Ranjan K. Som (1996). Probability and non-probability are two kinds of sampling techniques:

*Probability*: Probability sampling is also called by (random sampling) or (chance sampling). Under this sampling, every item of the universe has an equal chance of inclusion in the sample C.R Kothari (2004). Every element in the population has a certain chance of getting into sample.

*Non-probability*: Non-probability sampling is also called by deliberate sampling. In the point of view of C.R Kothari (2004), non-probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has a chance of being included in the sample. The individual cannot be known because of the population cannot be known.

The research also utilized snowball sampling technique. In snowball sampling, the researcher collected data from key respondents who then advised and provided information on other respondents whom they know, Crossman (2012:129). Snowball sampling had the advantages that it allowed the researcher to reach populations that are difficult to sample when using other sampling techniques and it required little planning, Castillo (2009:132).

**3.5** **Sources of Data**

There are two main sources of data namely; secondary and primary data. Both can be obtained internally and externally.

**3.5.1 Primary Data**

Paul white, in his website, ***www.ac.uk***, defines primary data as the data that the researcher collects in the field specifically for the project at hand. The data is directly relevant to the problem at hand and the researcher can control the amount of error in accuracy to be made.

According to Arbnor and Bjerke (1997) there are four techniques to gather primary data:

• Experiments

• Interviews

• Surveys

• Direct observations

In the primary data gathering phase three different sites were visited at the case company.

**3.5.2 Secondary Data**

According to Paul White and CSM Staff on [***www.ac.uk***](http://www.ac.uk/) secondary data refers to that data already available, collected for some other purpose other than the current research project.

The advantages of secondary data is that information is readily available, time to gather data is short and generally is less expensive to collect. However, data may not be a problem specific, may be outdated, it is difficult to correct the level of accuracy, data may not be subject to further manipulation and combination of various sources could lead to errors of coalition and introduce bias.

Secondary data sources include newsletters, books, journals, internet, and some research publications related to change management.

**3.6****Research Instruments**

In this study, interviews and questionnaires were used to collect data.

**3.6.1 Self-administered Questionnaires**

According to Cohen and Marion (1983), a questionnaire is a research instrument consisting of question and other prompts for the purpose of gathering information from respondents.

The rational for using a self-administered questionnaire was its applicability to the quantitative survey. Cohen and Marion (1983) points out that questionnaire can be administered to large numbers of people at the same time. This was ideal for the 100 polytechnic members. It is a method that was proved to be cost effective and convenient in collecting data. A questionnaire requires respondents to answer questions anonymously. This opened a way for more data to be gathered as fears of being victimised were eliminated.

However, the disadvantage of using a questionnaire method is that it lacks dependence on motivation. Respondents may have an inability to read questionnaire and write responses, leading to some respondents not responding to some or all of the questions.

**3.6.2 Interviews**

The researcher also used direct interviews in order to solicit the in depth information about supplier base rationalization at Bulawayo Polytechnic from both the students and lecturers. The interview is a face to face method of gathering information which involves the interaction between the interviewer and interviewee.

The carefully prepared guide eliminated weaknesses in the interview method such as bias.

**3.7 Reliability and Validity**

*Reliability and validity* need to be considered in producing grounded results. According to Yin (2009), it is possible to judge the quality of any given research according to certain logical tests. These tests have been summarized in numerous textbooks and are reliability and validity Yin (2009: 40). Generally, one of the most important elements to ensure a reliable and valid study is to develop a rigorous research design by studying the appropriate methodology. It is critically important to study the available research methods and the corresponding data collection tools in order to choose the one that best suits the study. Additionally, thoroughly describing all the research activities appears to be necessary, since without a plan, the research could take the form of random activities that are impossible to replicate, which compromises the validity and the reliability.

According to, Yin (2009: 45), *reliability* refers to the capability of a study to display the same results while using different data collection methods. The objective of establishing reliability is to be sure that, if a later investigator follows the same procedures as described by an earlier investigator, the later investigator should arrive at the same findings and conclusions.

