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The Impact of Lean Practices on Organizational Performance: The Zimbabwean Perspective

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Abstract: **Lean management is a set of management activities honed to progress proficiency and viability by dispensing waste. The center guideline of lean is to diminish and eradicate non-value-adding activities and waste, thereby enhancing the organization's profitability and competitiveness. The study is aimed at investigating the impact of lean management on the performance of an organization after such a system is fully implemented. The purpose of the research is to demonstrate how an organization is able to unleash its performance through the application of lean practices and how this outcome is able to impact the business.**

This is a review paper where a number of articles were selected and reviewed. A case study of Power Engineering Botswana has been incorporated to demonstrate how lean impacted an organization that has embraced the lean concept.

The critical discoveries of the research were that; Lean practices will enhance inventory turnover suggesting that it promotes the service delivery system of the organization; lean practices help eliminate waste, suggesting that it does away with sunk costs thereby promoting the profitability of the organization. The other finding which came out of the research was that lean management ensures quality products, suggesting that it promotes customer satisfaction.

This research significantly demonstrated that whilst organizations may be bothered by issues of competitiveness, poor delivery, operational losses, and excessive waste in their processes, the solution may be in the full implementation of the lean management system. The other significance of this research was its ability to show how the integration of the tools could provide better results leading to the enhancement of the organization's performance. For example, the integration of kaizen and total quality management would provide better results for material storage and issues which in turn ensures efficiency in the processes.

In conclusion, the research has demonstrated that a matured lean management system has got more positive impacts than negative ones, especially where the organization has committed employees and leadership to fully support its cause.

Keywords: Lean management, Lean Practices, Lean Concept, Lean Manufacturing, Lean tools.

1. INTRODUCTION

Lean Management is very important to the well-being of organizations owing to its ability to encourage shared leadership and obligation; its stance to instill continuous improvement which guarantees that each employee contributes to the advancement process. This management approach acts as a guide to building an effective and strong organization that is always advancing, recognizing genuine issues, and settling them. According to Demeter & Matyusz (2011), lean management is a significant approach to business as it safeguards competition and achieves better performance. The link between lean management practices and the overall performance of organizations has been investigated by numerous scholars and researchers and there has been a variety of arguments that have been put forward about this concept of lean management. This paper will consider the arguments put forward by other researchers and point to some of the influences that lean management has on the performance of the organization. The author feels that performance improvement is a factor of human intervention and that the human element must be emphasized wherever credit is warranted for this phenomenon.

Organizations are faced with so many problems daily. These issues become clear as the influence the bottom line of the company. The problems usually manifest in the form of poor quality products, wastage during production, excess work in progress along the value chain, prolonged residence time to finish a product for shipment to the customer, and sunk costs incurred along the value chain. All these problems when compounded point to poor delivery service and an unsatisfied customer at the far end of the value chain. This brings in an argument to showcase the impact of the lean management approach and demonstrate how effective the concept is and the applicable tools utilized to improve performance. Arguments are backed by the introduction of the much-neglected elements as these tools and concepts are utilized to propel performance, the element of the human factor, which is regarded as a "soft issue" in the research spectrum. The approach presented by the author is a radical one but commensurate with the concept of lean management as it exhibits the improvement of organizational performance. Although lean management has been studied in detail, insufficient attention has been paid to demonstrating the ability with which this tool is able to link with other tools or concepts to provide even better performance. The implications of lean management research deserve to be explored further to fully demonstrate the benefits of the performance outcome. Kaizen can be linked very much to Quality Management System (QMS) to realize robust management allowing for effective performance as the processes tape into material storage and issuing. The previous works portray one major limitation in that they ignore the human element in all lean practices that have been cherished for improving organizational performance. The research contributes to the body of knowledge as it demonstrates the alignment and integration of tools utilized in lean practices to produce hybrid systems and tools which results in better performance.

This investigation is set out to address the following question: What impacts do lean practices have on organizational performance? The study will investigate the effects of lean practices on the performance of an organization after the concept is fully implemented as opposed to just stating that an organization is on lean without really specifying the maturity of the system.

