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BARRIERS TO EFFECTIVE SUPPLY CHAIN MANAGEMENT IMPLEMENTATION IN THE ZIMBABWEAN PUBLIC SECTOR: A CASE STUDY OF PUBLIC PROCURING ENTITIES IN HARARE, ZIMBABWE

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Abstract

This study investigated the barriers to effective supply chain management implementation in the context of Zimbabwean public sector. We aimed to identify strategic barriers affecting supply chain management implementation among public procuring entities in Harare and establish the technological barriers affecting supply chain management implementation among public procuring entities in Harare. It was also premised to uncover the organizational barriers affecting supply chain management and implementation amongst public companies in Harare. The study was a cross sectional survey of selected public procuring entities in Harare. These included the Ministry of Health, Ministry of Agriculture, Ministry of Transport, Ministry of Finance and Ministry of Economic Development. A total of 132 respondents took part in the study. The findings revealed that the government departments under study lacked supply chain management planning that is well synchronized with the respective ministries' overall strategic planning. Inconsistencies were identified between the departments' supply chain structure and information systems that had been implemented and it had become difficult to incorporate real-time information sharing into supply chain operations.

Keywords: Organizational Public Sector, Strategy, Supply Chain Management, Technology, Barrier

1. Introduction

Due to rapid changes in global procurement, effective supply chain management has become more important than ever in both the private and public sector. More specifically, effective implementation of supply chain management in the public sector can help in improving efficiency, cutting costs as well as creation of good reputation (Abubakar, 2018; Mudgal *et al.* 2018). Empirical studies have also shown that the successful implementation of supply chain management can help in eliminating operational costs, improving customer satisfaction, reducing time overruns as well as increasing process performance (Ahmad *et al.* 2018; Govindan and Hasanagic, 2018; Prieto-Sandoval *et al.* 2018). Green (2012) argued that there have been many documented cases where total quality management (TQM) initiatives have failed to succeed and these have been often blamed on the implementation process. Employee satisfaction is considered to be one of the most important drivers of quality, customer satisfaction and productivity (Matzler and Renzl, 2006). Evidence existed that superior logistics customer service led to better overall firm performance. Logistics customer service has received considerable attention over the past several decades (Leuschner *et al.* 2013a). Watkins and Yandle (2011) found that international migration is driven more by state knowledge on economic developments, the reward structure and personal freedom. Peltzman (2007) argued that national regulation is difficult to change without a crisis. The research method was a cross-sectional survey of selected public procuring entities in Harare, Zimbabwe.

Research in public procurement sheds light on operations issues that impact efficiency, costs, reliability, trust, confidence, repeat business, public confidence, government credibility, economics and a business culture and disposition. Logistics scholars, as well as strategic management scholars, have in recent years shown that capabilities in logistics and supply chain management may be the foundation for a company's sustainable competitive advantage (Sandberg, 2013; Branch, 2000; Parent *et al.* 2018). Sandberg (2013) said it could be argued that beside product, production, or market-oriented companies, there were also flow-oriented companies, in which the business models are based on superior logistics performance. It is all these issues which have not been managed properly in Zimbabwe as confirmed by literature review which this research sets to explore and dig deep into for the benefit of industry, academia and government. Sales Force Automation (SFA) technologies are commonly used to support customer relationship strategies in firms across industries around the world today (Holloway *et al.* 2013). The body and body organs need service in hospitals regularly so does a supply chain system, like repairs and maintenance of equipment and buildings, public infrastructure, investment in new equipment and systems, regular skills development to take care of attrition as people die, retire and leave the organization for many reasons, and many other necessary activities to keep system efficient, operational and cost effective. Our car engines need flushing to remove slug and toxic waste that builds up as we use them (changing oil, filters, plugs, etc.). It is the same with a supply chain system. It requires regular cleansing by firing incompetent employees, thieves, looters, the lazy, those with feigned false sickness on a regular basis absenting themselves, the corrupt, eccentric characters and social outcast causing havoc in the organization and those who do moonlighting and insider trading bleeding the organization through corruption and theft. You also need a regular injection of graduate trainees from universities to bring fresh ideas and practices. It is necessary to have a compulsory leave policy too so that every supply chain staffer is away for thirty days, and someone does his/her job. This is the time deals and scandals explode in somebody's absence as there will be no one to cover up.

Corrupt men and women do not want to go on leave and give dozens of excuses for refusing to go on leave. Some become insane to the point of insisting that nobody could do their job. Well, if nobody can do your job that is a sign of a failed hopeless manager who should be fired immediately for holding the company to ransom and for not having a viable training program in place, a breach of standing policies and strategy in every company. Companies do not need indispensable people but team players and cooperating experts. Companies are not sole traders and tuck-shops to look to one person as savior. Companies require functional superb systems not selfish supermen with a village mentality who create fiefdoms of their own rather than serving as managers in a competent team. Cases have come up in Zimbabwe and elsewhere globally

many times where a very sick procurement committee member leaves a hospital bed just to attend a procurement committee meeting and sway decisions in favor of his friends' companies where he/she got bribes and then go back to his/her hospital bed straight from the procurement committee meeting. Common sense tells a long obvious story of a trail of corruption and underhand deals. It was quite imperative for organizations to pick up corrupt tendencies before they destroyed and destabilized their firms too much. Psychologists and human resources researchers have been writing about what the corrupt do which quickly exposes them to the public eye. Numerous studies have concluded that the corrupt and their immediate families engage in funny lifestyles unimaginable and incompatible with their incomes and lived kingly and princely lifestyles divorced from the rest of society. They buy expensive real estate properties one after another, live celebrity lives, buy expensive exclusive posh cars, have expensive overseas holidays, do expensive shopping, their children attend expensive elitist schools and universities in or outside the country, they buy out of this world expensive clothes and jewelry, wine and dine in expensive restaurants and hotels, and lastly, they show off their loot irritating honest workers and honest people in their neighborhoods, who then report them to the police or their companies for investigation. This is how they get caught. Some of the corrupt act in brazen dastardly manners mocking the honest employees as stupid idiots who are not smart and could not manage their finances and enjoy good well to do life like them. It becomes very irritating and provocative. Corruption was as intoxicating as alcohol or drugs, there were no safeguards when corruption became too much and involving large amounts of money and asset abuse, the history of corporate fraudsters tells us very clearly. CIPS (2019) said it all in its regular news magazine Supply Management, when they said that to avoid corruption risks in the first place, businesses had to understand the type of fraud or corrupt practices that existed, such as bid-rigging, or bid-splitting; creation of shell companies to facilitate fraudulent payments; variations in contracts or purchase orders; collusion between suppliers; unjustified single source awards; and false invoices for non-existent suppliers. Literature suggests that that whistleblowing is the most common best practice, followed by anti-corruption training and audits of internal controls (CIPS, 2019; Patra et al. 2021).

Lifestyle audits were one of the most effective ways of stemming corruption as well as whistle blower schemes of which in Zimbabwe, The Zimbabwe Revenue Authority (ZIMRA) had been very successful in this regard catching and firing quite a number of corrupt employees and instilling a sense of discipline and ethics amongst its workers as well as the transacting public. Support was shown for a negative relationship between unethical intention and both trust in manager and customer-oriented selling. Literature is full of these stories. An alternative perspective recognized that purchasing business services requires its own set of sourcing capabilities, which may be lacking (Selviaridis et al. 2013). The intra- and inter-organizational dynamics of the knowledge economy require a unique focus on the development and maintenance of trust (Zanini and Musante, 2013). Marketing relationships within and across firms will change and require a renewed emphasis on trust to safeguard the key asset in the knowledge economy. This emphasizes the central importance of knowledge workers in all disciplines, including marketing and supply chain. Four crucial SCM security management dimensions were identified: facility and cargo management; accident prevention and processing; information management; and partner relationship management (Yang and Wei, 2013).

