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## **THE EFFECTIVENESS OF SUPPLY CHAIN MANAGEMENT PRACTICES ON MANUFACTURING MICRO, SMALL AND MEDIUM ENTERPRISES (MSME) IN LUSAKA: A CASE OF MANDEVU AND KALINGALINGA MARKETS**

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PROCUREMENT

## THE EFFECTIVENESS OF SUPPLY CHAIN MANAGEMENT PRACTICES ON MANUFACTURING MICRO, SMALL AND MEDIUM ENTERPRISES (MSME) IN LUSAKA: A CASE OF MANDEVU AND KALINGALINGA MARKETS

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### Abstract

**Purpose:** The purpose of this study was to find out the state of supply chain management within MSME's in Zambia by investigating the Supply Chain Management (SCM) practices, its benefits and challenges using some selected manufacturing micro, small-medium enterprises in Mandevu and Kalingalinga markets of Lusaka.

**Methodology:** The study used descriptive research design and chose questionnaire as the tool for data collection. Purposive sampling technique was employed to obtain information from both the management and staff of the MSMEs. One hundred (100) questionnaires were distributed to the respondents. The obtained data were then analysed using the descriptive method.

**Results:** The study found out that the manufacturing MSME sector appreciates good supply chain management practices, but does not practise it. The study discovered that the sector has not established long term relationships with its customers and suppliers. The sector was found to face several challenges which threaten its long term growth and survival, the most worrying challenges being the lack of financial resources, failure to practice continuous quality improvement, low integration of process technologies and forecasting challenges. The study also revealed that when implemented SCM practices deliver a number of benefits to the MSMEs. For example, increased response to the customer, cost-cutting on service delivery, improved information sharing and improved capacity to offer after-sale services. It is evident that MSMEs would perform well if supply chain management activities are improved. This, however, can be accomplished, if the MSMEs engage in strategic partnerships, customer relationship, high level of information sharing, information quality, as well as continuous quality improvement.

**Unique contribution to theory, practice and policy:** The study could be replicated in other industry sectors of the economy and also in other developing countries to help build on the body of knowledge.

**Keywords:** *Micro Small Medium Enterprises (MSMEs), Supply Chain Management (SCM), Supply Chain Management Practices (SCMP), Small-Medium enterprises (SME), Zambian Kwacha rebased (ZKr).*

## **1.0 INTRODUCTION OF THE STUDY**

In developing countries like Zambia Micro, Small, Medium Enterprises (MSMEs) are recognised for their role in creating employment, breeding entrepreneurs, making new products and services available to consumers and contributing significantly to Gross Domestic Product (GDP) (Zambia Business Survey, 2010). In the past, Zambia's economic growth was sustained exclusively by the mining sector. When the prices copper suffered a substantial fall, the government then shifted its focus on other sectors that could help to sustain the economy, and this resulted in the Micro, Small and Medium Enterprise (MSME) sector receiving special attention as a potential alternative (Chisala, 2008).

Over the past years, the government of Zambia introduced several policies to help establish the sector. These included policies such as the Small Industries Development Organisation (SIDO, 1981) which was established to cater for financing needs of small-scale companies as defined in the SID Act. In 2006 SIDO was amalgamated into the Zambia Development Agency (ZDA Act No. 11 of 2006). Recently the government enacted the movable property security interest act (act no.3 of 2016) that allows lenders to accept movable property as collateral. Also, put in place was the credit guarantee scheme (2017) that offers credit to commercial banks for credit extended to the local SMEs (Minister of Finance Margaret Mwanakatwe, 2018). These and other Acts of Parliament, demonstrate government's effort towards the development and long-term sustainability of MSMEs.

However, despite all of these efforts to boost the sector, it is unfortunate that many enterprises in this sector experience little to no growth at all (The Ministry of Commerce, Trade and Industry, 2008). Most literature available focuses on the financial problems faced by MSMEs in Zambia, for example, Nuwagaba (2011) dwelled on the Financing of SMEs by microfinance institutions and Emezie (2017) who identified that the problem of lack of financial resources presents a great challenge for the MSMEs. Little is written on the performance of the sector and the other constraints under which they operate, specifically the factors of supply chain management (SCM) which are an important factor in driving performance.

According to Lambert and Cooper (2000), there is need to recognise that Supply Chain Management when effectively implemented maybe not only a source of survival and growth but also the origin of strategic relationships for a competitive advantage. It is therefore important for researchers to articulate on supply chain management as a value addition tool and driver of performance in the MSME sector.

### **Statement of the Problem**

Micro Small and Medium Enterprises (MSMEs) play an important role in the economic development of many countries. In Zambia, MSMEs play a huge part in employment creation and economic growth. The role played by the sector in economic development cannot be overlooked (Zambia Business Survey, 2010).

However the survival and growth of SMEs can be difficult in the current competitive business environment and global marketplace; customers are more demanding to have better and cheaper products, higher service levels, more product varieties and faster delivery (Chow et al., 2008; Ketchen et al., 2008). The On the Frontier Group (2005) noted that the issue of value addition has been elusive for most African SMEs as their goods are not deemed attractive by many local consumers who opt to go for imported goods. Most MSMEs in Zambia are characterised by the use of low-level technology and are oriented towards local and less affluent market segments (Ministry Of Commerce, Trade and Industry. 2008). This

could be due to the failure to effectively implement supply chain management as a tool for value addition leading to loss of market share and lack of growth. These challenges stress the importance of managing cross-boundary relationships between business (supply chain) partners and this can be achieved through the practice of effective supply chain management.