LITERATURE REVIEW

The genesis of lean management was in Toyota in Japan. After World War II there was pressure on material resources and Toyota was not spared from this pressure. Toyota was faced with labor strikes and pre-tax losses which was pointing to the company's bankruptcy (Holweg, 2007). Faced with such a situation Taiichi Ohno then introduced the Total Productive System (TPS) which is a lean management tool to eliminate waste within the production system and turned out to be a renowned reference icon in the global industries (Liker & Morgan, 2006).

1. WHAT IS LEAN MANAGEMENT?

According to McLaughlin (2019), lean management is an approach to running an organization that supports the concept of continuous improvement, a long-term approach that systematically achieves small, step-by-step changes in the process to improve efficiency and quality. Collar & Bradford (2012), describes lean management as a management system developed to improve productivity by eliminating waste. From the two definitions, it is clear that lean management refers to continual improvements geared at enhancing efficiency and hyping productivity through the eradication of waste. It is important to note that lean management stresses waste elimination. These two definitions overlooked a significant component of this management system, the cultural aspect which is included in the whole situation through the human element. Lean is a cultural issue. Organizations have tried to enhance better results through incentives but the introduction of lean culture provided for even better results because with lean management, employees are empowered and respected and they have ownership of the activities they are subjected to.

2. WASTE IN THE LEAN MANAGEMENT CONTEXT

It is critical to appreciate what the waste referred to means. Any activity or step in the process that does not add value to what the customer wants is regarded as waste (Skhmot, 2017). This outline of waste is very strong in that it clearly indicates that if an action exists in the process of production the client is not willing to pay for then that action is referred to as waste. In other words, that action or step becomes undesirable because it drags the customer into unnecessary costs. Plannettogether (2021), examines the wastes which include; overproduction, transport, motion, inventory, waiting, over-processing, and defects. Gay (2016), indicates that waste comes in the form of time, material, and labor. Whereas, Skhmot (2017), outlines the same items as indicated by Plannettogether, but included the eighth one to include non-utilized skills. These outlines are very relevant when talking about waste because they do not add value to the customer's needs. Though both authors argue about overproduction, it is felt that the argument omitted also another significant waste that is underproduction because it will not add value to the customer, in fact, it will inconvenience the customers by making them to incur some delays as efforts will be made to try and fulfill the rightful quantities. The issue of time is very important when considering on-time delivery of products to the customer. The whole idea here is to eliminate any expense or effort that does not transform the raw materials into an item the customer is expected to pay for (Gay, 2016). This then gives the notion that at each stage value is added to the production through optimization of the process steps.

3. THE RELEVANCE OF LEAN MANAGEMENT TO AN ORGANIZATION

Demeter & Matyusz (2011), describes the relevance of lean practices as a concept that safeguards competition and achieves better performance. In their discussion, they concluded that those organizations applying lean practices tend to achieve a better inventory performance turnover than their counterparts not embracing lean as an ideology. Pearce & Pons (2013), alludes to the same notion as suggested by Demeter & Martyusz on the benefits of lean practices but they went a step further to highlight that what then gives the organization a better standing when embracing lean practices are the choices made on choosing the appropriate tools and when to apply them. These two arguments bring significant issues, the first issue being the decision alone for an organization to go lean becomes relevant in the long run for the business when all the other variables are correctly structured. Certain critical variables such as the organizational culture need to be taken into consideration, and the commitment of both the leadership and the employees is yet another critical variable. A decision to go lean may face challenges if these variables are not first considered and addressed if lacking. Demeter & Matyusz (2011), brings an argument about the benefits of lean which is basically reliant on concepts than practical phenomenon on the ground. The argument of tools selection is also very important. Tools such as; Kanban, the 5S, TPM, and SMED are commonly applied but it is always prudent to establish the relevance of the tool to the specific waste to be eliminated otherwise the organization risks applying an irrelevant tool (Pearce & Pons, 2013). From the above arguments, the author feels it is also important to talk about the impact of the lean practices in relation to the maturity stage of the concept in terms of its implementation, where certain parameters can be set as benchmarks are set to supply information on the improvement of the lean management system. Such a system may be described as an infant, developing, and mature depending on how the implemented system satisfies the set parameters applicable to those three developmental stages. The idea of providing a blanket statement to indicate that an organization has gone lean may be misleading at times and it also does let down the concept itself depending on how and at what level the implementation is done. The other critical issue ignored by Demeter & Martyusz was the issue of resource availability. Those organizations endowed with resources are likely to excel well in terms of getting value from lean practices than their counterparts starved of resources. Lack of resources can seriously affect lean practices, especially under circumstances where planning is critical. Some of the resources can be overwhelmed with