As for the *validity* of a study, it is divided into two types of validities: internal validity and external validity. Firstly, the internal validity evaluates whether the researcher measured what he or she intended to measure, when the research was designed Quintone et al. (2006: 129). Secondly, the external validity evaluates whether the study findings are generalised beyond the immediate case company (Yin 2009: 43). In regard to this study, the external validity would mean whether the developed supplier base reduction process is applicable to other Polytechnics under the same ministry.

**3.8** **Data Presentation and Analysis**

**3.8.1 Data presentation**

The use of the questionnaire enabled the researcher to present his findings in a tabular, graphic and text form. Tables were used so that data becomes manageable and easy to interpret. The use tables made the displaying of summarised information more accurate. Graphs were used because they made suitably clear presentation of the trend lines over time, which allows for comparisons of different data over time.

**3.9 Data analysis**

According to Mugenda & Mugenda (2003), data analysis is the process of bringing order, structure and meaning to the mass of information collected. Data analysis methods employed involved quantitative and qualitative procedures. Quantitative data was analysed using descriptive statistical methods. The study adopted a descriptive analysis by use of descriptive statistics such as the measure of central tendency.

**3.9** **Ethical Considerations**

This research was guided by some ethical values which are as follows;

* *Autonomy*: - the researcher respected the freedom of participants to give voluntary information, informed consent or even to withdraw from the research at any time.
* *Non-maleficence*:- the researcher ensured that no physical, emotional, social or any form of harm happened to participants. The obtained information was strictly used for this research purpose only.
* *Beneficence*: - the researcher ensured that, the research benefits participants, other researchers and society at large by disclosing findings and recommendations to them.
* *Confidentiality:-* the researcher emphasised on confidentiality

**Chapter Summary**

This chapter discussed the research design which consists of case study, exploratory, explanatory and descriptive survey which was deemed to be suitably for this study. A sample size of 100 members of the Bulawayo Polytechnic community was selected, from a target population of 334, using purposive sampling. The sources of data which are secondary and primary data were discussed and the research instruments which comprises of the questionnaire and interviews were highlighted. The data presentation and analysis procedures and ethical considerations were also discussed. This chapter has therefore explored the methodical strategies employed in conducting this study. The researcher presented and discussed the results in the next chapter.

**CHAPTER IV**

**DATA PRESENTATION, ANALYSIS AND INTERPRETATION.**

**4.0 Introduction**

In the previous chapter, the research design and methodology were presented. In this chapter, the results obtained through interviews and questionnaires will be presented, analysed and interpreted. Each interview question and its intention are presented, as well as the results that were obtained therefrom. Quantitative research has been covered by questionnaires, compiled as an add-on to the interviews, and distributed to the 70respondents selected. The findings from this survey will be presented and briefly discussed.

**4.1 Response rate**

**Table 1. Response rate**

|  |  |  |
| --- | --- | --- |
| **Number of questionnaires distributed** | **Number of questionnaires returned** | **Response %** |
| **70** | **64** | **91** |

All in all seventy questionnaires were issued to the respondents and sixty-four were returned giving 91 % response rate. Thus any respondents took part and gave the valuable information to enable the research to proceed

**4.2Distribution of respondents**

**Table 2: Distribution of respondents**

|  |  |
| --- | --- |
| **Department** | **Number of people** |
| Senior management | 25 |
| Lecturing staff (Users) | 20 |
| Polytechnic administration personnel | 8 |
| Accounts personnel | 4 |
| Support staff | 7 |
| Students (Users) | 10 |
| **Totals** | **70** |

*Source: Primary data*

Table 1: Distribution of respondents

The distribution of the respondents is as per the sample taken from one hundred respondents and is comprised as

*Figure 2: Distribution of respondents*

**4.3 Professional qualifications of Polytechnic buying staff**

**Table 3: Level of education of the Polytechnic buying personnel**

|  |  |  |
| --- | --- | --- |
| **Level of education** | **Number of respondents** | **% Response** |
| Masters | 6 | 9 |
| Degree | 15 | 24 |
| Diploma | 39 | 61 |
| Certificate | 4 | 6 |
| Total | 64 | 100 |

*Source: Primary data*

The table above shows that the majority of the employees hold professional qualifications in the form of Masters, Degrees and diplomas representing 94% .The degree holders in the section give anchor to the operations and demands of the supply chain management section . only 6% are certificate holders these comprise mainly of support staff .