### **Research Objectives**

The general objective of the study was to investigate the effectiveness of Supply Chain Management Practices on the performance of Manufacturing MSMEs in Lusaka while the specific objectives were:

1. To identify the supply chain management practices the manufacturing MSMEs have implemented.
2. To describe the supply chain management challenges facing the MSMEs.
3. To establish the benefits of adopting supply chain management practices by the MSME

### **Research Questions**

#### **Main Question**

What effects do supply chain management practices have on the performance of manufacturing MSMEs?

#### **Specific Questions**

1. What are the supply chain management practices that are currently adopted by MSMEs at Kalingalinga, and Mandevu Markets?
2. (a) What challenges are the MSMEs facing in adopting supply chain management practices?  
(b) Why do customers perceive the quality of goods and services delivery by MSME's inferior to imported goods and services?
3. How can MSMEs effectively use supply chain management to improve the quality of their goods and service delivery?

### **Significance of The Study**

Having a clear understanding of the exact factors that affect the supply chain management practices of Micro Small Medium Enterprises in the manufacturing sector will allow all the relevant government bodies and stakeholders to formulate solutions that will help to overcome these obstacles. This will help to ensure sustainable growth within the sector and improve their contribution to the Zambian economy as a whole.

It is important to note that although some studies have been done on MSMEs and factors that affect them, for instance by researchers such as, Nuwagaba (2015) who focused on the micro-financing of the SMEs, Musona (2014) concentrated on factors affecting the growth of micro-enterprises, Chisala (2008) who wrote about the Zambian situation in general, among many others and Chibbabbuka (2007) whose focus was on the communication strategies used to promote SME development. This study was therefore particularly important because currently there is inadequate information on the effect of supply chain management practices on MSME performance in Zambia. . It is important to note that MSMEs need more than financial assistance to optimum results for survival and sustainability in the current competitive markets hence the justification of this research it is vital to research on how effective supply chain management can improve the quality of goods and service delivery by MSMEs.



## **2.0 LITERATURE REVIEW**

### **Overview of Macro Small Medium Enterprises (Msme's)**

It is important to note that the definition of MSMEs varies between countries dependent on the country's level of development. The definition is also based on considerations such as the number of employees and revenue levels. The European Union categorises companies with fewer than ten (10) employees as 'micro', those with fewer than fifty (50) as 'small', and those with fewer than two hundred and fifty (250) as 'medium'. In the United States and Canada, SMEs are defined by their annual turnovers and number of employees. New Zealand considers an SME comprising of nineteen (19) people or fewer and a micro-business is defined as a business with fewer than five (5) employees (Wikipedia encyclopaedia). The Zimbabwe Revenue Authority (2014) defines MSMEs as, small company with (6) six to forty (40) employees, a medium-sized company is one with forty-one (41) to seventy-five (75) employees, and a business that operates below the threshold of a small enterprise is defined as a micro-enterprise.

Globally, MSMEs are seen to play a critical role in the economy through wealth and labour creation. According to Goto and Nagash (2016), it is estimated that SMEs constitute over ninety per cent (90%) of total enterprises in most economies with a high rate of employment growth. They are also a vehicle for increased industrial production and exports.

MSMEs, though small in size have become a vital part in the development of most economies of the world, this has seen them being placed at the forefront of accelerating economic growth in many countries. Governments at all levels have undertaken initiatives to promote the growth of MSMEs (Quartey, 2015). Small businesses technically dominate the market in the United States, as they accounted for 61.8% of net new jobs from the first quarter of 1993 until the third quarter of 2016 according to the United States Small Business Administration's Office of Advocacy (2017).

In developing countries, MSME's account for 90 % of all firms outside the agricultural sector and they also drive employment as well as serve as machinery for generating both local and foreign revenue (OECD report 2004.). In Ghana SMEs account for 70% of gross domestic product (GDP) in Nigeria they make up 70 % of the manufacturing sector (Emezie, 2017). The Majority of the SMEs in South Africa operate in the informal sector, and there are about seven hundred thousand (700,000) such businesses which contribute between sixteen to forty percent (16% to 40%) of the country's gross national product (DeSmidt, 1990; Thamas, 1989) and this is in concert with the Zambian scenario as the formal sector cannot absorb or give jobs to all.

Though it is clear that this sector is very important for sustainable economic growth, in Africa the MSME sector faces many challenges that include adverse and unpredictable climatic conditions, unstable world markets, rising operating costs, poor and incompetent management, cultural and legal and political interferences (Moenga, 2016).

### **Micro Small Medium Enterprises and Supply Chain Management**

In an increasingly international marketplace, many companies have shown great interest in supply chain management (SCM) due to the competitive advantage it possesses. Large companies have well recognised the benefits of SCM, but micro, small and medium enterprises (MSMEs) are lagging in appreciating the benefits that come with effectively implementing SCM practices which include better quality services, cost reduction and improved efficiency (Chin et al., 2012). This poses a problem for the MSMEs, as today's business environment is highly competitive, and the modern customer is more demanding of

quality, higher service levels, more product variety and faster delivery (Tachizawa and Thomsen, 2007; Chow et al., 2008; Ketchen et al., 2008). Considering this, it can be a real challenge to deliver the right product and service at the most opportune time and the lowest possible cost to the right customer. It is especially difficult for Micro Small-Medium Enterprises (MSMEs). These firms fight a competitive battle against large companies who have leverage and resource advantages and poor supply chain management only compounds the problems for these micro small-medium companies (Asare and Prempeh, 2016.p. 14). Thakkar et al. (2008) stated that presently the SMEs supply chain performance measurement is oriented towards internal business and profit maximisation, lacks measures related to market responsiveness, flexibility and delivery schedules, and complete order delivery.