Although there is a plethora of benefits related to effective supply chain implementation, the public procuring entities in Zimbabwe had been very slow in embracing it. For example, there had been a disintegrated supply chain management system between the suppliers and government departments due to resistance to adopting technological advancements in procurement (Dzuke and Naude, 2017). Due to inadequate supply chain management implementation, the government's departments have been characterized by reduction in inventories, overpaying for freight invoices, and lack of information sharing with suppliers and other partners, decreased mutual trust among supply chain partners as well as increased product life cycles (Parent et al. 2018). More so, many procurement departments in government ministries had been accused of lacking commitment, inadequate IT infrastructure as well as poor comprehension of the concept of supply chain management. As a result, most government departments have been encountering immense complications in procuring materials required to carry out efficient services thereby negatively impacting on the bottom line. This research seeks

to delve into the history, magnitude, effects and reasons for the existing barriers to public procurement in Harare, Zimbabwe with a view that the results of these studies could be generalized to the whole public sector in Zimbabwe and elsewhere in similar circumstances. This will help improve systems, procedures, cut costs, improve quality of service, reduce waste and go the extra mile with the national budgets on public procurement for public benefit. No country can be competitive internationally without fixing its public entities, especially public procurement. This is the gap in knowledge and contribution to the stock of knowledge that researchers were seeking to fill. The reasons and justification speak for themselves.

The situation was worsened by the COVID-19 pandemic which further increased costs of materials as well as procurement of poor-quality goods (The Zimbabwean, 2020). In 2020, many corruption scandals were exposed, and some were convicted and fined or jailed (The Zimbabwean, 2020). Thus, the Covid-19 pandemic revealed extensive deficiencies in the government's inability to procure items needed in the fight against Covid-19.

The International Trade Centre (1993) said in its world eminent book that potential investors were concerned about national resources, investment participation by local investors, national environment (political stability, infrastructure, institutions, utilities and custom/immigration services) and finally investment climate (taxes, labor regulations, incentives, approval procedures, profit repatriation regulations, etc.). They said this was looked at as a complete package. Zimbabwe's situation had to be looked in that context, competing for investment and supplies with the rest of the world. Would Zimbabwe be a preferred customer by suppliers given its current situation? Running nation states was not a play show but a complex system with highly contradictory and diverse interest groups, sometimes pulling in different directions. Politics was for the thick skinned and brave, men and women who put their countries and national interest ahead of anything else, ahead of personal interests.

Any person analyzing the barriers to supply chain implementation in the Zimbabwean public sector would be short-changing society and academia if he/she did not get to understand the political and economic history of the country and where it had landed the country. Only in that context would correct conclusions be drawn on any findings as those would be based on reality on the ground. A knowledge of the crucial events in the development of modern civilization was the other part of a basic education for citizenship in the modern world, (Ellis, 2020). This paper would explore among many other factors, whether citizenship education was compulsory in Zimbabwe universities and if not, why, and with what consequences for everything including public procurement?

Manfred and Alain (2010) said that most political leaders want policy stability. Aspromourgos (2010), argues that if a competitive capitalist economy is to work properly one needs transparent FDI friendly rules and regulations. Walsh (2010) concludes that in national development planning global economic shocks represented threats to and opportunities for states. Ogunmuyiwa (2010) concluded that most developing countries contracted huge debt which makes them uncompetitive for FDI. As supply chain activities become more dispersed among customers, suppliers and service providers, there is an increased need for customers and suppliers to work together more closely, (Leuschner *et al.* 2013b).

Briefly the history of Zimbabwe starts with colonization by Britain for more than two hundred years, then an armed revolutionary liberation struggle by black people from the 1960's to 1979 when a settlement was negotiated and agreed, then free and fair elections were done in 1980, first time there was universal suffrage or franchise in the country. These elections ushered in a black government led by Robert Gabriel Mugabe of Zimbabwe African National Union (Patriotic Front) (ZANU-PF) party as Prime Minister. A few years into independence the ugly head of corruption reared its ugly head and continued to increase. Discontent with the economic free fall and inflation, discontent of which was started by the Zimbabwean public and exposed in the public domain by professors and students at the University of Zimbabwe (UZ) as well as the independent media, as they researched the root cause of economic problems which mostly pointed to corruption and the Economic Structural Adjustment Programme (ESAP) of the IMF, implemented by the Government of Zimbabwe, which caused untold suffering, company closures and a flight of capital from the country. The UZ was joined by trade unions and workers across the country in protests against the economic pain. This anger and discontent led to the formation

of a first formidable opposition, the Movement for Democratic Change (MDC), in late 1997-1999. In order to woo and please the electorate and get more votes in a bitterly contested election in 2000, and for emotional historical reasons held dear by almost all blacks in Zimbabwe, land reform to give back land/farms to blacks which was grabbed by force by Whites led by Cecil John Rhodes during colonization was started in 2000 by the government and was characterized by violence and deaths to some White farmers who resisted the program. It was correct to get back the land, but the method used was chaotic and violent.

The land reform mostly brought productivity on farms to an almost complete standstill as newly resettled black farmers neither had the skill nor the resources and market connections worldwide for successful farming. Some of the farmers had no interest in farming at all (cell-phone farmers). The farms traditionally fed industry with raw materials and inputs for production. Disruption on farms also meant the collapse of farming, which culminated in the collapse of the national economy too. There was partly selfish multiple farm ownership by elites and top bureaucrats (against government official policy of one person one farm), most of which farms were not used productively but held for speculation. Because of the violence and the distaste, resistance and dislike of the whole land reform exercise by Western governments, they reacted by imposing punitive sanctions on the country which crippled the economy very quickly, created shortages, the foreign currency black market, water, electricity and fuel shortages, collapsing health delivery system, collapsing unmaintained public infrastructure, the flight of many international air carriers like British Airways, Lufthansa and others and being ditched by global shipping companies, difficulties in buying any goods as well as shipping goods due to crippling sanctions, and a flight of professionals and intellectuals to countries in the region and internationally where there were functional economies offering a better quality of life than Zimbabwe, (Pindula, 2021). With the collapse of the economy came the loss of jobs, livelihoods and the sudden loss of tax earnings for the government running into billions of US\$ annually. This weakened government financially very badly and was an unquestionable result of sanctions. Government workers kissed good conditions of service goodbye as that was not affordable anymore and regular civil service strikes became the order of the day since the year 2000 till now with no solution. Western sanctions are the enemy within and the elephant in the room. The combination of sanctions and corruption produced an economic tsunami and hurricane to consume any country. Lebanon was a current case in point on the destructive effects of corruption on a national economy. Recent history had Greece, Spain, Italy, France, Sudan, Venezuela, North Korea and Portugal (2008-2012) as other countries that experienced high levels of corruption which led to serious national economic challenges. If there were any lessons developing countries needed to learn from rich developed Western countries and Asian economic giants like China, India, South Korea, Japan, Singapore, Hong Kong, the rich Gulf Cooperation Council (GCC) countries and many others development trajectory, it was the ability of these countries to accept and learn from their past mistakes, do solid corrections, enforce the sanctity of the rule of law and develop, plus to refuse to tolerate impunity and have any untouchables at any level of society. This was part of some of the developing world's failure, crossroads, and fault line. From 2000 there was an element of impunity where the powerful could get away with corruption and looting and became almost untouchable. Things have since changed since 2018, but many high-profile corruption cases have collapsed with no convictions, which still erodes public trust and confidence (the so-called arrest and release drama). The Chinese model where political and economic tigers and oligarchs were convicted and jailed is the best yardstick for countries, so is the case in Singapore, Taiwan, South Korea, Japan and Hong Kong.