**4.4 Work experience.**

**Table 4: Work experience.**

|  |  |  |
| --- | --- | --- |
| **Employment period** | **Number of respondents** | **Response rate** |
| Below 5 years | 35 | 55 |
| 5 – 10 years | 12 | 27 |
| 10 years and above | 17 | 18 |
| Total | 64 |  |

*Source: Primary data*

The table shows that 45% of the employees have been more than five years and that means they have the experience needed for decision making. Also they are privy to the trends in the supply chain management. However 55% of the respondents have below 5 years of work experience

*Figure 4: Employment period of respondents (Buying Section personnel)*

The remaining part of the questionnaire and interview schedule was on information on rationalisation of the supplier base and was analysed according to the objectives of the study as follows:

**4.5 To assess the relevance of supplier base rationalisation.**

To examine the above objective, the study sought to answer the question.“***What is the size of the supplier base at Bulawayo Polytechnic?”***

The respondents’ reasons were as shown in table 5 below:

|  |  |  |
| --- | --- | --- |
| **Views on the intergraion of spend analysis** | **Number of people** | **% Response** |
| Yes | 32 | 50 |
| No | 20 | 32 |
| Not sure | 12 | 18 |
| **Totals** | **64** |  |

The table shows that about 60% of the respondents feel that the supplier base for the Polytechnic is generally too large while only 14% feel the supplier base is small. Given that the general view is that the supplier base is large, the need for reduction of it is evident in the responses. The graph below illustrates the views:

***Graph***

Furthermore, to probe the supplier base issue, the question was **“*How many suppliers does the Polytechnic have per product or commodity?***

Most respondent the spend analysis was not integrated into the source module .they also felt that most of the suppliers in the database were those who supplied products of less value ***.to further illustrate this , the question on the size of the suppliers was asked***

**Table 6: Number of suppliers per product**

|  |  |  |
| --- | --- | --- |
| **Size of the supplier base** | **Number of respondents** | **% number of respondents** |
| Small | 40 | 63 |
| Big | 16 | 25 |
| Appropriate | 8 | 12 |
| **Totals** | **64** |  |

Most of the respondents indicated that the supplier base was small (63%) while 25% felt it was big and only 12% thought it was appropriate.

**Table 7: view on size as an advantage**

|  |  |  |
| --- | --- | --- |
| **Product or commodity** | **Number or respondents** | **% of respondentts** |
| Yes | 21 | 32 |
| No | 33 | 52 |
| Not sure | 10 | 16 |

Most respondents suggested that a small data base was a disadvantage in that it resulted in increased costs for example buyers are said to only concentrate on the transaction cost leaving out other costs like managerial costs(that is competence to manage closer buyer-supplier relationship).

Table 8; view on quality of goods

The objective 1 was investigated by the question regarding the ***status of the suppliers*** on the Polytechnic database. The responses were recorded as follows:

**Table 8: Evaluation of the current supplier base at the Polytechnic**

|  |  |  |
| --- | --- | --- |
| **Supplier category** | **Number of respondents** | **% Response** |
| Dormant suppliers | 5 | 13 |
| Inactive suppliers | 10 | 25 |
| Active Suppliers | 25 | 62 |
| Total | 40 |  |

Apart from having a blotted a supplier base, the supplier database at the Polytechnic has about 38% of the suppliers who are not doing business with them. Thus comes from the dormant and inactive suppliers.

*Figure 7: Quality of the suppliers in the database at the Polytechnic*

Respondent indicated that at most the reduced supplier base resulted in single sourcing . this means that an organisation cannot compare the quality of the product with that of the other suppliers.

**Table 9: views on selection criteria**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Number of response** | **% Response** |
| Systematic | 19 | 30 |
| standardisation | 28 | 44 |
| Tiering | 10 | 16 |
| **Other (random)** | **7** | **10** |
| **Totals** | **64** |  |

*Source primary data*

44% of the respondents indicated that standardization was used to select the supplier, hence the drastic reduction in the number of the suppliers. This said this was the case because the system replaced several products with single product. This affected especially engineering department as procurement function standardised materials yet different decision has different specification.

