The Effect of Sustainable Procurement Practices On Procurement Efficiency in Mining Companies in Mashonaland Central Province in Zimbabwe

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Abstract: **This study aimed to investigate the effects of sustainable procurement practices on procurement efficiency in the mining sector in Zimbabwe. A qualitative research approach was employed where interviews were conducted with 10 key informants in mining companies. The findings of the study were that supplier training, whole life cycle costing, procurement of recyclable products and environmentally friendly products have positive effects on procurement efficiency. The study concluded that supplier training, product whole life cycle costing, procurement of recyclable products, and the procurement of environmentally friendly products have a positive effect on procurement efficiency in mining companies in Zimbabwe. The study recommended mining companies to increase the recycling of purchased products and to use environmentally friendly products in order to minimize costs.**

Keywords**: Sustainable procurement, sustainable procurement practices, procurement efficiency.**

I. INTRODUCTION

Sustainable procurement is a fast-growing area of interest world over that both private and public sector organizations are being encouraged to procure sustainably. According to the Sustainable Procurement Guide of Austria (SPGA) (2018), the concept of sustainable procurement is getting pressure from the Sustainable Development Goals (SDGs) which emerged at a United Nations (UN) conference on sustainable development, Rio+20 in the year 2012. The main objective was to set balances of the three dimensions of sustainable development which are known as the environmental, economic, and social factors of the Triple Bottom Line (TBL), (Sustainable Development Knowledge Summary, 2012). Toadd on, nations were called to make efforts for the achievement of the seventeen sustainable development goals by the end of 2030. Thus, pressure is mounting from the UN to achieve these sustainable development goals.

More so, the idea of sustainable procurement has quickly gained ground because of the growing urgency of sustainable development for the entire world (Sachs, 2012). Nderitu & Ngugi (2014) opine that, when firms take into account the efficacy of sustainable procurement on efficiency and brand image, they realize many benefits in revenue growth, and contribute to societal benefits which can lead to brand image. It is thus part of procurement in firms to ensure that purchasing decisions are based on sound principles that maximize the benefit to society and meet community expectations while also protecting against reputational risks (Kiwili & Ismail, 2016). Therefore, procurement departments are tasked with the practice of sustainable procurement as this can impact procurement efficiency and brand image through the specification of products, sourcing for suppliers, evaluation, and supplier selection (Chartered Institute of Procurement and Supply, 2013).

According to Walker, Miemczyk, Johnsen, & Spencer (2012), developed countries have implemented policies in an attempt to achieve sustainable development through procurement in both the private and public sectors. Kiwili & Ismail (2016) state that recent studies on sustainable procurement in Africa indicate that sustainable procurement is not being well implemented to the much-expected level in both private and public sectors that countries are lagging in achieving the sustainable development goals. However, a study by Chari & Chiriseri (2014) in Zimbabwe shows that there has been a turnaround in sustainability and various stakeholders' groups have addressed issues such as human rights, women's rights, and environmental management. Additionally, the promulgation of the new public procurement act in Zimbabwe, the Public Procurement and Disposal of Public Assets Act (PPDPA) in the year 2017 has seen sustainable procurement being addressed with the provision of one of its objectives on section 4 (1)(a). The objective requires procuring entities to secure the implementation of environmental, social, economic, and other sustainability policies in procurement proceedings (PPDPA, 2017).

Although the private sector is not obliged to operate within the public sector procurement, it is obliged to meet the sustainable procurement initiatives through corporate social responsibility (CSR). According to a Newsday newspaper published on 25th April 2018, the mining sector, in particular, contributes about 13% of Gross Domestic Product (GDP) in Zimbabwe hence the need for the mining sector to engage in sustainability since the activities of mining companies affect the environment when manufacturing and processing of the minerals from the ground. Gold mining companies in

Mashonaland Central Province in Zimbabwe are the leading mining companies specializing in gold and they procure a range of materials, goods, consumables, machinery, and services. The gold mining companies in Mashonaland Central Province were chosen for the study as they are recognized as leaders in the private gold mining sector. The companies have encountered unsustainable costs increases which are a threat to survival as stated in their annual reports. The benefits of sustainable procurement to mining companies have not been fully looked at as they are usually thought of as benefits to the society and environment.