Energy resources were vital to power industrial processes in manufacturing and logistics, while their use is also a major contributor to carbon emissions (Halldorsson and Svanberg, 2013). Reduced supply chain vulnerability to risks arose through horizontal collaboration amongst producers, and vertical collaboration with the processor and retailer (Leat and Revoredo-Giha, 2013). Producers improved market and price security, and animal performance. For the processor and retailer, the collaboration generated greater security of supply of an assured quality, improved communication with suppliers, and reduced demand risk as they could assure consumers on quality, animal welfare and product provenance. Zimbabwe had neither of these advantages or

factors because of Western sanctions. Zimbabwean media and researchers have documented these developments very clearly.

The Zimbabwe Anti-Corruption Commission (ZAAC) had brought many corrupt people to justice at the courts, and many had been sent to prison, and some had corrupt proceeds confiscated to the state, a very commendable gesture which discouraged graft. This was all public news in Zimbabwe. It was this situation which confronted public procurement in Zimbabwe which managers were grappling with trying to do professional public sector procurement in an abnormal highly frustrating environment. This is a situation where even if a dozen Harvard University economics and political science professors were to be seconded to the Government of Zimbabwe nothing would improve or change because of crippling sanctions imposed on Zimbabwe by Western governments. Throughout history sanctions are well known to create and fuel corruption due to shortages of almost everything in the economy. Rent seekers quickly emerge and cannot be eliminated as long as sanctions persist. That is the environment in Zimbabwe today, many knee-jerk measures to try to run a national economy bleeding and suffering from sanctions.

Government was trying its best in a highly toxic and difficult environment and ZAAC had sent a clear message to the public that corruption was no longer tolerable in Zimbabwe and those who dared do it paid a heavy price. The experiences of countries like Iran, Libya, Sudan, Cuba, Syria, Zimbabwe and Venezuela had educated the whole world that managing any organization (more so public procurement), or any country under Western or international sanctions was not a stroll in the park, but a herculean task of monumental proportions. This paper was written in that context in its entirety and should be understood as such. Fung and Chen (2010) examined the impact of supply chain management (SCM) capabilities on the performance of international trade intermediaries (ITIs). SCM capabilities here were defined as supplier management capabilities, customer-focused capabilities and business process capabilities. What could Zimbabwe public sector do when it was disconnected from the hubs of commerce by harsh trade and economic sanctions? We all know that most technologies were bought from the rich advanced Western nations. Then with sanctions where would you buy any technologies and equipment for sound operations? Zimbabwe government companies were failing to buy what they want in Western countries due to these sanctions, and public procurement managers cannot be blamed for situations created by politicians away from companies where they have no control or say. How would Zimbabwe public companies run their systems successfully without these technologies and equipment? It is quite clear things fall apart. Traditional public procurement theory does not address these issues hence this research to fill the gap in knowledge and make a contribution to academia.

Given that emerging public sector procurement plays a proudly significant role in the growth of the economy and functioning of government departments, it has become imperative to have a comprehension of barriers to effective supply chain management implementation in the Zimbabwean public sector. Moreover, studies relating to barriers to effective supply chain management implementation in developing countries, especially those in Africa, are sparse (Choudhury, 2017; Govindan and Hasanagic, 2018). Thus, the study investigated the barriers to effective supply chain management implementation in the context of Zimbabwean public sector. The study used Zimbabwean public sector as it had been experiencing unprecedented operational constraints emanating from rigid supply chain management. As such, the study would add to empirical literature on developing countries by identifying and providing the barriers of effective supply chain management implementation. Many studies have been done on public procurement in Zimbabwe but none have been devoted to studying and researching specific barriers to effective supply chain management implementation in the Zimbabwean public sector: a case study of public procuring entities in Harare, Zimbabwe, especially post year 2000 after imposition of sanctions by Western countries and many misunderstandings and clashes at government level. By carrying out this study a huge gap in knowledge would have been filled for the benefit of academia, industry and government. Researchers believe that public discourse would be ignited, possible solutions advanced through results of this research, which can be used to deal with all these challenges for the betterment of systems, procedures and stakeholders. Other researchers can carry forward the research focusing in the multiplicity of possible areas in

the wide, controversial, politically charged and highly sophisticated public sector procurement with many contradictory interest groups.

The study specifically was aimed at achieving the following research objectives:

- i. Identify strategic barriers affecting supply chain management implementation among public procuring entities in Harare
- ii. Establish the technological barriers affecting supply chain management implementation among public procuring entities in Harare.
- iii. Determine the organizational barriers affecting supply chain management implementation among public procuring entities in Harare.
- iv. Recommend strategies to improve supply chain management implementation among public procuring entities in Harare.

The rest of this paper is structured as follow: Section 2 presents literature review whereas Section 3 gives methodology while data collection. Data analysis is presented in Section 4 and afterwards, Section 5 discusses the findings of this study. Finally, Section 6 concludes the paper with limitations and future research recommendations.

2. Literature review

2.1. Concept of supply chain management

There is no consensus among academics and practitioners with regard to the definition of supply chain management. Although various attempts have been made to come up with a comprehensive definition, no common agreement has been reached among practitioners and academics as shown by various definitions of the term (Jia *et al.* 2018; Salehi *et al.* 2019; Sajjad *et al.* 2020). According to Salehi *et al.* (2019), supply chain management can be described as a combination of various cooperative efforts by members in the implementation, designation and management of a value-added process in order to meet specific customer requirements. For Chimberengwa *et al.* (2018), supply chain management is a cross-functional approach between various organizations with regard to management of product movement from producer to the end user.

Another definition by Nazam *et al.* (2020) describes supply chain management as encompassing planning, collaboration, coordination and management of various activities within an organization such as sourcing, purchasing technology as well as logistics. A more traditional definition describes supply chain management as management of both material and information flows within and between organizations (Shibin *et al.* 2020). Thus, supply chain management is a function largely responsible in connecting organizational processes and functions inside and across companies. For the purpose of this study, the definition by Shibin *et al.* (2020) will be adopted as it has strategic fit with issues being investigated.

Supply chain management has been found to be an important ingredient for not only reducing operating costs but also decreasing total supply chain costs (Ulgen and Forslund, 2015). This is corroborated by Jia *et al.* (2018), who postulate that supply chain management help companies in managing overhead costs, logistics costs, improving efficiency and satisfying demand. Moreover, many companies depend on just-in-time strategies that need delivery of various components on time, in required quantities and right quality. More significantly, supply chain management helps both public and private organizations in improving risk mitigation as well as increasing cash flow.

2.2. Theoretical framework: Technology-Organization-Environment (TOE) framework

In order to deeply understand the barriers to effective supply chain strategic management implementation in the Zimbabwean public sector, the study was anchored on the Technology-Organization-Environment (TOE) framework. Due to its metaphysical constructs, the TOE framework has been used to analyze the adoption of supply chain management at organizational level. The technology-organization-environment framework looks at three contexts which affect a

company's adoption of supply chain management. These three factors that influence the adoption of supply chain management are technological, organizational and environmental (Desore and Narula, 2018).

The technological context involves various technologies that can be used within a company (Monzouri *et al.* 2010). Organizational context involves formal and informal structures within an organization, whilst environmental context includes factors such as level of competition, external support accessible for adopting supply chain management as well as government regulations (Dzuke and Naude, 2017). It should be noted that the TOE framework, has been presented in various supply chain management implementation and adoption studies (Choudhury, 2017; Cox, 2015; Mhelembe and Mafini, 2019; Saruchera and Asante-Darko, 2021). According to Abubakar (2018), the TOE framework has been important in understanding antecedents and inhibitors of supply chain management implementation among companies in the manufacturing sector. Moreover, the TOE framework has also been used to analyze the elements that influence adoption of supply chain management practices by public sector companies (Ahmad *et al.* 2018; Chowdhury *et al.* 2019).