**Table :Supplier base reduction factor recommended.**

|  |  |  |
| --- | --- | --- |
| **views** | **Number of respondents** | **% Response** |
| Good function information system | 8 | 13 |
| Setting up cross functional teams | 26 | 40 |
| Key management support | 22 | 34 |
| Good buyer-supplier relationships | 8 | 13 |
| Total | 64 |  |

***Source primary data***

The table above shows 40% of the respondents recommended setting up of cross functional teams as a success factor for successful supplier base reduction followed by 34% who recommended key management support while 13% was for both on good buyer relationships and good function information system as factors for a successful supplier base reduction.

**Table : View on the process done by the institution to arrive at its number of suppliers.**

|  |  |  |
| --- | --- | --- |
| **suppliers** | **Number or respondents** | **% of respondentts** |
| Yes | 15 | 23 |
| No | 35 | 55 |
| Partially | 14 | 22 |
| total | 64 |  |

***Source primary data***

The table above shows the results on the process done by the institution to arrive at its number of suppliers. According to business practitioners (carter et al.2008:5) having the correct number of suppliers cannot arbitrary be decided upon and on the contrary, companies are required to go through a formal process to arrive at their targeted supplier base numbers.55% indicated that no process has been used to arrive the number of suppliers and that was the concern at the way the targeted suppliers were arrived at. The process was said not to be in accordance with the company strategy and objectives.23% of the respondent shows that the process was done to arrive and 22% were not sure whether or not the process was used.

**Figure ; Appropriateness for continuous and supply of products**

*Source primary data*

The figure above shows that 58% of the respondent indicated that the number of suppliers is said to be appropriate if suppliers shows the continuous and efficient and quality of supply. 19% agreed that there was continuous and efficiency supply of products while 23% not aware of what to say about the products.

**Objective 2: To establish ways of building a more efficient supply base.**

In order to examine the above objective, the study sought to answer the question, ***“Who is involved in decision regarding suppliers at Bulawayo Polytechnic***?” The responses were as follows:

|  |  |  |
| --- | --- | --- |
| **Decision makers on suppliers** | **Number of people** | **% Response** |
| Administrator | 40 | 57 |
| Buying team | 15 | 21 |
| Finance Committee | 5 | 8 |
| Others | 10 | 14 |
| **Totals** | **70** |  |

The table 10 shows that the respondents felt that the administrator is the one that makes decisions on which supplier to use. This is shown by the 57% responses recorded. However, the finance committee which sits every time before anything is purchased by the Polytechnic only is represented by the 8% which means that, they have very little say in the supplier selection. The buying team is represented by 21% and yet it is the department that interacts with suppliers and as such they are expected to influence the selection of the suppliers. This is further illustrated by figure … below:

**Objective 3: To identify the criteria used to select suppliers for the Polytechnic.**

To probe this objective, the question was “***What methods did Bulawayo Polytechnic use in screening their suppliers?”*** the responses were recorded as follows:

|  |  |  |
| --- | --- | --- |
| **Supplier qualification screening process** | **Number of people** | **% Response** |
| Reference checks | 13 | 19 |
| Indications of supplier quality | 12 | 17 |
| Financial status checks | 8 | 11 |
| Ability to meet specifications | 27 | 39 |
| Buy-in from internal customers | 10 | 14 |
| **Totals** | **70** |  |

The table 11 shows that Bulawayo Polytechnic uses the factor “ability to meet specifications” as a popular method in screening their suppliers as represented by the 39%. However, the 14% recorded against “Buy-I from internal customers” and “Financial status checks” with 11 % is worrisome as these factors are critical for ay successful rationalisation of the supplier base. This is further illustrated below

**Objective 4: To evaluate the criteria used to select the suppliers for the Polytechnic.**

In order to establish the criteria that was used for selecting suppliers, the question was, “***Which of the following supplier base rationalisation approach was used by the Polytechnic?”***The responses were recorded as follows:

|  |  |  |
| --- | --- | --- |
| **Approaches available for SBR** | **Number of people** | **% Response** |
| Systematic elimination | 20 | 29 |
| Standardization | 15 | 21 |
| Tiering | 5 | 7 |
| Other (or random) | 30 | 43 |
| **Totals** | **70** |  |