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the tasks at hand, while others will not have adequate on their part to keep them busy. In a nutshell, such a scenario where resources become an issue time becomes constrained and the outcome is undesirable when certain phases of production begin to delay because of the unavailability of resources. Overall, Demeter & Martyusz's argument would hold water when all variables are in tandem, that is when the targeted waste has been identified, the applicable tool to handle the waste is found relevant, the desired resources are availed, and the implementation stage parameters set to spell out the system's maturity stage. When these are in place then inventory turnover performance would demonstrate a scenario where less cash is spent on raw materials owing to the selection of the JIT approach, and less cash is tied to work-in-progress owing to the application of the Kanban tool. The time to deliver is always met resulting in a satisfied customer.

4. HOW DOES THE APPLICATION OF NON-FINANCIAL MEASURES INFLUENCES LEAN MANUFACTURING?

Fullerton & Wemper (2009), examines how the application of non-financial manufacturing performance measures (NFPM) influences lean manufacturing monetary performance. In short, their findings suggest that NFPM arbitrates the connection between lean manufacturing and the monetary performance of an organization. Non-financial performance measure relates to the organization's long-term achievement and variables such as customer satisfaction, internal business process proficiency, business new ideas, and employee satisfaction lead to strides in organizational and financial performance (Lynch & Cross, 1991; Kaplan & Norton, 1996). Non-financial performance measures include factors like; customer satisfaction, employee skills, and knowledge, employee satisfaction, etc. Fullerton & Wemper's discussions revealed that implementing lean management systems without supportive non-financial performance measures ends in disappointing monetary outcomes. They provided an invaluable source for this focus owing to the fact that non-financial measures are less vulnerable to external clamor than financial measures, their use may advance managers' execution by giving a more exact evaluation of their activities. Their discussion however fell short of comprehension because of its inadequacy in showing key core competencies and in identifying the areas the organization could not realize were suffering. Norton & Kaplan (1996), then developed the balanced scorecard which demonstrates that for a business to thrive, it requires the balancing of the four business perspectives namely; financial, customer, internal business processes, and learning and growth perspectives. In contrast to the Fullerton & Wemper argument, Norton & Kaplan brought in specific non-financial measures and really explained why their designed tool was more appropriate in enhancing the monetary performance of an organization. Their argument was that financial measures alone were inadequate as they account for past performance and history. The Balance scorecard was a tool that supports the organization's strategy and is based on today's investment for future harvest, meaning it is a long-term investment strategy. Norton & Kaplan made their work stronger by exploring the out-come based measures from their tool such as client satisfaction emanating from well-laid strategies focusing on customer needs, market advancement emanating from strategies to invest in market occupation as these are in tandem with non-financial measures. The author feels that non-financial performance measures as crafted by Norton and Kaplan are critical to an organization as they can be linked to the organization's strategic objectives and be utilized as a performance management tool for the employees. It enriches the lean management system in that it brings the human element to the whole phenomenon which all the other tools could not provide. While managing employee performance and the links with the rewarding systems which incite performance, an organization ends up with satisfied employees which is an "intangible asset" to the organization. The Balanced Scorecard becomes one of the modern-day tools that leadership can select when addressing any specific waste elimination. In fact, it is universal in its application because it is relevant to any change process where human involvement is concerned. As argued above, instituting a non-financial performance measure like learning and growth forms the basis of a process to promote performance. When the learning and growth perspective is in shape, it means the employees are prepared with the fundamental aptitudes and information to able to positively influence the internal business process activities and ensure effectiveness and efficiencies are accomplished resulting in high inventory turnover performances. The high inventory turnover performance will provide for a satisfied customer as service delivery would be good and the products will be of good quality. At this stage, the organization is comfortable talking about having attained a competitive advantage. When the customer satisfaction index is good it then transforms into increased revenues and profitable transactions demonstrating good financial performance emanating from lean management linked with non-financial performance measures. In short, lean management can be integrated with an organization's corporate strategy, and the Balanced Scorecard can be selected as the relevant tool to eliminate waste such as time delays which affect delivery and will be addressed through the internal business processes perspective, defects which are expenses in terms of materials, and overproduction which the business addresses through fine-tuning the internal business processes. The internal business processes' effectiveness can be cascaded to the customer perspective to ensure more business and more market share as customer satisfaction would be achieved. Customer satisfaction then culminates in financial performance for the organization.