### **Micro Small Medium Enterprises and Supply Chain Management the Global perspective**

MSMEs in the United States of America have well recognised the benefits of integrated supply chain through collaborative relationships this was echoed by a study on SCM practices among small retailers that was conducted by Hamister (2012) in the United States of America that identified four main practices among seventy-nine (79) small retailers in the US to be strategic supplier partnership, information sharing, and information quality and integration intensity. Tanco and Jurburg (2012) conducted an assessment of SMEs supply chain management best practices in Uruguay that showed Uruguayan companies place great importance on customer relationship management. The study established that the companies do not place as much importance on supplier evaluation and improvement methodologies, such as continuous improvement. The study also showed that the main difficulties that hinder supply chain performance were the availability and quality of labour force and the lack of integration between the interests of the public and private sectors

In Merseyside, in the United Kingdom, a study of SCM SMEs conducted by Meehan and Muir (2008) revealed that SMEs place a high emphasis on the relational benefits of SCM, specifically the ability to improve customer responsiveness and supply chain communications. The study went on further to explain that barriers to SCM also exist and this include lack of skilled personnel, lack of experience in improvement programs and lack of trust among members of the supply chain. In another study conducted by Sangachhen and Vallandingham (2016) in Norway, it was discovered that the local food industries, which are mostly SMEs, have challenges related to balancing supply and demand, though its popularity is increasing. Therefore, the ability to improve the performance of Local Food Supply Chain (LFSC) is extremely important. Specifically, efficient SCM and information sharing was found to be vital in improving the performance of a supply chain which is enabled by information technology.

In another study involving SMEs manufacturing companies in Turkey, it was found that the execution of SCM practices could deliver benefits to SMEs in terms of reduced inventory level, reduced lead time in production, increased flexibility, forecasting accuracy, cost-saving and accurate resource planning (Hocaoğlu et al, 2013).

### **Micro Small Medium Enterprises the African perspective**

A wealth of literature exists on benefits of MSMEs to developing African economies and the financial challenges they face, Quarteya et al. (2017) conducted a study on financing the growth of SMEs in Africa with specific focus on the West African sub-region, Turyahikayo (2015) outlined twenty-one (21) challenges faced by small and medium enterprises in raising

finance in Uganda and Mosbah, (2014) who focused on the development of Algerian SMEs in the age of globalisation.

However, there is a gap when it comes to literature that focuses on the supply chain management practices, of MSMEs from the African perspective. Development of African economies depends on investing in MSMEs and although this can be made possible with committed funding from traditional commercial banks and microfinance institutions others factors that impact the development of the sector should also be given equal focus (Muriithi, 2017).

The literature that does talk about supply chain management of MSMEs shows that the sector is lagging in the practice of SCM. It also sheds light on the benefits that come with the effective implementation of SCM practices. Benzing and Chu (2012) researched the perceived success factors and problems of small business owners in Africa and established that the most important factors associated with the success of the SMEs were non-managerial characteristics such as honesty and integrity, hard work, business reputation, good customer service and good quality products at competitive prices. Though this paper touched on some of the elements of SCM, they were not the major focus. Moenga (2016) focused on the supply chain management practices and challenges for the SMEs in Kenya's tea industry and established that although the small scale tea growing sector appreciates good SCM practices, they do not fully incorporate them in the operations of the sector. The study went on further to note that the sector faces financial problems that are caused by delayed payment from their customers, and this negatively impacts the whole supply chain. This study although relevant to this research was conducted in the agricultural sector (Tea growing) and data was collected from a small sample; therefore, it may not reflect the true picture of the SME sector in Kenya and Africa in general fully.

Asare and Prempeh (2016) found out that SMEs in the Agrochemical industry in Kumasi (Ghana) is not highly engaged in the practices of supply chain management through attempts are being made by management staff to practice such. It was established that the companies faced several hindrances to the smooth running of SCM and its associated benefits. These included loyalty and commitment that often impedes information flow, inadequacy of funds and technology and inadequacy of experienced personnel.

The importance of effective SCM practices to the growth and development of MSMEs should not be underestimated. According to an article in the African Business Insights written by a DHL staff writer (14 September 2017), John Lucas, country manager, for DHL Express South Africa, said SMEs need to make supply chain management part of their business plan if they want to succeed and exploit the opportunities in the continent's growing economies. This echoed a research conducted by Asare et al. (2014) on the effect of supply chain management practices on performance of SMEs in Sekondi-Takoradi metropolis of Ghana that concluded that SMEs would perform well if supply chain management activities are improved and practised properly. They went on further to state that effective SCM can be accomplished if the SMEs engage in strategic partnerships, customer relationship, high level of information sharing, as well as information quality.