The table 12 shows that the approach used by Bulawayo Polytechnic to rationalise the supplier base was largely random, with no specific method used. This is evidenced by the 43% responses. The least number of respondents, 7% believe that the Polytechnic used Tiering as an approach to SBR. This is further illustrated below:

**Objective 5: To analyse reason for rationalising the supplier base.**

In order to examine the above objective, the study sought to answer the question.‘***Do you think the supplier base is of optimum or appropriate size?***

|  |  |  |
| --- | --- | --- |
| **Views on the size of the supplier base** | **Number of people** | **% Response** |
| Yes | 17 | 24 |
| No | 38 | 54 |
| Neutral | 15 | 22 |
| **Totals** | **70** |  |

The table 13 shows that the majority of the people feel that the supplier base at the Polytechnic is not of optimum size as represented by the 38%.

**Objective 7: To recommend best practices in managing the supply base at the Polytechnic.**

In order to be in a position to have a successful supplier base reduction, the question was ***‘Which of the following critical success factors for successful supplier base reduction would you recommend?’***The responses were recorded as follows:

|  |  |  |
| --- | --- | --- |
| **Critical Success Factors for SBR** | **Number of people** | **% Response** |
| Good functioning information system | 20 | 29 |
| Setting up a cross-functional team | 26 | 37 |
| Key Management support | 15 | 21 |
| Good buyer-supplier relationship | 9 | 16 |
| **Totals** | **70** |  |

The table 14 shows that the majority of the respondents feel that setting up a cross functions team would be one of the critical success factors for a successful SBR. This is represented by the 37%.A good functioning information systems was also identified as important with 29% responses while the least responses were recorded at 9%. This is further illustrated below:

**CHAPTER FIVE**

**FINDINGS, CONCLUSION AND RECOMMENDATIONS**

**5.1 Introduction.**

In this chapter, the researcher gives a summary of the major findings and their implications according to the objectives of the study, a conclusion of the study and recommendations for an effective supplier base rationalisation.

### 5.2 Summary of Findings

The study objective was to evaluate the effectiveness of the supplier base rationalisation as instituted at Bulawayo Polytechnic.

* + 1. *To assess the effectiveness and relevance off the supplier base rationalisation.*

The study found out that there was no need for supplier base reduction and as such the institution was supposed to continue with the same number of suppliers for the organisation.

* + 1. *To reduce the number of suppliers and to build a more efficient supplier base.*

It was found that the Polytechnic has a seemingly large number of suppliers than necessary in relation to its size. Most suppliers supply a common product especially for the kitchen and the canteen where it was established that OK Mart, Tilus ad Greens Supermarkets supply similar products to Bulawayo Polytechnic.

Some suppliers could be classified as Inactive and Dormant and these should be taken out of the supplier database so as to remain with active suppliers only.

* + 1. *To determine the benefits, if any that arose following supply base rationalization.*

It was found that the supplier base reduction carried out at Bulawayo Polytechnic did not bring expected benefits. The institution instead incurred some costs as a result of the exercise. However, the relationship with suppliers improved together with the supplier responsiveness.

* + 1. *To determine how effective the organization became following the supply base rationalization.*

It was noted that SBR did not make the organisation effective. Effectiveness had to do with meeting the purchasing objectives which in this case were not met. There was no clear connection between supplier base reduction and the purchasing strategy at the institution.

* + 1. *To recommend best practices in managing the supply base.*

It was noted that SBR has to be implemented well after wide consultations with stakeholders who should have a strong buy-in for the initiative. There should also be cross-functional teams in the whole set-up of supplier base reduction.

Another problem regarding the purchasing organization is the collaboration between the central purchasing department and the administration. Today it is unclear who owns the supplier base and what criteria to prioritize when choosing suppliers

### 5.3 Conclusion

Guidance provided by the literature study gave an indication on how effective supplier base reduction can be if planned and implemented well. Based on the findings above it is clear that supplier base reduction (SBR) should entail thoughtful planning and sensitive implementation, and above all, consultation with, and involvement of, the people affected by the changes. In this case study, all the academic departments and staff working at different management levels should be allowed to participate in the supplier base rationalisation project.