5. LEAN AS A CHANGE PROCESS AND ITS DRIVERS

According to Negro, Filho & Marodin (2017), there is a relationship between lean practices and the performance outcome of an organization. Their discussion touched on 83 studies on organizations that adopted lean practices, and their presentations revealed that 41 articles indicated positive outcomes from the phenomenon, whereas 5 articles show negative effects caused by the phenomenon. Wullbrandt (2016), suggests that lean practices in organizations have got a negative impact on the employees because of the increased stress as a potential outcome of the implementation of the phenomenon. The stress levels are detrimental to employees' health and eventually will have adverse effects on the organization's productivity, quality, and delivery of service.

These adverse effects caused by the stress instigated by the implementation of lean practices have a negative bearing on the organization's performance. Negro, Filho & Marodin's argument portrays some strength because for sure when properly assessed and planned and having selected the relevant lean tools, the practices will bear some positive impact on the performance of the organization. Beckhard and Harris (1980), suggest that for any change process to happen, leaders should have a positive vision that they clearly share with their followers to allow for a smooth buy-in, they must also be dissatisfied with the status quo for them to be able to propel forward the change process, and they must be able to make the first positive step towards the change. The product of dissatisfaction, vision, and the first step must be greater than the resistance from the stakeholders and the system.

$$D \times V \times F > R$$

Where: D is the dissatisfaction with the status quo or the waste.
V is the positive vision that leaders envisage as a result of the waste elimination
F is the first step towards addressing waste elimination, like giving the employees roles during the change process.

Adopted from Beckhard & Harris (1987).

Beckham's argument is centered on the fact that the factors on the left must always be greater than 1 and that the resistance should always be suppressed below the product of the left side factors. When the product of the left factors of the equation is greater than the resistance the relationship between the lean practices and the performance outcome becomes positive. The only challenge with this argument is that it is based on the fact that the stakeholders are intellectuals who quickly appreciate issues rather than when the stakeholders are illiterate and take time to appreciate certain change modalities which could breed resistance. Both arguments above complement each other in that lean practices when carried out with all variables in order will definitely yield positive performance outcomes. The Beckhard – Harris equation does compliment the above notion in that it addresses issues of resistance to change. Once resistance issues are addressed then it will be a sure issue that the lean management change process is a success that impacts the organization in a positive way and that will be demonstrated through financial performance, customer satisfaction, and enhanced efficiencies owing to the organization's preparedness for the change. The two arguments fell short of addressing the issue of the fact that lean practice implementation is a long-term process that is considered an investment and so the cost implications are also a limitation. If an organization is not careful it can find itself being drained ending up being incapacitated for the desired lean outcomes. The situation may be worse when the time frame for the implementation is prolonged and the variables as alluded to by Beckhard and Harris fails to override the resistance to change from the stakeholders. The author brings another dimension as well, that for change to occur smoothly, the organizational culture has to align with the required results. The human element is one aspect that needs proper consideration as it is capable of upsetting everything. To avoid the negative effects of the lean practices caused by other ancillary factors, it is prudent for the leadership to carry out a Force-Field analysis of the change process and plan beforehand for the mitigating actions so that once the change process of lean management begins there will not be found any hindrances. It is noted that the two arguments above provide adequate support to lean practices because as a philosophy it is capable of contributing significantly to the profit of the business and sustaining it if properly implemented as stated above, a pure demonstration of the positive impact of the ideology to the organization.