### **Micro Small Medium Enterprises and Supply Chain Management a regional perspective**

Katunzi and Zheng (2010) performed a comparison of the SCM perceptions between Tanzanian SMEs and large firms. The research looked at four major issues: the benefits of SCM, the type of information sharing, the motivation for SCM integration and other collaborative SCM activities. The study found that Tanzanian SMEs aimed to reduce costs by

engaging in SCM. While they expected to minimise the competitive effect in the market, they were reluctant to share information with other supply chain network members and less eager than the large firms to employ advanced information systems. Another study that explored the perceptions of SMEs regarding supply chain management practices such as information sharing, trust, synergies and performance of suppliers, was conducted in South Africa by Loury-Okoumba and Mafini (n.d). They concluded that SME owners and managers perceive that supply chain management practices are important contributors to supply chain performance. However, the study also noted that improvement was needed in areas of continuous improvement and information sharing.

In Zimbabwe, a research was carried out that established that the supply chain activities of SMEs in the manufacturing industry are greatly affected because SMEs do not recognise the importance of integrating information technologies (IT) and strategic purchasing for the improvement of business performance (Chinomona, 2013). This study only focused on the value of information technologies but did not account for other SCM variables.

### **Micro Small Medium Enterprises and Supply Chain Management a Zambian perspective**

The Small Enterprises Development (SED) Act of 1996 defined SMEs as follows:

Firstly, an enterprise is defined as an undertaking engaged in the manufacture or provisions of services or any undertaking carrying out business in the field of manufacturing, construction and trading services but does not include mining or recovery of minerals.

Micro, an enterprise whose total investment excluding land and buildings does not exceed fifty million Zambian Kwacha (rK50,000); annual turnover that does not exceed twenty million Zambian Kwacha (rK20,000) and employing up to ten (10) persons.

Small, an enterprise whose total investment excluding land and buildings does not exceed fifty million Zambian Kwacha (rK50, 000), in case of manufacturing and processing enterprise and ten million Zambian Kwacha (rK10, 000) in case of a trading and service enterprise; an annual turnover that does not exceed eighty million Zambian Kwacha (rK80,000) and employing up to thirty (30) people.

The act does not define a medium enterprise, but according to Mbuta (2007, p.VII), an enterprise is considered medium if it has a total investment of one million eight hundred thousand (ZKR 1 800 000) for the manufacturing sector and six hundred thousand (ZKR 600, 000) for those in the trade sector. Such a firm must also have an annual turnover of no more than five million (ZKR 5 000 000) for both the trade and manufacturing sectors with a maximum number of 100 employees in both cases.

According to Chisala (2008), the need to reduce over-dependency on mining exports led to Zambia recognising the importance of diversification in the economy. This forced the Zambian government to consider other alternative ways of sustaining the economy; therefore policies aimed at promoting MSMEs growth were put in place in as early as 1981 and the government has continued improving on these policies. These policies included the Zambia Development Agency (ZDA Act No. 11 of 2006). In 2010 the Micro, Small and Medium Enterprise Policy was launched to help develop this sector by providing the appropriate framework. In addition, the Citizen Economic Empowerment Policy was launched to provide funding to entrepreneurial Zambian citizens to help them develop income-generating businesses (Musona, 2014). With the most recent additions been Movable Property Security Interest act (act no.3 of 2016) that allows lenders to accept movable property as collateral and



Credit Guarantee Scheme (2017) that offers credit to commercial banks for credit extended to the local MSMEs. The minister of commerce, trade and industry in 2008 revealed that the preferred strategy for the enhancement of economic growth was the production of non-traditional export products and creation of Micro, Small and Medium Enterprises. Currently, MSMEs are found in almost all business sectors in Zambia and provide one of the largest sources of employment and wealth creation (Nuwagaba, 2015). MSMEs make up a significant part of the manufacturing sector in Zambia which makes them a hub for the development of entrepreneurial talent. However, despite the government's efforts to fund and support MSMEs through the policies mentioned above the development of the sector has remained a challenge (Minister of Commerce, Trade and Industry, 2008). According to the Zambia Business Survey (2010) past analysis of Zambia's business environment has shown that private sector competitiveness has been hampered by focusing on large formal-sector enterprises. Neglecting the fact that MSMEs have a huge potential of growth to become large enterprises of tomorrow and contribute immensely to the social and economic development of the country if the right strategies and infrastructure are put in place.

The government, through the Bank of Zambia, has set up a number MFIs in most of the provinces in the country to reach small investors (Bank of Zambia, 2014). According to BOZ, 2014, there are currently thirty three (33) MFIs all engaged in Micro financing, and they are all registered in Lusaka, and their main purpose is the financing of SMEs. A survey conducted by the World Bank on Enterprise Development in Zambia (2007) identified poor access to finance as a major impediment to investment and growth in Zambia. Nuwagaba (2015) conducted a study on the micro-financing of SMEs in Zambia. The study established that it would be difficult to attain the growth of the SME sector without dedicated initiatives for providing microfinance facilities to entrepreneurial SMEs. Furthermore, Musona (2014) undertook a study on the MSME sector to establish factors constraining the growth of micro-enterprises in Lusaka and stated that the top five factors constraining the growth of micro-enterprises in Lusaka are excessive competition, lack of finance, vulnerability to crime, lack of market demand and high family demands respectively. Chisala (2008) noted that Zambian SMEs as are mostly constrained by credit which in turn also limits their entrepreneurship innovations. He also alluded to the importance of creating linkages between MSMEs and larger companies as this facilitates training, education, research and development, technology transfer, innovation and creates a platform for financial support

It is clear research has been done by quite several researchers on Zambian MSMEs, and its virtue has been identified on financing the sector. Although finances impact a huge part of MSMEs operations, alone, it cannot achieve optimum results for the survival and sustainability of the MSMEs in the current competitive markets hence the justification of this research it is vital to research on how effective supply chain management can improve the quality of goods and service delivery by MSMEs.