2.3. Strategic barriers affecting supply chain management implementation

An organizational strategy is described by Prieto-Sandoval *et al.* (2018) as a blueprint of action used by an organization to determine how to use its current resources for long term profitability and survival. There are various strategic barriers that can be encountered whilst implementing supply chain management in organizations. These strategic barriers that can affect the successful implementation of supply chain management include a general lack of strategic direction and planning, ineffective vision statement and short-term decision-making standpoints (Parent *et al.* 2018). Other strategic barriers include ineffective performance and inconsistent performance measurement systems with partners (Tukuta and Saruchera, 2015). As noted by Govindan and Hasanagic (2018), the lack of awareness with regard to a company's mission, objective and strategic direction lead to unwillingness by employees and management to implement supply chain management processes. Agi and Nishant (2017) on understanding influential factors on implementing supply chain management practices on Bangladesh identified as lack awareness with regard to a company's mission, objective and strategic direction as the main barriers to supply chain management implementation. Nevertheless, lack of commitment by top management has also been noted as a huge stumbling block towards implementing supply chain management (Ojo *et al.* 2013). Indeed, top management is significant in providing continuous support for supply chain management in their strategic and action plans for successful implementation (Wu *et al.* 2012). Therefore, it can be argued that lack of top management commitment in any organizational setup can be a barrier to implementation of supply chain management.

Furthermore, some organizations fail to align their short term and long-term plans and have difficulties in altering current practices and policies. In some cases, unclear and conflicting business goals; and lack of direction from top management result in poor implementation of supply chain management (Xue *et al.* 2013). This is also explained by Esfahbodi *et al.* (2016), who point out that many public sector institutions fail to properly implement supply chain management practices due to not only internal politics, skewed strategic goals but also short-term alignment to goals. The strategic goals poor alignment can be emanating from tactical, functional and strategic levels of management. More so, there are also other strategic barriers related to how both employees and management will be conducting themselves within an organization (Rakib *et al.* 2017).

2.4. Technological barriers affecting supply chain management implementation

Efficient technological systems are very essential for supporting supply chain management in an organization. Examples of information and communication technologies used in supply chain management include e-mailing, e-invoicing, electronic data interchange, distribution resource planning, automated retrieval systems, vehicle routing and e-tendering (Urban and Naidoo, 2012;

Wadud and Huda, 2017). As pointed out by Genovese *et al.* (2017), technology has been an important instrument for developing relationships that achieve efficient supply chain management and organizational performance in any industry. In particular, information and communication technology handle the flow of information related with both forward and backward movement of materials and other resources. Additionally, information technology enablement helps in achieving efficiency and promoting product innovation (Fawcett *et al.* 2015). As such, any resistance towards technological advancement adoptions within an organization can be construed as a significant barrier to implementation of supply chain management.

In many public sector organizations, a general lack of adequate technical/IT infrastructure has been seen as a major impediment to supply chain management implementation. According to Wadud and Huda (2017), many government institutions worry much about information leakage and are not willing to share their information with partners. Moreover, a quantitative study by Tseng *et al.* (2013) on sustainable consumption and production for Asian countries found that lack of implementing information and communication technology had been a top-level barrier of supply chain management. Likewise, Choi and Cheng (2015) found that lack of information and communication technology obstructed or prevented the successful implementation of supply chain management practices in Thailand. As such, it can be argued that IT systems help in supporting collaborative supply chain processes as well as product development programs.

2.5. Organizational barriers affecting supply chain management

According to Tay *et al.* (2015), organizations with highly skilled human resources find it easier to implement supply chain management. This is because high quality human capital provides new ideas for organizations, easily acquire new technologies, freely share knowledge amongst each other and are able to use new technologies to solve organizational problems. However, due to financial constraints, many governments in developing countries do not have employees who are highly skilled, and these employees usually discourage adoption of new innovations (Whiteman *et al.* 2013). Furthermore, the general lack of government support systems has been viewed as a major barrier in implementing efficient supply chain management.

Other studies in developing countries such as Mozambique and Uganda have identified organizational barriers as the main determinants of supply chain management implementation. In the same vein, the study by Zhu *et al.* (2017) in China and Indonesia found that the key factors that prevented adoption of supply chain management practices were inadequate training, management's level of familiarity with supply chain management processes as well as lack of company's readiness. Furthermore, poor business reengineering can also become a supply chain barrier due to lack of integration between companies (Cadden *et al.* 2015). Lack of proper organizational structure might also have a significant effect on successful implementation of supply chain management practices. For instance, organizational structure factors such as availability of human resources, intensity of administration, technical capabilities, ethics and professionalism are equally important in the implementation of supply chain management (Choi and Hwang 2015; Mvubu and Naude, 2016).

3. Research methodology and instrumentation

In order to investigate barriers to effective supply chain management implementation among public procuring entities in Harare, the researchers adopted a positivist approach. The use of positivism was anchored on its objectivism and independence of the researchers from research phenomenon (Berg and Lune, 2017; Fleming, 2018). More so, the use of positivism was associated with the use of quantitative approach for analyzing primary data. The quantitative nature of the data meant that it could be deductively expressed in numbers (Baxter and Jack 2018; Lucas *et al.* 2018). Furthermore, the quantitative approach was regarded as appropriate for the study since it permitted the researchers to vividly explain the barriers of supply chain management in the Zimbabwean public sector.

Moreover, the study was a cross sectional survey of selected public procuring entities in Harare. Moreover, the cross-sectional survey was important for the study since it was

comparatively fast to conduct, data on all selected could be collected once and the researchers were able to measure pervasiveness for all barriers of supply chain management under study. The cross-sectional survey also meant the study took place at a particular point in time and permitted the researchers to simultaneously analyze various characteristics of respondents (Easterby-Smith *et al.* 2015; Saunders *et al.* 2017).

The population of the study comprised of employees and managers working in the procurement departments of five government ministries in Harare. These included the Ministry of Health, Ministry of Agriculture, Ministry of Transport, Ministry of Finance and Ministry of Economic Development in Zimbabwe. These government departments were selected for the study since they had been experiencing supply chain management challenges such as delayed goods, poor quality goods, high staff turnover at senior levels, poor coordination and poor supplier appraisal and supplier evaluation, challenges in acquiring equipment resulting in poor supply chain performance and high lead time cycles, a recent newspaper reports on Parirenyatwa Group of Hospitals is instructive on this (Pindula, 2021).

The five government departments had a total of 200 employees and managers. Since it was not possible to include all the respondents in the study, statistical formula by Kumar (2019) was used to calculate sample size.

Using the sampling formula, the study required a minimum total of 132 respondents to take part in the study at 95% confidence interval. Proportional stratified random strategy was used to come up with a sample that was representative of the public procuring entities. Stratified random sampling meant that the sample that was from each stratum was balanced with regard to number of members in the strata. Once the population had been fully stratified simple random sampling was then used within each government ministry. Simple random sampling strategy implied that each respondent selected for the study had an equal chance to participate in the study. More so, simple random sampling was quite precise and reduced sampling error (Hair *et al.* 2016).

Structured questionnaires were used to collect primary data from the selected respondents. The questionnaire had a total of four sections whereby the first section had demographic information of respondents that incorporated age, gender, highest academic qualifications and length of service in the public sector. The second section of the questionnaire had questions relating to strategic barriers affecting supply chain management implementation among public procuring entities in Harare whilst the third section asked about issues relating to technological barriers affecting supply chain management implementation among public procuring entities in Harare. Finally, the fourth section of the questionnaire had items focusing on organizational barriers affecting supply chain management implementation among public procuring entities in Harare.