II. LITERATURE REVIEW

2.1 Sustainable Procurement

According to the Chartered Institute of Procurement and Supply (CIPS) (2013) knowledge summary as cited in Kalubanga (2015), sustainable procurement is a process of acquiring goods and services from suppliers in a manner that achieves value for money, on a whole life cycle basis by way of generating benefits to the organization society and the economy whilst reducing damage to the environment. The rise in global warming, climate changes, depleting natural resources, and increase in population are drivers of sustainable procurement. The call by the United Nations (2012) to meet the sustainable development goals by 2030 has made the concept be looked into with a different perspective across all nations and procurement plays a crucial role as large amounts of money are channeled to the procurement of needs. However, according to Renukappa (2016), there has been debate on how social, environmental can be combined.

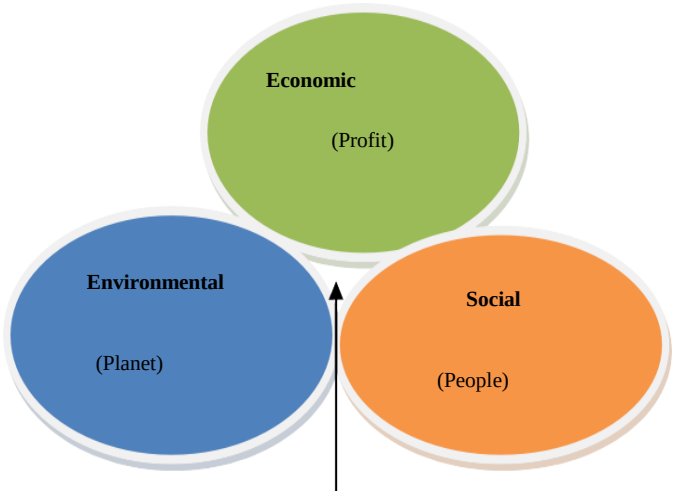

Figure 1: Triple bottom line concept of sustainability Sustainable procurement

Source: Smith (2010)

According to figure 2.1 above, the triple bottom line concept of sustainable procurement is grouped into three dimensions which are the economic, social, and environmental dimensions. Makkonen (2014) opines that the concept underpins sustainable procurement and is closely linked to developing sustainable procurement practices. Environmental factors include minimizing pollution, energy consumption, waste, and efficient use of materials (Lysons & Farrington, 2016). Economic impacts include value for money obtained through reduced costs, improved reputation, and social impacts which encompass the generation of social benefits through procurement by way of promoting human rights, fair and ethical trading, improving labor conditions, promoting local communities (UNEP, 2016).

2.2 Sustainable Procurement Practices

Firstly, supplier training is one of the most critical sustainable procurement practices that enhance sustainability. Training suppliers in new product developments or improvements allow for better design of products to meet the right specifications as well as packaging requirements of sustainability. Hence companies can have collaborative relationships with their suppliers to ensure supplier training goes well. To add on, commitment to waste reduction goals can be achieved. Kiwili & Ismail, (2016) postulate that this enhances innovation as there will be sharing of ideas between the buyer and the supplier which allows for waste minimization and improved recycling methods that will lead to positive effects after implementation.

Secondly, whole life cycle costing is a sustainable procurement practice that ensures that value for money is achieved which firms in the private sector seek to obtain. The total cost of ownership is broken down to see the costs of owning a certain product from buying up until disposal. It includes acquisition costs, maintenance costs, and disposal costs (Lysons & Farrington, 2016). This helps in saving costs as waste production is reduced and buying products of high quality that are sustainable and that meet environmental, social, and economic goals.

Finally, procurement of recyclable products is a sustainability practice that entails buying products that can be recycled so that there are no negative environmental impacts (Wallace & Omachar, 2016). Thus, aspects such as reduction, reuse, and recycling must be taken into consideration when designing products in the supply chain. Specifications are thus important to communicate to suppliers. The products must be disposable or can be returned to the supplier for recycling.