### **Emerging Issues**

It appears that supply chain management practices and benefits vary from one industry to another. There is no universally accepted set of SCM practices that apply to all organisations, large or small. However, the challenges faced by MSMEs in both developing and developed economies are similar. As established from the literature, these challenges include lack of financial resources, the poor practice of continuous improvement, and poor flow of information, among many others. The literature also revealed that MSMEs in developed countries have a better appreciation of the benefits that come with the implementation of SCM practices.

## Research Gaps

An analysis and review of past studies reveal that little research has been done with a specific focus on supply chain management practices of MSMEs in the Zambian context. Past studies on supply chain management practices both in Zambia and internationally have been very general. Most of these studies continue to focus on large businesses and those that do focus on the MSMEs mostly talk about the financial challenges the sector faces. There still exists a conflict in the literature in terms of the common SCM practices adopted by MSMEs. Given the absence of any past surveys focusing on SCM practice of manufacturing MSMEs, this study, therefore, seeks to identify the current SCM practices adopted by the MSMEs and give recommendations on how to improve the effective implementation of SCM.

## 3.0 Theoretical Framework

### Strategic Reconciliation

Operations strategy is the total pattern of decisions which shape the long term capabilities of any operation and their contribution to the overall strategy through the reconciliation of market requirements with operations resources (Slack and Lewis, 2011). This definition shows that operations strategy is concerned with the reconciliation of market requirements and operations resources, and it does this by:

- Satisfying market requirements measured by competitive factors by setting appropriate performance objectives for operations.
- Taking decisions on the deployment of operations resources which affect the performance objectives for operations

Using the market-based approach to operations strategy, an organisation makes decisions regarding the markets and customers within those markets that it intends to target. An organisation's market position is one which its performance enables it to attract customers to its products and services in a more successful manner than its competitors. Competitive factors are how a product or service wins orders in a market, for example, price, quality, speed of delivery, dependability and flexibility. It is highly recommended that a market-led approach is adopted as it would be of immense advantage to the company, especially in fulfilling its corporate objectives of maximising a competitive advantage (Shavarini et al, 2013).

An operations led perspective (resource-based view) is one in which an organisation's strategy is driven by excellence in operations (Slack, 2007). This strategy considers how operations can effectively use the resources and capabilities they possess to meet market requirements. The RBV deals with competitive advantages related to the firm's possession of heterogeneous resources (financial, physical, human, technological, organisational, and reputational) and capabilities (the combination of two or more resources) (Grant, 1991; Penrose, 1959; Prahalad and Hamel, 1990).

The resource-based view (RBV) implies that resources are allocated heterogeneously (unevenly) within an industry. Organisations, therefore, must be aware of their strengths and weaknesses, as they have to develop strategies on how to outperform competitors with the given resources bundles and capabilities (Grant, 1991). These resources and capabilities can be important factors of sustainable competitive advantage and superior firm performance if they possess certain special characteristics. They should be valuable, increasing efficiency and effectiveness, rare, imperfectly imitable and non-substitutable (VRIN) (Barney 1991).

Terry Hill (1985) proposed that there should be a link between an organisation's operations strategy and its marketing strategy by considering how its products and services win orders in

the market place. Further explained that it is possible to identify two types of competitive criteria in any market, for example, order qualifiers and order winners.

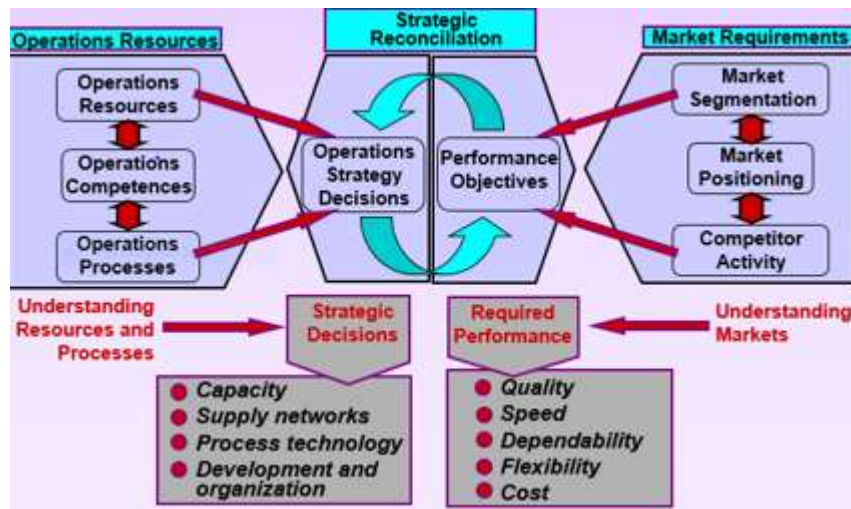


Figure 1 Strategic Reconciliation Adopted from, Nigel Slack and Michael Lewis 2003