Bulawayo Polytechnic did not institute a supplier base reduction process with all the parties involved before cutting down on the number of suppliers for the institution.

It is important to seek buy in from potential stakeholders to be able to identify problems and enable a smooth implementation process. It is also important to understand the organization’s needs, goals and objectives prior to making changes (Ogden, 2003; Ogden and Carter, 2008).

### 5.4 Recommendations for Policy and Practice

The following recommendations are based on the data collected from the key informants at Bulawayo Polytechnic.

**5.4.1 Sensitization programs**

The management should come up with sensitization programs that focus on education of the stakeholders so that there will be a buy-in during the implementation of the SBR.

**5.4.2 Capacity building programs**

A capacity building program to be started where personnel from various departments of the Bulawayo Polytechnic will be trained on how to evaluate and select the suppliers to be in the supplier database.

# 5.4.3 Ownership

The execution of basic services by municipalities requires a level of satisfaction by the client. According to Kirkpatrick (1985:30) the implementer of change should claim possession of the whole process. In this study, however, it is not clear if the buying department at Bulawayo Polytechnic seized ownership in say, the buying of certain common commodities because at times the Administration is found buying equipment and materials for maintenance when it is expected that the buying department does the function. In any of these changes it has not been clear if the buying department had ownership of the changes.

**5.4.4** **Keep the Size, Change the Mix**

Many organizations such as Bulawayo Polytechnic set "number-of-suppliers goals" and measure success simply by the numbers. But the quality of suppliers is more important than the quantity of suppliers. Even if you have the right number of suppliers, you may need to replace the poor performers with good ones.

**5.4.5 The cross-functional teams**

The cross-functional team who can also be called multidisciplinary team. Doyle defines cross functional team as "a team composed of individuals from departments within the firm whose competencies are essential in achieving optimal evaluation. Successful teams combine skill sets which no single individual possesses." Parker explains a CFT by "a group of people with a clear purpose representing a variety of functions or disciplines in the organization whose combined efforts are necessary for achieving the team's purpose. With this Bulawayo Polytechnic may be able to rationalise its supplier base more logically and coherently with the buy-in from all stakeholders which in turn derives the expected benefits.

**5.4.6 Successful Supplier Base Reduction approach: - Best practices**

The following recommendations were made towards a successful and effective supplier base reduction:

**5.4.6.1 The use of known models and frameworks for SBR implementation**

### *5.4.6.1.1 Supplier Base Reduction Process by Carter et al.*

Carter et al. (2008) developed a supplier base reduction process as outlined below:

**Step 1**

•

Establishing Cross

-

Functional Team

**Step 2**

•

Developing Commodity Sourcing Strategy

**Step 3**

•

Identifying Potential Suppliers

**Step 4**

•

Supplier Selection Process

**Step 5**

•

Implementing Changes

**Step 6**

•

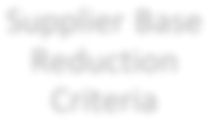
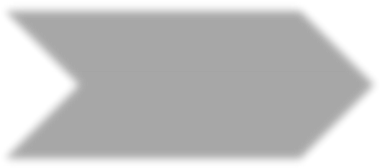
Continuous Improvement

*Figure 9. Supplier base reduction process by Carter et al. (adapted from Carter et al. 2008:15).*

As depicted the process consists of six major steps: establishing cross-functional teams, developing commodity sourcing strategy, identifying potential suppliers, supplier selection process, implementing changes, and continuous improvement. Bulawayo Polytechnic could make do with such a model to realise effectiveness. Alternatively, Bulawayo Polytechnic could use the model by Pryjma as outlined below.