The questionnaire was structured in ways that allowed a profound analysis of findings. The questions were on a five-point Likert scale that ranged from one (representing strongly disagree) to five (representing strongly agree). The five-point Likert scale questions measured the attitudes of respondents by using arithmetic values on the effect of each barrier on effective supply chain implementation. Five-point Likert scales have been previously used to collect measurable data in empirical studies on supply chain management (Abubakar, 2018; Desore and Narula, 2018; Sajjad *et al.* 2020). The questionnaire was first pretested before distribution to all selected respondents. The pilot test gave the researchers the opportunity to test research approach using few respondents before conducting the main study. In particular, the pilot test was crucial in assessing eligibility criteria, feasibility, ambiguities and questions arrangement.

Due to human movement restriction introduced by the government in order to prevent the spread of Covid-19, all questionnaires were sent through e-mails. The e-mail survey proved to be both inexpensive and a fast way of distributing questionnaires. The questionnaires were distributed between 22 January 2021 and 15 February 2021. Those respondents who had not completed their questionnaires were given another week to do so.

Data collected from the respondents was analyzed using Statistical Packages for the Social Sciences (SPSS) version 26.0 software. Statistical techniques used in the study included descriptive statistics such as mean, standard deviation and frequency distributions. Cronbach alpha coefficients were used to test reliability of the research instrument. In line with

recommendations by Bell et al. (2018), Cronbach Alpha coefficient of 0.7 was considered as the acceptable cut-off point. A regression model was used to determine the effect of each barrier on the implementation of supply chain management.

4. Data collection and data analysis

A total of 132 questionnaires were distributed to five government departments in Harare. The study managed to yield a total of 84 questionnaires that were fully completed. The returned questionnaire represented a response rate of 63.64%. The smaller number of questionnaires distributed was a result of Covid-19 limitations as access to respondents was badly constrained by lockdowns, movement restrictions and poor internet access. This will be part of the limitations in this research. The response rate was not high enough due to Covid-19 movement restrictions imposed by the government of Zimbabwe with some employees working from home. With regard to demographic characteristics of the respondents, majority of them were males. This implied that the procurement departments in the government ministries are largely dominated by males. The study also revealed that majority of the respondents (81%) were aged below 40 years and most of them (69%) had at least a university degree. As such, most of the respondents who participated in the study understood issues pertaining to barriers to effective supply chain management implementation in the Zimbabwean public sector. In addition, the study revealed that majority of the respondents (81%) had been with their respective government departments for at least six years. Table 1 shows the demographic characteristics of the respondents.

Table 1. Demographic characteristic of respondents

| Variable | Categories | Frequencies |
|----------------------------|----------------------|-------------|
| Gender | Male | 56% |
| | Female | 44% |
| Age | Less than 20 years | 7% |
| | 20 years to 29 years | 33% |
| | 30 years to 39 years | 41% |
| | 40 years to 49 years | 15% |
| | 50 years and above | 4% |
| Highest level of education | Secondary Education | 8% |
| | Diploma | 23% |
| | Undergraduate Degree | 53% |
| | Masters' Degree | 16% |
| | Doctorate Degree | - |
| Working experience | Less than 1 year | 2% |
| | 1 year to 5 years | 17% |
| | 6 years to 10 years | 31% |
| | 11 years to 15 years | 38% |
| | Above 15 years | 12% |

Source: Author's own preparation

Cronbach alpha coefficients were used to analyze the reliability of the constructs selected for the study. The results from the study are summarized in Table 2:

Table 2. Cronbach alpha reliability test

| Variable | Number of Items | Cronbach Alpha Coefficient |
|--|-----------------|----------------------------|
| Strategic Barriers | 5 | 0.797 |
| Technological Barriers | 5 | 0.806 |
| Organizational Barriers | 5 | 0.811 |
| Supply Chain Strategic Management Implementation | 5 | 0.795 |

Source: Author's own preparation

From the above findings, it can be inferred that the Cronbach alpha coefficients for strategic barriers (0.797), technological barriers (0.806), organizational barriers (0.811) and supply chain management implementation (0.795) were above the cut-off point of 0.70. The findings implied that the constructs used for the study had high internal consistency. Descriptive statistics such as mean and standard deviation were used to analyze how strategic barriers affected supply chain management implementation among public procuring entities in Harare. These barriers must be related to literature review and the realities alluded to beveling Zimbabwean government entities and the national economic and political environment in Zimbabwe. It comes as no surprise and confirms what the vast and diverse literature review was saying. The results from the survey study are summarized in Table 3:

Table 3. Descriptive statistics: Strategic barriers and supply chain management implementation

| Item | N | Mean | Std. Deviation |
|--|----|-------|----------------|
| The government department does not have specific goals and strategy for supply chain management implementation | 84 | 4.276 | 0.008 |
| There is lack of supply chain management policies and support from government | 84 | 4.173 | 0.129 |
| There is general resistance by management with regard to adoption of supply chain management | 84 | 4.115 | 0.052 |
| The government department has clear vision as well as a complete supply chain management strategy | 84 | 2.061 | 0.057 |
| The government department have supply chain management planning which is well synchronized with the ministry's overall strategic planning. | 84 | 1.849 | 0.251 |

Source: Author's own preparation

As indicated in the table above, there had been general lack of supply chain management policies and support from the central government (mean = 4.173) and had been resistance from senior management with regard to adoption of supply chain management practices (mean = 4.115). In addition, the study showed that the government departments do not have specific goals (mean = 4.276), clear vision as well as a complete strategy for supply chain management implementation (mean = 2.06). The study also showed that governments department have supply chain management planning which is well synchronized with the ministry's overall strategic planning. The study also revealed that the government departments under study lacked supply chain management planning that is well synchronized with the respective ministries' overall strategic planning (mean = 1.849). The survey study also looked at technological barriers which affected supply chain management implementation among public procuring entities in Harare. Findings from the survey study are summarized in Table 4:

Table 4. Descriptive statistics: Technological barrier and supply chain management implementation

| Item | N | Mean | Std Deviation |
|--|----|-------|---------------|
| The government department does not have the appropriate information technology required to implement supply chain management practices | 84 | 4.297 | 0.052 |
| There are inconsistencies between the department's supply chain structure and information systems | 84 | 4.227 | 0.061 |
| There is adequate technical infrastructure for supply chain management implementation | 84 | 2.402 | 1.032 |
| Real-time information sharing with supply chain partners is incorporated into supply chain operations | 84 | 1.951 | 0.049 |
| There is no integrated information systems and e-trading systems that connect the ministry with suppliers | 84 | 4.307 | 0.005 |

Source: Author's own preparation

As shown in Table 5, the government departments under study did not have the suitable information technology required to properly implement supply chain management practices (mean = 4.297) largely due to inadequate technical infrastructure (mean = 2.402). The study also found that there had been inconsistencies between the departments' supply chain structure and information systems that had been implemented (mean = 4.227) and it had become difficult to incorporate real-time information sharing into supply chain operations (mean = 1.951). It was also noted that there was no integrated information systems and e-trading systems that connects the ministry with suppliers (mean = 4.307).