### Value Chain Analysis

Porter (1985) identified the 'value chain' as a means of analysing an organisation's strategically relevant activities to understand the behaviour of costs. Porter went on further to explain that a value chain refers to all the activities and services that bring a product or a service from conception to end-use in a particular industry, from input supply to production, processing, wholesale and finally, retail. It is called so because the value is being added to the product or service at each step. Taking a value chain approach to business means addressing the major constraints and opportunities faced by businesses at multiple levels of the value chain (Prescott. 2001). In a supply chain, competitive advantage comes from carrying out those activities in a more cost-effective way than one's competitors. Value chain analysis is important because:

### Porters Value Chain Analysis



Figure 2 Porters Value Chain Analysis  
Adopted from, Porter (1985)

MSMEs do not exist in isolation and always need the support of other competitors on the market as alluded to by the theories. Interaction with members of the supply chain both internally and externally ensures efficiency and quality delivery of goods and services. Flexibility and dependability enable MSMEs to sustain their business, and the coexistence will ensure that there is no market failure when providing goods and services to the community. In so doing, performance is enhanced as they are deemed to be effective on the market. SCM provides an opportunity for MSMEs to align supply chain objectives with business strategy; it is an opportunity to develop and maintain relationships and equally important, to identify skills and competencies, thus allowing a focus on life-cycle costs (Quayle, 2003)

### Conceptual Framework

The conceptual framework shown below was developed based on the literature review and the theoretical framework. The conceptual framework illustrates the proposed linkage between product quality, flexibility, dependability, speed of delivery and cost, which are taken to be the antecedents of SCM practices. In turn, the adoption of SCM practices is taken to be a driver of value addition and customer satisfaction. MSMEs choose which operations objectives they want to compete on, based on their strengths. The market effectiveness of any product or service development process can be judged in the same way as the other operations processes. This means that the development process can be judged in terms of the five performance objective factors. Since organisations may fail to excel in the above all the operations objectives at the same hence the need for trade-offs of some competencies and this can be achieved by taking into consideration the four decision areas. The decision area followed determines the outcome in terms of performance. Achieving strategic fit by making a balanced trade-off among the competitive priorities that are focused on the organisations' strengths leads to SCM benefits both internally and externally.

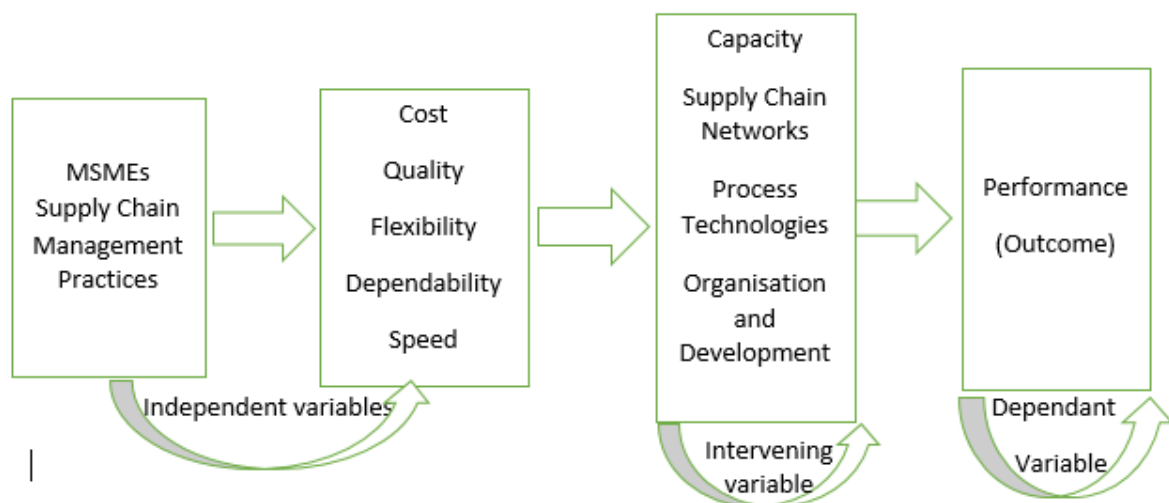


Figure 3 Conceptual Framework Source: Author (2019)

## 4.0 RESEARCH METHODOLOGY

This dissertation used the descriptive approach since there is no influence of the variables involved in the study. This approach also ensured ease in understanding the insights and ideas about the problem. Primary data was collected using a questionnaire administered on a one-on-one basis. The questionnaire was structured according to the objectives of the study.



Homogenous purposive sampling was used for this research. To support this study, the MSMEs in Mandevu and Kalingalinga markets of Lusaka were selected in which manufacturing activities (metal and wood fabrication) are performed. A descriptive statistical data analysis method was used and the data presentation done by use of frequency tables and charts. There is no latest documented baseline survey on MSMEs in the country. So, the available reliable base line data on MSMEs in the country is of the year 2010.

According to a 2010 World Bank Survey, Lusaka Province had a five hundred fifty-five (555) registered MSMEs. This was the basis for the target population of five hundred fifty-five (555) for this study.