*5.4.6.1.2 Supplier Base Reduction Process by Pryjma*

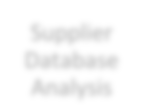
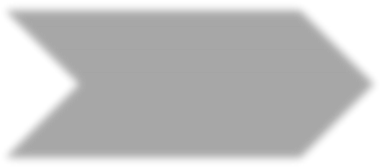
Pryjma (2011) develops a SBR process as follows:



Supplier Base

Reduction

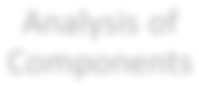
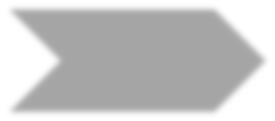
Criteria



Supplier

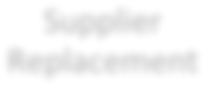
Database

Analysis



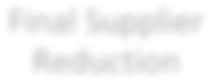
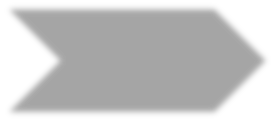
Analysis of

Components



Supplier

Replacement



Final Supplier

Reduction

**Stage 1**

**Stage 2**

Target Suppliers for

Elimination

Eliminate the Targeted Suppliers

Using the four

steps

process

*Figure 10. Supplier base reduction process by Pryjma (modified from Pryjma 2011: 48).*

As seen in the model above, this process consists of two major stages. At Stage 1, the supplier base reduction criteria are thoroughly defined which would allow a methodical differentiation between suppliers to be maintained in the supplier base from those to be eliminated. At Stage 2, he develops a four-step process to eliminate the targeted suppliers. This could also be used at Bulawayo Polytechnic.

**5.4.6.2** **Approaches to Supplier Base Reduction**

Ogden and Carter (2008) identified three main approaches for SBR: (1) systematic elimination, (2) standardization and (3) Tiering. For Bulawayo Polytechnic, it is recommended that they use systematic elimination approach to SBR for them to realise organisational effectiveness. Millington (2011) argues that the systematic elimination approach sometimes cleaning and updating the organization's supplier base from inactive suppliers, bankrupt suppliers, duplicates and unused suppliers.

**5.4.7 Critical success factors for Supplier base reduction.**

Bulawayo Polytechnic should adopt the following critical success factors for supplier base rationalisation as espoused by Ogden (2006):

**5.4.7.1Good information system**

First, a good information system allows companies to gather historical information regarding suppliers’ products. One of the main barriers to SBR is lack of historical data to utilize in decision making. Second, an effective information system will also support compliance initiatives during the implementation phase. Third, it helps standardization efforts by allowing decision makers to visualize the spending across the organization. A good information system is therefore considered to be a prerequisite for an effective SBR.

**5.4.7.2 Cross-functional team**

**These** enhance the probability of participation of stakeholders in the SBR process and to secure the implementation. Getting inputs from different departments can provide valuable information. For example, receiving input from the engineering department can help the purchasing department discover potential issues. Furthermore, stakeholders are more likely to approve changes when they have input in shaping changes initially.

**5.4.7.3 Selecting the right supplier**

When shifting larger volumes to fewer suppliers, the company needs to ensure that the selected suppliers have the capacity and capability to support larger volumes within the lead time requirements.

**5.4.7.4 Good communication**

Key stakeholders need to be informed of the progress and the cross functional team therefore becomes critical. It is essential that project objectives and benefits are well communicated throughout the organization.

**5.4.7.5 Win-win relationships**

Both suppliers and buyers will get benefits from the SBR process.

**5.4.7.6 Key management support**

To avoid any blockage during the implementation and unnecessary delays, the key decision makers (department representatives, users etc.) should be involved early in the process. The key decision makers are not necessarily administration staff and buyers but are the end-users (lecturers and students) with influence.

QUESTIONNAIRE COVE PAGE

Dear Sir/Madam

RE: REQUEST FOR RESPONSES ON THE QUESTIONNAIRE

My name is Nodumo Maphenduka, a Bachelor of Commerce (Honours) degree in Purchasing student with the Bindura University of Science Education. I am carrying out research on an assessment onto the impact of supplier base rationalisation on institution’s effectiveness: A case study of Bulawayo Polytechnic. I am kindly requesting you to respond to the questionnaire to help me complete my research .The results obtained from the research will be treated with confidentiality and there will no release of respondents’ names. The information obtained will be used for research purposes only. All given answers will be considered correct as those are respondents ‘views. The researcher considers the views as important to her research because they will go a long way to assist in improving the institution’s supplier base rationalisation system and its effectiveness. Please do not write your name on the questionnaire. Thank you.