Respondents were also asked to provide their objective opinions with regard to organizational barriers affecting supply chain management implementation among public procuring entities in Harare. The findings from the survey study are summarized in the following Table 5:

Table 5. Descriptive statistics: Organizational barrier and supply chain management implementation

| Item | N | Mean | Std Deviation |
|--|----|-------|---------------|
| The government department has proper supplier performance evaluation systems | 84 | 2.160 | 0.058 |
| The level of managers' involvement in the implementation of supply chain management is very low | 84 | 4.118 | 0.702 |
| There has been financial support from top management for supply chain management implementation | 84 | 2.195 | 0.072 |
| The department lacks expertise and technical knowhow with regard to supply chain management implementation | 84 | 4.304 | 0.014 |
| The department has both privacy and information disclosure concerns with regard to supply chain collaboration with partners. | 84 | 4.019 | 0.081 |

Source: Author's own preparation

From Table 5, it can be inferred that the level of top management involvement in the implementation of supply chain management had been very low (mean = 4.118) and as such they had not been willing to provide financial support (mean = 2.195). The descriptive statistics also showed that the government departments do not have proper supplier performance evaluation systems (mean = 2.160) and they also lacked expertise and technical knowhow with regard to supply chain management implementation (mean = 4.304). It was also noted that the government departments expressed privacy and information disclosure concerns as a huge barrier with regard to supply chain collaboration with partners (mean = 4.019).

The study utilized a regression model to determine how strategic barriers, technological barriers and organizational barriers affected supply chain management implementation when other factors are at constant. The findings from the study are shown in Table 6:

Table 6. Regression model

| Coefficients ^a | | | | | |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | | Sig. |
| | B | Std. Error | Beta | t | |
| (Constant) | 1.456 | 0.250 | | 5.829 | 0.067 |
| Strategic Barriers | -0.258 | 0.072 | 0.042 | -2.800 | 0.426 |
| Technological Barriers | -0.385 | 0.072 | 0.890 | -7.955 | 0.094 |
| Organizational Barriers | -0.308 | 0.044 | 0.009 | -3.177 | 0.860 |

Note: a. Dependent Variable: Supply Chain Management Implementation.

Source: Author's own preparation

As indicated in Table 6, it can be inferred that a unit increase in strategic barriers can result in decreased supply chain management implementation by a factor of -0.258 (-25.8%). The study also revealed that all things being at constant, a unit increase in technological barriers in the government departments would result in decreased supply chain management implementation by a factor of -0.385 (-38.5%). Additionally, the study showed that a unit increase in organizational barriers would lead to decreased supply chain management implementation by a factor of -0.308 (-30.8%). The findings implied that strategic barriers, technological barriers and organizational barriers negatively affected supply chain management implementation in the Zimbabwean government ministries. Overall, technological barriers had the greatest negative effect on supply chain management (beta = -0.385) and this was followed by organizational barriers (beta = -0.308). Some of the findings were not statistically significant signifying the very fluid nature of running public enterprises in Zimbabwe under sanctions. Zimbabwe was not a normal economy subject to the standard laws of supply demand as they apply to a functional free economy. You have a large black market or shadow economy feeding into the calculus and equation as you do pricing. There was a lot of hide and seek with black market operators and smugglers, the so-called runners or dealers who go to neighboring countries to get supplies not available locally and come back to sell at a killer price. Zimbabwean made goods prices for some goods were much higher than regional countries e.g. electronics and groceries because of the shadow economy.

5. Discussion

The study investigated the barriers to effective supply chain management implementation in the Zimbabwean public sector with specific reference to selected public procuring entities in Harare. Findings from the survey study revealed that the major strategic barriers facing the public procuring entities in Harare were lack of supply chain management policies, inadequate support from the central government as well as resistance from top management with regard to adoption of supply chain management practices. The results seem to agree with empirical studies by Salehi *et al.* (2020), who pointed out that poor planning of supply chain management implementation as well as lack of top-level management commitment and support in the adoption of supply chain management practices were huge challenges faced in the public sector. Findings of this study are also consistent with Sajjad *et al.* (2020) who elucidated that lack of supply chain management policies was a significant barrier to the adoption of sustainable supply chain management practices in many government departments. The study also found that most government departments did not have specific goals, clear vision as well as a complete strategy for supply chain management implementation. This concurred with Majumdar and Sinha (2018) and Nazam *et al.* (2020) who explained that some organizations have been unable to properly implement supply chain management due to unclear, skewed and conflicting strategic goals that emanate from tactical, functional and strategic levels of management.

The study also revealed that the government departments under study did not have the suitable information technology required to properly implement supply chain management practices largely due to inadequate technical infrastructure. The study also noted that there had been inconsistencies between the departments' supply chain structure and information systems that had been implemented and it had become difficult to incorporate real-time information sharing into supply chain operations. The findings are not in line with Desore and Narula (2018) who pointed out that technology should be an important instrument for developing relationships that achieve efficient supply chain management and organizational performance in any industry. Sajjad *et al.* (2020) point out that information technology enablement helps in achieving efficiency and promoting product innovation. The study also confirmed the paramount significance of technology in supply chain operations and integration with partners. It was also revealed that the government departments did not have adequate technical/IT infrastructure thereby impeding supply chain management implementation. According to Wadud and Huda (2017), many government institutions worry much about information leakage and are not willing to share their information with partners.

From the descriptive findings, it was revealed that the government departments lacked proper supplier performance evaluation systems and did not have enough expertise and technical knowhow with regard to supply chain management implementation. The findings are in line with empirical studies by Choudhury (2017), Chowdhury *et al.* (2019); Zhu *et al.* (2018). Whiteman *et al.* (2013) also expressed that due to financial constraints, many governments in developing countries do not have employees who were highly skilled, and these employees usually discourage adoption of new innovations. It was also noted that the government departments expressed privacy and information disclosure concerns as a huge barrier with regard to supply chain collaboration with partners. According to Mvubu and Naude (2016), the general concerns about privacy and information disclosure have been viewed as a major barrier in implementing efficient supply chain management in the public sector.

Crow (2010) said adherence to the principles that made the USA the world's largest economy is the surest path to continued economic growth and stability over the long run. He said of particular importance were policies that allowed flexibility in labor markets; free movement of capital and labor, unimpeded by excessive regulation; tax rates that minimize disincentives for the development of human and physical capital; and liberalization of international flows of goods, services, people and capital. Analysis of findings must always be interpreted taking into account the geopolitical, environmental, reward systems, policies, fears, corporate and personal interests and realities faced by any management, be it private or public sector. Human beings were human beings and reacted in the same way to incentives, punishment, fear and risk management. The items needed to be dissected one by one addressing the causal factors and implications. It was accepted public knowledge and national ethos that public procurement was an expression of company and national economic and political choices or the way a society wanted to live. It was therefore impossible to succeed in public procurement without fully understanding economics and politics. It would be wrong to say there were no supplier appraisal systems in the public sector procurement systems. Zimbabwe Government had some of the toughest public procurement regulations in the country (derived from the United Nations Public Procurement Guidelines), and many people had been sent to prison or fired for flouting these regulations. What criminally minded people were doing was studying the loopholes in the systems and exploiting these to their advantage. A few orders suffered stillbirths as suppliers were paid in advance and nothing was delivered. This was quite common in the public sector. Rules needed to be strengthened to punish deviant suppliers through recovery of money, blacklisting and referring them to police and the courts. It is the commitment to do this which was lacking. Here comes the giant evil and barrier even if one reported to the police: the judiciary, the police, prosecutors and even clerks at the courts, some of them were hopelessly corrupt. Dirty money or bribes exchanged hands to frustrate some cases right throughout the system. This was in the public domain and court cases regularly. The devil was in the system where corruption defeated national interest, justice, public good and transparency.