The sample size was determined using the formula provided by Israel (1992) at the confidence level of 90%. The formula was developed by Yamane in 1967 and calculates the sample size as follows:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{555}{1 + 555(.10)^2}$$

## 5.0 RESULTS

### Supply Chain Management Practices

The first objective of this study was to establish the supply chain management practices adopted by the manufacturing MSMEs in Mandevu and Kalingalinga markets. The data collection tool asked the respondents to indicate the SCM practices that they adopted. The respondents had been provided with sixteen (16) practices from which to choose using a scale as provided in the questionnaire. The responses are discussed as follows:

#### Understanding of supply chain management

On the part of the understanding of supply chain management (SCM) found in the two areas of study, findings indicate that the majority 41% had an average understanding of what SCM is. This was followed by 32% that understood SCM to a small extent. This vividly shows that most of the respondents in the MSMEs sector have a limited understanding of SCM as indicated mainly by 41% who had an average understanding of SCM.

#### Operations Management

The results show that operations management is practised to on average extent except for the integration of process technology (46%) and continuous quality improvement (46%) that are practised on a small extent

#### Customer Relationship Management

Offering after-sales services (36% to a great extent) and dependable and timely delivery (36% average extent) were the most practised in customer relationship management while frequent interactions with (24% small extents) customers and customer follow-ups for quality/service feedback (27% small extent) are among the lowest. It was established that the

location of the two areas of study acted as an appropriate distribution point as customers easily have access to the MSMEs.

### **Challenges Faced in the Implementation of SCM**

In terms of the challenges faced during the implementation of SCM, the study revealed several factors that inhibit the MSMEs desire to promote better SCM practices were found +both internally and externally. The respondents were provided with seventeen (17) challenges to respond to. The challenges that were considered were lack of financial resources, continuous quality improvement, customer relationship management, process technology integration, supplier relationship management, location, transportation and many others.

It was also established that though the MSMEs in the two areas of study have an average extent rating of 54% in maintaining quality standards the challenges they face in SCM implementation causes customers to perceive the quality of their products as inferior to imported products and those manufactured by large businesses.

### **Lack of financial resources**

The responses from MSMEs confirmed that accessibility to bank loans and finance still represent the greatest problem for MSMEs in Zambia. It was established that inadequate capital to start and sustain a business is a major challenge that hinders the growth of the sector as 41 % of the respondent rated this challenge as been felt to a great extent. 26% rated it has been felt to a very great extent, and 16% said they felt the challenge to on an average extent. Only 17% of the MSMEs rated the challenge very small or small extent.

### **Integration of process Technologies**

The MSMEs operating in Mandevu and Kalingalinga markets showed that their adoption of process technologies in their production processes is limited, as shown by the figure above. This challenge was rated as been felt to a great extent by 37% of the respondents and 24% rated it as an average and very great extent.

### **Customer and supplier relationship management**

The respondents rate the challenge of customer relationship management 37% average, 32% great extent and 11% very great extent. The same frequency was noted on supplier relationship management which had ratings of 31% average extent, 33% great extent and 16% very great extent

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### **Continuous quality improvement**

The study established that as a challenge in the implementation of supply chain management practices, continuous quality improvement is experienced on an average extent by 25%, to a great extent by 35% and to a very great extent by 21%. This is an indication that continuous quality improvement is a major challenge faced by manufacturing MSMEs

### **Supply and Demand uncertainties**

As a challenge to the implementation of SCM practices supply and demand, uncertainty is felt on an average extent of 33% and 41% respectively. To a great extent, they are felt at 14% and 20% respectively.

### **Reasons and Benefits to Engage in Supply Chain Management**

This portion of the research presents diverse reasons why it is necessary to engage in SCM and some of the benefits derived by MSMEs from the practice of SCM. On a scale of one to five (1 to 5), the respondents were asked to indicate the degree of importance of eighteen (18) SCM benefits to their businesses.

To assess the influence of supply chain management on the operations of MSMEs emphasis was given to several factors such as increased end satisfaction, improved product quality, cost-cutting on service delivery, improved relations (customer/supplier), and many others shown by table 5.4. 1 and figure 5.4.2. The finding established that the MSMEs do recognise the benefits that come with effective implementation of SCM to a great extent despite the challenges they face.

### **Benefit of SCM practices**

The research shows that among the highest benefits derived from the effective implementation of supply chain management practices are accurate information sharing (44%), access to experienced operators (41%), and improved quality of outsourced services (40%).

### **Impact of SCM on customer relationship management**

Of great interest were ratings given to the influence of SCM practices on the management of customer relationship management. It had the highest ranking of 46% on improved service delivery and improved capacity to offer after-sale services. Cost-cutting on service delivery, improved customer perception of product quality, reuse of recycled materials, consideration of customer feedback, improved production capacity and timely delivery of products and services received ranked 41%, 42%, 33%, 39%, 32% and 34% respectively