2.3 Procurement Efficiency

Procurement efficiency in this case describes how the concept of sustainable procurement practices is made sustainable by being economically logical, socially meaningful, and environmentally friendly. According to Benard (2015), efficiency can be analyzed in four areas of supply chain management which include design operations, inbound logistics, and reverse and outbound logistics. Design encompasses all activities to be done such as providing design specifications to suppliers, minimization of waste, corporation with the suppliers to achieve sustainable objectives, and sustainable packaging. Inbound logistics includes all activities that bridge the gap between suppliers and the organization by

making available raw materials and needed products. Benard (2015) further elaborates that engaging suppliers and sharing ideas will allow for innovation, reduced costs that is packaging and production. Outbound and reverse logistics include recycling of products, waste disposal to reduce all forms of waste to improve environmental performance and save costs.

III. RESEARCH METHODOLOGY.

The researchers adopted a descriptive case study research design to obtain detailed information on sustainable procurement practices in the private mining sector as well as to get a comprehensive explanation of the effect of sustainable procurement practices on supply chain efficiency. A descriptive research design was used because it is straightforward, authentic and it gives direction on noting research questions (Rebolj, 2017). The target population for the study was comprised of key informants in procurement, marketing, human resources, production, accounting, and the corporate affairs departments in mining companies. Therefore, the total population targeted was 12 and the sample size used was 10. This is in line with Saunders (2016) who stipulates that usually, the sample in qualitative research is small. Therefore, the sample size ensured that the results are not biased with regards to the total population of 12. The researchers conducted face-to-face and telephone interviews to gather data. Interviews were conducted with key informants who were to give relevant information.

IV. FINDINGS

The findings of the study show the effects of sustainable procurement practices on procurement efficiency and brand image as follows:

Firstly, the study found out that supplier training can lead to supply chain efficiency as a supplier produce what the organization wants and improves quality and delivery processes. The results are in line with research done by (Kiwili & Ismail, 2016) on the effects of sustainable procurement practices on supply chain performance the study found out that supplier involvement contributes positively to supply chain performance where costs and quality are improved. These findings also concur with a study by (Hussein, 2014) on the effects of sustainable procurement practices on organizational performance in the manufacturing sector in Kenya. The researchers found out that supplier involvement, corporate social responsibility, product reusability, ethical practices contributed to green procurement in the organization.

Secondly, on procurement of recyclable goods, the study found out that sustainable procurement has a positive effect on procurement efficiency as it reduces costs of procurement. The research is in line with findings of research done by Lemmet (2012) under the United Nations Environmental Programme in Brazil, Sao Paulo on the use of recycled paper. The purchase of notebooks that contained 60% of recycled paper showed significant positive effects on the triple bottom line that is economic, environmental, and social impacts. Purchasing costs were reduced, water consumption was minimized, waste production was also reduced, and improved economic activity. The results also concur with findings by Wallace & Omachar (2016), the researchers concluded that green procurement practices minimize environmental impacts through reuse, recycle activities and economically conservative business allow for lower raw material costs, production efficiency, and environmental safety expenses.

Pen-ultimately, the researchers found out that the use of environmentally friendly products has a positive effect on procurement efficiency. Such findings are consistent with previous research done by Wallace and Omachar (2016) on the effect of sustainable procurement practices on operational efficiency. The research concluded that the use of environmentally friendly products impacts positively on operational efficiency by improving waste prevention and energy saving.

Finally, the study found out that carrying out product whole life cycle analysis has a positive effect on procurement efficiency. It was found out that the practice of carrying out product whole life costing helps mining companies in making sustainable purchasing decisions. This helps in the efficient utilization of the available financial resources and ensures that mining companies procure products using within the confines of budgeted resources.

V. CONCLUSION AND RECOMMENDATIONS

Based on the results presented, it can be concluded that supplier training, product whole life cycle costing, procurement of recyclable products, and the procurement of environmentally friendly products have a positive effect on procurement efficiency in mining companies in Zimbabwe. Because of this, it is recommended that mining companies in Zimbabwe must implement sustainable procurement practices in their procurement functions to save on procurement costs to realize sustainable business growth, and to survive in a highly competitive industry.

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