6. THE BENEFITS OF LEAN MANAGEMENT TO AN ORGANIZATION

Belekoukias, Garza-Reyes & Kumar (2014), discuss the benefits that an organization gets from implementing lean methods and tools to improve its operations and process. Their investigation was based on five lean practices which include; Just-In-Time (JIT), Automation, Total Productive Maintenance, Kaisen, and Value Streaming on their impact on the modern measures such as price, speed, reliability, and quality. They found that JIT and Automation pose the most significant impact on operational performance, while Kaisen, TPM, and Value Streaming pose lesser or even negative impact on operational performance. According to Rewers, Trojanowski & Chabowski (2016), methods and tools applied to lean practices are all important as each one contributes to its specific relevancy. The two arguments present a strong case in that they both agree that the lean management system and its tools play significant roles in the improvement of the organization's operations and performance. The objective is to eliminate waste and depending on the situation, specific tools are chosen depending on their relevance to the assignment. When properly assigned the tools will accomplish the objectives but when a wrong tool is assigned to an irrelevant task then that is when it is deemed that it is posing a lesser or negative impact on performance. Belekoukias, Garza-Reyes & Kumar's work does present a strong case on its own as it articulates how lean methods and tools integrate quality management along the value chain rather than just at the end. By so doing waste is eliminated at every stage along the production line thereby avoiding the piling of defects at the end of production. Waste avoidance results in better performance in financial terms as well as customer satisfaction. The only concern which weakens their work is that their presentation failed to draw from the barriers to implementing lean practices in an organization. The consideration of obstacles to implementing lean practices would have made their discussion effective. Highlighting and scheduling mitigating action plans to issues like; underestimating employee attitudes/resistance to change, insufficient employee skills to implement lean, lack of leadership commitment to the change process, and the general organizational culture could have made their work effective. To obtain maximum impact from lean practices, leadership must not treat the change process like a short-time event but they must take it and allow it to flow like any other project with specific milestones. These milestones must be allowed to flow until the end. This again calls for proper planning and investment in the

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project. When properly executed with reviews taking place incremental performance are noticeable as the lean management system matures.

7. PRACTICAL ORGANIZATION EXPERIENCES IN TERMS OF SUCCESSES AND FAILURES OF LEAN PRACTICES

According to White, Pearson, and Wilson (1999), organizations normally find it difficult to set up lean practices for a number of reasons. Hu et al (2015), suggest that such organizations finding it difficult to implement lean practices would not have critical success factors established to guide them as they journey through the change process. These critical success factors are focuses of leadership planning that must be exercised to accomplish intended and desired results in an organization (Saraph, George, and Schroeder, 1989).

Success is normally given when top leadership is in full support of the change process and shows commitment to the cause. Support is demonstrated through assuming full responsibility for a given assignment or task. Active participation in the required improvements to enhance performance can never be overemphasized. For example, at General Cable, management decided to adopt lean six sigma. Management supported the change process and took responsibilities that came with the change process. Currently, General Cable is competitive in a price-sensitive industry. Management at General Cable assumed an active responsibility for the lean practices change process.

The other significant critical success factor which an organization going for a change process of the magnitude of lean practices is a shared improvement vision. The organization needs to demonstrate a company-wide long-term direction presenting the path with which the business is taking. The objectives and goals need to be clear and supported by tangible improvement, aligned with the organization's strategy. The strategy is a long-term issue that has to be monitored and managed to ensure the performance is kept as desired. Ingersoll Rand set itself on an improvement vision to fine-tune its order entry process by utilizing the DMAIC concept and six sigma tools. These initiative efforts enabled the organization to reduce defects dramatically. All in all, the change process has enabled Ingersoll Rand to a 70% defects reduction, and customer experience has improved also.

The issue of communication under such change processes can never be overemphasized. Ideas, knowledge, and information flow and exchange are also other significant issues that play a role as critical success factors when a change process like lean practices implementation is undertaken. Information flow needs to be clear, adequate, and transparent no matter whether oral or written. It needs to flow in all the company directions to keep everyone informed. This has worked well for Celestica Inc, a firm dealing with electronics in Toronto. Communication has been their mainstay for their Safety Kaisen Improvement program. Employee engagements were improved through company-wide communications. The company managed to create posters that positively impacted employee buy-in resulting in Celestica being able to sustain the program effectively.

The other downside of lean practices is that when done improperly, the process fails. Usually, failure to address structural issues can cause failure in the lean implementation resulting in bad performance. An example of such was General Motors which failed because of not addressing an uncompetitive wage and rewarding structure as well as market compelling products. As a result, the lean factories were closed down because of loss of business, their products were no longer in demand.