## **6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **Summary**

Manufacturing MSMEs in Mandevu and Kalinganga markets are not highly engaged in the practices of supply chain management though they do make attempts to practice. Aside from the practice of offering after-sales services which was practiced effectively, others which included supplier selection evaluation, customer relationship management, continuous quality management, outsourcing, integration of process technologies and the management of information flow though practiced by the MSMEs were not effectively carried out as revealed by the findings. The findings established that the MSMEs in the two areas of study have a moderate (41%) understanding of the concept of supply chain management, this may be one of the reasons there is the poor practice of SCM. The responses from MSMEs confirmed that accessibility to bank loans and finance still represent the greatest problem for MSMEs in Zambia. It was established that inadequate capital to start and sustain a business is a major challenge that hinders the growth of the sector as 57 % of the respondent rated this challenge as been felt from a great extent to a very great extent. The specific financial elements mentioned here were as follows; limited access to capital, working capital and investment capital. As per findings, the relationship management skills within the sector leave a lot to be

desired. The major difficulty has been the poor management of information flow by the MSMEs themselves because they do not make frequent follow-ups on the members of their supply chain to obtain feedback. Hence making it difficult for them to innovate because suppliers are not aware of their preference and this in turn hinders their ability to meet customer requirements as the quality is defined by customer preference. From the findings of the study, it was established that although MSMEs appreciate that process and information technology integration is a strategy that can improve the competitiveness of the sector the case of the MSMEs operating in Mandevu and Kalingalinga markets showed that their adoption of process technologies in their production processes is limited. Sadly the study established that continuous quality improvement, an important factor of SCM poses a major challenge for the MSMEs as only over 83% acknowledged facing challenges in this area. This is mainly due to these factors; lack of management support, poor supplier evaluation processes and the neglect in considering customer feedback. The study established that most of the MSMEs produce quality goods but their failure to implement effective SCM especially in the areas of customer relationship management, supplier relationship management, supplier selection evaluation and continuous quality improvement give rise to the perception that their products and services are of inferior quality as compared to imported goods or services produced by large companies. The study established that the manufacturing MSMEs agree that the effective implementation of SCM comes with many benefits. It was revealed that all the eighteen SCM practices identified were important to a great extent. In particular, managing customer and supplier relationships, information sharing and continuous improvement were the highest rated practices. From the findings, SMEs have continuously been unable to take the advantages of the benefits associated with the practice of SCM due to lack of financial resources, lower levels of technology integration and the reluctance of implementing SCM as a whole. In order to be successful SMEs should share their stock, production and promotion estimation and plans with customers and suppliers which form the other ring of the chain.

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### **Recommendations**

Based on the results and findings of this study, the researcher makes the following recommendations:

**Education and awareness:** Awareness about good supply chain management practices in MSMEs is very low. The SMEs tend to adopt a rather narrow view when it comes to business practices. There is a need to educate the MSMEs on the importance of the good practices of SCM, just like any other business as they operate in a dynamic business environment as a value addition tool that increases competitive advantage and encourages sustainable growth.

**The need to monitor the chain:** The firm must ensure that appropriate measures and indicators are analysed regularly to ensure that everything is working to plan so that any shortcomings can be quickly identified and action is taken if necessary.



**Customer relationship management:** The importance of CRM in the supply chain cannot be overemphasized. Several components go into superb customer relations that MSMEs should implement.

- **Marketing:** Strategically promoting services or resources that make an organisation stand out is a huge part of customer relations.
- **Consistency:** MSMEs should make sure that they are consistent not only in what they offer but in how it is offered, as it inspires loyalty in existing customers and repeats business in new customers.
- **Responsiveness:** A prompt, positive response works to build trust in customer relation, and the MSMEs should endeavour to achieve this by all means possible.
- **Flexibility:** In this ever changing marketplace, MSMEs have to be able to make changes quickly to adapt to customer needs and competitor offerings. MSMEs should seek to promote flexibility in their operations by effectively practising SCM.

### **Supplier selection evaluation**

Group suppliers into categories that match their performance for evaluation such as underperforming, preferred and strategic. Look to working with each category to bring cost reductions to your business and to the supply chain. Those that are underperforming are likely to bring few improvement ideas to the supply chain. Each represents a cost in terms of negotiation time and services. A substantial reduction in their number will free up time to spend on more productive supplier activities. Enter into negotiations with preferred suppliers to explore the potential to reduce inventory, distribution, handling, and warehousing costs. Cost transfers may be negotiable in return for commitments to longer-term supply.

### **There is a need for continuous improvement.**

To improve the quality of their products and respond to ever-increasing customer needs, there is need for continuous improvement. Because MSMEs cannot produce goods and services in mass like larger companies, errors can be especially costly. Focusing on continuously identifying potential sources of errors and fixing them can avoid problems that might otherwise crop up over time.

**Complete support is needed from the Government:** Through its various Ministries and bodies that are directly responsible for the development of SMEs to encourage the practice of SCM.

### **Limitations of the Study**

Although the study was successful, it also faced a number of limitations which are briefly explained here. During data collection, it was discovered that most of the respondents had little information on SCM practices, although they had adopted some of them in their businesses. The study was also limited by respondents' unwillingness to give information and the lack of a clear database of the Manufacturing Micro, Small and Medium Enterprises (MSMEs). Given the crucial role of the Micro, Small and Medium Enterprises (MSMEs) in the growth of the county's economy, the relevant authorities need to respond to the limitation

by developing a reliable database of all the Micro, Small and Medium Enterprises (MSMEs) in this line of trade.

### Areas for Further Research

This research was a case study of the manufacturing micro, small-medium enterprises in Mandevu and Kalingalinga markets of Lusaka. Data was collected from a limited sample and therefore may not reflect the true picture of the MSMEs sector fully in Zambia. The researcher wishes to recommend that further studies be conducted relating the SCM practices of MSMEs within Zambia and Africa in general.

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