Many times the people who reported the corrupt to police enroute to the courts see them back in offices, only to punish the people who had reported them through demotions, forced transfers to remote areas, dismissals, targeting, bullying, threats and general frustration tactics. A culture of fear engulfs the rest and criminals become untouchable. Most of those corrupt were people with very high positions, well connected and affluent who could afford the most expensive lawyers to fight their cases and could pay high sums in terms of bribes which were irresistible to some of the poorly paid staffers at the courts and the police. That combined with a partly malleable corrupt system where corruption was almost like a religion gets cases thrown out and dead in the sand, the so called arrest and release drama in Zimbabwe where some of the top politicians and political dynasties, the super-rich and elites get arrested and are never convicted and never go to jail, but get released for many flimsy reasons (their cases are thrown out and closed – for lack of evidence, etc). Ferguson (2020) reminded the world about the dangers of corruption to a national economy saying China in the nineteenth century appeared to be in perpetual decline because it was rife with endemic corruption. In the 21st century as China adopted zero tolerance to corruption it was shining again and was now the 2nd largest economy in the world. The corrupt get hanged in China, if the case is very serious and a national economic threat. The same is the case in Singapore, Saudi Arabia, Iran and others, which is very good indeed as a deterrent. Developed

countries had better accountability and deterrent systems where impunity was zero. Corruption was a cancer that could bring down a whole government if not dealt with head on. South Africa was one such example of endemic corruption where electricity load shedding and water rationing were now a norm in some towns and cities because of underfunding due to endemic corruption, public funds leakages and state capture, which was mostly not there during the White rule because corruption was not tolerated. This was one of the hurdles faced by the public sector procurement in Zimbabwe, corruption.

Branch (2000) argued that the best export logistics and supply chain strategy is the development of world class customs and immigration systems and adopting e-logistics as well as good infrastructure in terms of roads, railways, airports and seaways, and lastly having highly qualified personnel to service these institutions. After sanctions ruined the economy forcing many companies to close, government lost tax revenue in billions of USA dollars naturally, and that constrained their ability to pay good salaries, wages and offer good, dignified conditions of service, as well as their ability to do meaningful capital investment and maintenance of public infrastructure. This must be understood as one looks at the toxic situation faced by the public procurement authorities who operate in this regrettable environment. Most of the funding challenges government faced today had this long history documented here and was its fault line in all its operations be it IT infrastructure, other capital projects, resourcing, salaries and conditions of service, meeting expectations and respecting supply contracts. A government in cashflow challenges is the same as a company in cashflow challenges cannot be expected to do timely payments to suppliers and creditors nor have good conditions of service. A company in a severe negative cashflow situation would delay payments or default payments thus damaging its reputation, trust, confidence, loyalty, credibility and possibilities of repeat business with suppliers. It also lost good terms of payment to harsh cash upfront payments on purchases as no suppliers would want to burn their fingers on payment. Change and inadequate government regulations are at the bottom level of the hierarchy implying highest driving power and require higher attention and focused mitigation strategies. Risks like lack of traceability, transport delays/breakdowns and temperature abuse, cross-contamination in transport and storage have medium driver and dependence powers (Srivastava *et al.* 2015).

Underpaid workers were angry, frustrated, they worked to rule, never gave of their best, were not committed, were sometimes thieves through desperation and would leave any time they got better jobs, just like the situation in Iran and Cuba. That frustrating system and scenario where jobs were not readily available for some of the Zimbabwean graduates forced many to cross their borders in search of greener pastures to regional countries as well as overseas to Europe, USA, Canada, Australia and Middle East (GCC in particular). The country lost many strategic skills which affected many professions, especially engineering, medicine and health sciences, teaching, senior academics and top-grade trouble shooters/organ grinders and planners in supply chain. Job satisfaction is a crucial factor that determines retention of employees in all industries (Dhanapal *et al.* 2013).

The Zimbabwean government was engaging the community of nations to regain trust and embrace other countries was the best long-term solution for everything including public procurement. Pariah states have never built successful economies and good public procurement systems, it is impossible due to funding and market access challenges as well as exodus of critical skilled labor, not just for public procurement, but the economy as a whole. Public procurement was best where the national economy flourished with plenty of resources, support industries and solid corruption free public institutions. Douglas (2000) contented that the old political battles that have consumed humankind during most of the twentieth century - black versus white, Left versus Right, male versus female - will fade into the background and that the only battle worth fighting and winning, the only one that could set us free, was The People versus The Corporate Cool Machine or corporate brands and national brands. The message was all about quality of goods and services competing in the market with the best and winning hearts and minds, the national brand and country of origin effect. Zimbabwe was at a crossroads on this and fared badly. This gap in knowledge was missing from the academic world and was part of this paper's contribution to knowledge.

One other factor which cannot be denied is the lack of citizenship education at universities which made people to love and like their country and give of their best, in countries where this is a compulsory subject or course or module. Zimbabwe had made a fatal mistake, which university leaders were dithering to correct with disastrous consequences for the country, which is the lack of compulsory citizenship education to each and every graduate (which education was already compulsory at other lower tier higher education tertiary institutions in Zimbabwe like polytechnics or vocational training centers and teachers' colleges). Universities produced future political and industry leaders, and these had to be molded correctly with complete and comprehensive citizenship education, or else a country was doomed. A grounding in the nation's history was one essential part of an education for citizenship, and another was a knowledge of its basic institutions, especially the constitution (Ellis, 2020). Ellis (2020) went further and said that in a country that depended upon an educated populace, ignorance of its own history and the founding documents (constitution) would be disastrous. Do Zimbabweans study this at universities? The answer was no. A country without its correct history does not have national identity and direction, worse with the young population who were the future of the country. One only needed to look at how proud Americans, Europeans or Arabs (especially oil producing Gulf Cooperation Council countries), were about their countries and their patriotism where they were prepared to lay their lives for their countries, and the way they loved and praised their leaders. You can see how much Americans respect their soldiers and war heroes like the late John Sidney McCain, the Vietnam War hero who was winning his Arizona Senate seat for more than thirty years uncontested by anybody as a sign of respect. You normally find less corruption in countries where there was compulsory citizenship education as the generality of the people wanted to see their countries develop and prosper and would give of their best in an ethical manner. Their leaders were leading by example in all respects and not looters at night. There were no untouchables in the society as a whole. Stealing from the company or ministry was considered disloyalty and frowned upon, and the justice systems were functional and corruption free with harsh sentences for offenders who would definitely be sent to jail and corrupt proceeds repossessed by the state or as restitution to wronged companies. National interest prevailed over individual interest. Public procurement was better served with patriotic citizens who publish less bad things about their country and were less corrupt thus making it easier to attract suppliers, investors and to export goods. This gap in knowledge was missing from the academic literature and was part of this paper's contribution to the stock of knowledge.

The sooner Zimbabwean universities introduced citizenship education as a compulsory module or course for all university students the better for the country long term. A country without citizenship education is an enemy unto itself, and a liability unto itself and was a worldwide laughingstock. The excessive volumes of negative news coming out via our private and online newspapers completely disregarding the many good things being done by our government (serious anti-corruption measures and prosecutions/convictions, farming development, massive public infrastructure spending and construction of roads and other institutions, reform, export drive, tourism development, repaying foreign debt, engaging other countries, high value immigration, Education 5.0, and many other excellent things) farmers, mining, universities, manufacturing and other industries just shows what happens when patriotism had eluded a people. Some of them act like opponents in a war zone rather than citizens of the country, with each and every publication spewing hate and bad things only and nothing good. The media is definitely entitled to do sensible critique, checks on power and informing the public, but why see evil and bad things only surely? It is only the state media which does reasonable balanced reporting to inform the public about economic development and international relations objectively. What some private media houses forgot was that a repetitive flow of negative news only without balancing with positives happening in the country frightened and drove away investors, and the same media houses would be blaming the government of the day for the resultant low investment in the country and the suffering that it brought on the people including unemployment (unemployment for the sons and daughters of private media house bosses and staffers as well), and resultant social and economic suffering, forgetting that they were accomplices in driving away investment and prosperity away from the country. Current literature does not address this issue and this paper fills the gap in knowledge as a contribution to the stock of knowledge.