Lean practices failure can also be triggered by cultural issues. Corporate culture and the way the business is led at the top matter when change processes such as lean management take place. The success of such practices requires an attribute that is rare in both the business and the people, which is constancy of purpose. Organizations vying for lean practices implementation need to create an enabling environment that fosters individuals to achieve results over time through consistent guidance and standardized work processes. People need to be aware of how things are done in their company.

SITUATIONAL ANALYSIS: ZIMBABWEAN PERSPECTIVE

The current economic hardships faced by Zimbabwe have seen a lot of organizations slowing down on operations and let alone sourcing for systems to incorporate into their operations. They perceive such efforts as a waste of already scarce resources. They would rather spare that little they have to enable them to avail of raw materials and be able to meet other business obligations. The other striking issue has been the level of awareness of the lean concept in the Zimbabwean business environment. The concept is perceived as waste and also as a cosmetic to the already large and well-performing companies. This study took a look at a few companies that are functional in Zimbabwe and have a capacity utilization worth mentioning and the authors came up with the following briefings as indicated in the narration below.

Khanchanapong et al (2014) postulate that the adoption of lean practices presents a competitive edge to the organization. The current economic situation in Zimbabwe is prohibitive and businesses are struggling to meet their business obligations as a result, very few can afford to institute such concepts as lean management. The few organizations that have managed to set up the lean management system in their operations are excelling well and have managed to penetrate the regional and global markets. For example, Zimplats, a mining company involved in the exploration of platinum has set up a lean management system which has resulted in its operations being able to reduce waste. They have managed to implement a total productive maintenance system that seeks to collaborate all functions in their company to maximize the overall effectiveness of production equipment. This resulted in the business eliminating waste in terms of time delays during changeover times for certain tasks. The processes and the machinery/equipment have been fine-tuned reducing mistakes and accidents during operations. These measures have presented cost savings for the business and allowed for better pricing of the platinum despite it being determined by the metal index system. The company, therefore, is comfortable with the prices as dictated by the London Metal index because of the ability of their operation to eliminate waste and provide huge savings for the business making it very competitive.

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Maware and Adetunji (2019), indicated that Just-In-Time (JIT), Total Quality Management (TQM), and Human Resources Management (HRM) are significant tools applied to develop qualitative measurement models of the lean concept. A number of organizations as stated above are finding it hard to have a full bouquet of the lean management system, hence they adopt a portion of it by applying such tools like JIT, TQM, or HRM piecemeal. Zimplats is one such company applying JIT to its operations. The adoption of JIT provides an adequate inventory management arrangement. Zimplats is managing to reduce inventory costs as it does not store excess inventory and tie its cash to it but it procures and supply the moment the materials are required. This arrangement helps to ensure a smoother and more efficient production flow. The other company that has adopted the piecemeal approach to lean practice is Chloride Zimbabwe which manufactures batteries for automobiles. The company has implemented a TQM system in its operations. A number of other companies have adopted the same approach. Chloride Zimbabwe through the adoption of TQM has managed to uphold cultural values that create long-term success for both customers and the company itself. Employees focus on eliminating defects which can be a cost the customer is not willing to pay. Continuous improvement is also assured as it is a component of one of the series of ISO 9001:2015 which is one of the affiliates of TQM. This continuous improvement is a process whereby an organization thrives to do better every time on certain activities within its operations. According to Baron (2019), TQM is an ongoing process of identifying and reducing or eliminating errors. The system demands the establishment of standard operating procedures which are deemed necessary for the manufacture of good quality products thereby preventing errors. The operations at Chloride Zimbabwe are well documented to allow for the prevention of errors and for the provision of confidence to the customers of the business.

In terms of the HRM bit as a significant tool applied to develop qualitative measurement, many organizations in Zimbabwe both the manufacturing and service industries have adopted a performance management system by applying the non-financial measures as proclaimed by Norton and Kaplan (1996) in their Balanced Scorecard. The tool looks at a business from four perspectives and out of these three are of fundamental importance to this subject. These three are; client viewpoint, inside trade forms, and learning and development. The balanced scorecard has been employed by several companies in Zimbabwe owing to its strategic management performance metric that leverages organizations select and upgrades their internal process to assist their external outcomes. The focus is on equipping skills; improving internal efficiencies through people; innovation; and improved technology leading to a satisfied customer. When the customer is satisfied then it means there is the continual business for the company resulting in good financial performance. These non-financial measures ensure there is an improvement in efficiencies emanating from the learning and growth perspective, improved efficiencies coming from fine-tuned internal business processes and all of this leads to the desired delivery service and a satisfied customer.

The above situational analysis provides a picture of the improved performance of organizations that have embraced the lean concept. As stated above, some have institutionalized the full lean concept bouquet while some have employed the piecemeal approach. In either approach, the benefits are evident though the magnitude differs between those that apply the full bouquet to those that employ the piecemeal approach.

FUTURE RESEARCH ISSUES

There has been a lot of literature in terms of lean management. Future research on the subject to establish the core elements that constitute a formal lean practice would be ideal to enable a better understanding for those companies eyeing to implement the system in their organizations. The research should further come up with the way the system can be audited to assess compliance like other systems does, for example, the Total Quality Management System on its ISO 9001:2015 standard.

CONCLUSION

The arguments presented in the above literature review clearly demonstrate that with lean practices, any expense created during processing or effort that does not transform or convert raw materials into a product or service the customer is not desirous to pay for is waste. Lean practices seek to eliminate these expenses and efforts which do not add value for the organization to perform better and remain relevant and sustainable. Waste normally manifests in the form of overproduction/underproduction, motion, transport, inventory, over-processing, and defects. These factors may render an organization uncompetitive and negatively impact the performance of the organization. The introduction of lean practices could be the best solution to deal with the undesired waste which can easily be done through the selection of relevant methods and tools specific to the targeted waste.

Lean management has been argued in the review as having the ability to promote shared leadership and obligation thereby presenting opportunities to everyone in the organization to fully contribute to the continual improvement of the processes which in turn attracts operational performance. This has been evident in those organizations with employees who have adequate lean skills and where the organizational culture is skewed towards learning and development. If the culture is not conducive and the employee skills inadequate, then there is bound to be resistance to the implementation of this phenomenon. Again, lean management has been argued to have the ability to align with other concepts, methods, and tools to establish a robust hybrid system that is impactful leading to the high performance of the organization.

After going through the reviewed arguments, it has been demonstrated that when assessing the impact of lean practices in an organization, attention must be given to the maturity of the lean management system. It will only be fair to assess a given lean system on the basis of its period of implementation rather than generalizing that since it has adopted lean practices so everything must fall into shape. Lean systems are long-term investment projects which run in tandem with the corporate strategy and may not give short-term wins. The issue of resource availability is another significant factor during lean practices. The presence of resources normally propels the phenomenon, for example in the event of a process where efficiency is boosted by automation the presence of resources will enable the procurement of the equipment required to be factored. Where resources are unavailable, their absence results in a challenge.

The balanced scorecard has exhibited that non-financial performance measures can be linked with lean practices and enable high performance for the organization. The balanced scorecard has the human element which demonstrates that its integration with lean practices provides impactful results. The learning and growth perspective of the balanced scorecard is comprised of soft issues which are geared toward addressing human elements.

Lean like any other change process needs to be careful of employee attitude/resistance and the inclusion of the Beckhard-Harris equation has demonstrated that when all variables are adequately applied, then resistance is overcome to allow the change process to present itself in terms of impacting the performance of the business positively.

RECOMMENDATIONS

It is recommended that lean practices be made a mandatory subject in all business and technical curricula in Zimbabwe to enable the country to come to speed with the global trends in terms of operational improvements and subsequently performance improvement. This will address the current misconception that lean practices are costly and are nice to have.

Further recommendations are made to the commercial sector for them to consider embracing lean practices in their operations. Again, the notion of regarding lean as an approach suitable for the manufacturing companies need to be corrected because all businesses encounter wastes that lean aims to address.

ABBREVIATIONS

DMAIC	Define, measure, analyze, improve, and control
HRM	Human Resources Management
ISO	International Organization for Standardization.
JIT	Just-In-Time
NFPM	Non-financial performance measures
QMS	Quality Management Systems
SMED	Single Minute Exchange of Die
5S	Set in order, Sort, Shine, Standardize, and Sustain
TPM	Total Productive Maintenance
TPS	Total Productive Systems
TQM	Total Quality Management

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