In conclusion the best plans, vision, mission and objectives were there but these could not be implemented due to resource limitations alluded to. The resources were simply not enough, and continuity suffered where there was a high labor turnover and a lack of commitment. Supplier appraisal simply becomes less effective when you do not have enough resources and there were vested interests driven by corruption and underhand deals. It is not that supplier appraisal was not being done but was not done properly according to international norms. Many uncompleted projects and undelivered goods where payment was done upfront testified to that, and those issues were always coming out in the Zimbabwe Auditor General's Annual Report to Parliament, glaring painful reports exposing abuse and corruption. In other countries the report would be followed up by the police and prosecutions done. Without that, it just becomes a talk show for parliamentarians on a regularly basis without any corrective measures or reversal or accountability, partly valueless debate without long term corrections and deterrence for national benefit. Why are identified corrupt people not prosecuted when known and all the evidence is there? Corruption cases are dreaded when many have their hands in the till, the so called who would police the police?

The survey study had both theoretical and managerial implications and investigated barriers to effective supply chain management implementation in the Zimbabwean public sector. From a theoretical point of view, the study made substantial contributions to theory building in supply chain management especially in the public sector of developing countries. Furthermore, managers in the public sector can use the technology-organization-environment (TOE) framework and have a good understanding of the different technological, strategic and organizational barriers impacting supply chain management implementation. As such, the theoretical framework provided a launchpad from which to come up with a detailed analysis of various aspects that affect smooth implementation of supply chain management in the public sector. Many grey areas had not been explored especially countries under sanctions, the effects of sanctions on public procurement and resourcing, a smart look at a choked economy and its effects on the rest of the economy which provided support industries to public procuring entities. This research did just that. The technology-organization-environment (TOE) framework was critically analyzed from all perspectives, economic, political, technological and sociological as well. The researchers also looked at all issues from a Scamper Technique point of view to see what could be changed with what results. This was done to rip apart all issues surrounding public procurement for justice to be done.

This paper critically analyzed a clear link between national economic and political scenario versus the world of community of nations and the implications on public procurement. This covered international relations, national policies and disposition, politics and consequences, skills development and retention, corruption levels, trust, integrity, loyalty, coordination, resourcing, citizenship education and lastly economic sanctions. Issues that had never seen the light of day were exposed as leading to barriers in all three areas under investigation. There is no perfect country or system in the world but the commitment to accountability and transparency must be there for systems to be self-correcting. The doctrine of rewards and sanctions and carrot and stick approach to management taught us one undeniable reality – punishment brings about order and is a very effective deterrent while incentives encourage good behavior. Impunity destroys countries, government ministries, communities and companies and also encouraged more criminals to join the gravy train or deviant behavior (Human Factor Content and Leadership Theories).

6. Conclusion

The study concluded that that all the three barriers analyzed (strategic barriers, technological barriers and organizational barriers) significantly affected the implementation of supply chain management in the Zimbabwean public sector. The survey study also concluded that technological barriers had the greatest negative effect on supply chain management, and this was followed by organizational barriers. As such, proper understanding of these barriers could be a crucial step highly required into implementing supply chain management.

The researchers did away with the simplistic approach of treating issues in ministries and companies as standalone in Zimbabwe but connected these very well and smartly with the political dynamics, economic dynamics and the world economy. Issues were brought to the fore about land reform, breakdown of rule of law, fanaticism, violence, unproductive farms, the collapse of farming and industry, the flight of highly skilled labor to other countries, sanctions and their negative effects on the whole economy including public procurement. The issue of citizenship education was explored as well, a critical component of national cohesion long ignored in Zimbabwean universities but badly damaging public entities as well as the rest of the economy. It was demonstrated a lot with diverse supporting literature evidence that gone were the times when industry managers could dream about doing well in companies or ministries when political policies and practices were not business friendly, and a country was an international pariah state isolated and cut off from the rest of the world. That put lobbying and advocacy at the forefront as critically important to get politicians to reverse policies which have failed and have not delivered viability and competitiveness for companies and quality life for the public. In any case, a poor performing economy created poor performing businesses which also meant less tax revenue for the government and less government services for the public.

It becomes clear that poor national policies have no beneficiary but losers in the whole economic matrix. Nobody wants this as political leaders and the whole country want prosperity and good lives. The obvious thing was for industrialists to engage politicians persuading them through lobby and advocacy to drive good national policies that enable managers to do their job with good results. That was what faced Zimbabwe today, a need to work together, facilitate good public procurement and create prosperity for the country and quality of life for its citizens. That bond of brotherhood and working together was there and just needed to be strengthened further. That will never be possible with the country being choked and strangled by harsh Western sanctions and no patriotic Zimbabwean should support sanctions for any reason, and the same applies to corruption as it is evil and destructive. Many examples abound of failed economies due to sanctions, like North Korea, Iran, Syria, Venezuela, Cuba, Libya, Sudan and many others. The ball was in the court of politicians to solve this long-standing international relations impasse and get the country going including public procurement. Public procurement entities have a dilemma and many limitations without this being solved. The Government of Zimbabwe must ruthlessly fight corruption with no sacred cows and untouchables, compensate White farmers for farms taken by government and engage the community of nations, and address farm use, productivity and issues to do with greedy multiple farm ownership (with many of these unproductive and lying fallow), as a priority for a viable economy. It made no sense blaming public procurement managers for issues beyond their capacity/mandate/domain as they were not politicians who ran the country. The public managers' situation was circumstantial and nothing else. Researchers have to be honest with themselves and the rest of society and face the hard truth as it is or else become irrelevant. Groping and skirting the truth was equally bad if not unethical as well. This was a refreshing approach to research which filled a critical gap in the stock of knowledge for the benefit of academia, industry, government, and society.

In Zimbabwe, the public sector is viewed as the engine for driving the country's economic growth. From a practical point of view, the study provided procurement professionals in the public sector with information that can help in identifying the main barriers to supply chain management implementation. Thus, findings from the study could be used by procurement managers and employees in the public sector to improve the implementation of supply chain management practices. Specifically, improvements in strategic, technological and organizational areas can potentially result in improved supply chain management in the Zimbabwean public sector. The study furnished insights for supply chain management and procurement practitioners by finding barriers for the implementation of supply chain management in the public sector. For instance, public procuring entities facing supply chain challenges can use technological advancements to improve information sharing with suppliers and other partners. It is, therefore, imperative that the government ministries adjust strategic, operational, technological and strategic goals in line with the barriers that come with the proper implementation of supply chain management practices. More so, increasing awareness at all functional and tactical levels within ministries through trainings and workshops can also help in assisting the implementation of supply chain

management. Long term capacity building was what was lacking, and government had to take that course for it to deliver better service than what is there. But this was partly a pipedream given resource constraints already alluded to in prior discussions.

Despite the study's making significant theoretical and practical contributions, it has some limitations that could offer directions for future studies. The smaller number of questionnaires distributed was a result of Covid19 limitations as access to respondents was badly constrained by lockdowns, movement restrictions and poor internet access was also a limitation in this research.

However, the rich cross-section of respondents reached managed to help researchers illuminate all major issues in the objectives and problem statement, thus doing justice and achieving research objectives. This was supported by an exceptional rich and diverse literature review which brought major research findings in the same problem areas elsewhere globally to the fore. The study was largely a cross-sectional survey which focused on public procuring entities in Harare. Future studies could focus on the private sector in fields such as manufacturing, banking, retail supermarkets and insurance sector. More so, deeper understanding of the barriers to effective supply chain management implementation in the Zimbabwean public sector are possible if longitudinal data could also be employed. In this regard, future studies could also focus on such research direction in order to understand more on barriers to effective supply chain management implementation and lobbying government for excellent supply chain (PPP or smart partnerships).

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