

Knowledge Management as a Catalyst to Building Resilient and Effective Human Capital in Manufacturing Companies

Charles Mazhazhate, Bindura University of Science Education, Zimbabwe
Tafadzwa Mudondo, Harare Polytechnic, Zimbabwe

The Asian Conference on Education 2019
Official Conference Proceedings

Abstract

The study argues that human capital development from a knowledge management perspective helps to shape attitudes and foster ethical values for higher productivity. Human capital is central to productivity in an economy and if well groomed, may result in sustainable development of a society. Human cultures vary, but application of knowledge management perspectives lead to cooperation, collaboration, team work and understanding that all people desire to live in a safe and secure world. Knowledge management is an idea-generating process that must be shared within the organization through tacit means or explicit knowledge which leads to the alignment and integration of human resources' skills, competences and abilities to the positions held by the various incumbents in the organization. Knowledge management also implies the product value and features should match the cultural and physical inclinations of that community for it to be of any use or market value. Thus, fusion of knowledge management into human capital development leads to development of employees who are able to make decisions in uncertain scenarios and make organizations successful and sustainable. This was a case study of twenty manufacturing companies and both qualitative and quantitative instrumentation were used. The study found out that use of knowledge management as a discipline to guide policy formulation and decisions in organizations was a farfetched idea. No organization used knowledge as one of the co-competences. The study recommends use of research to create knowledge so that decisions are made based on empirical evidence.

Keywords: Knowledge Management, Human Capital Development, Idea-Generating Process

iafor

The International Academic Forum
www.iafor.org

1.0 Introduction

The study had been prompted by difficulties faced by students to get attachment for On the Job Education and Training Program as part of their curricular requirements as companies shut down. The research then sought to establish the degree of company resilience in order for them to survive. Zimbabwe is a country that is struggling to make progress in its economic endeavors to attain the middle income status by 2030 as enshrined in the Zimbabwe Government Transitional Stabilization Program (TSP, 2018). This vision, notwithstanding the strides made in the economic arena, is still a closed system embroiled in mystery, secrecy and intellectual trials that are not supported by human capital skills, competencies and knowledge of what is to be done. There is much talk about the vision 2030 in public gatherings and in the public sector, without a strong *throng* of effort supporting and directing manufacturing companies to live to expectations.

Building resilient and human capital effectiveness in manufacturing companies is a pre-requisite for organizational survival in a business environment shaped by competition and other economic shocks and surprises. The definition adopted for this study for resilience is defined as a positive response to adversity that allows individuals or organizations to thrive cope with stressors and overcome disadvantage (Masten, 2007). The concept of resilience then is seen or understood as a process for having capacity to adopt and adapt to challenging or threatening situations as a result of the innate ability in human capital for the good of the organization. Human capital effectiveness is implied to mean the desired outcome from employee performance that reflect agility and flexibility in solving dynamic challenges facing an organization for sustainable competitiveness. Knowledge management becomes instrumental in shaping the desired habits, traits and personality to build the suitable and cultured human resources for the creation of economic value. Policy makers should realize the fact that human resources make use of all other resources in order to create the much needed economic value. Alawamleh, et al (2019) concede that there is a relationship between innovation and human capital investment and if these two aspects are in existence in the organization, they lead to economic development. Human capital is an indispensable organizational resource because that is the resource that can utilize other resources (tangible or intangible assets) in order to attain organizational competitiveness leading to achievement of organizational goals. Eigbiremolen and Anaduaka (2014) posit that of all factors of production, only human beings are capable of learning, adapting or changing, innovative and creative. Drucker (1985), cited in Stehr and Ruser (2017) points out that the knowledge society is one in which the quality of life is dependent upon the primary production of knowledge as a resource instead of capital and labour as was the case in the agrarian and industrial economies. This study argues that human capital development is more effective if it is done from a knowledge management perspective which helps to shape attitudes and foster ethical values for higher productivity. Human capital is central to productivity in an economy and if well groomed, result in innovation and sustainable development of a society. Human cultures vary, but application of knowledge management perspectives lead to cooperation, collaboration, team work and understanding that all people desire to live in a safe and secure world. This the reason why El-Farr and Hosseingholizadeh (2019,p. 5) argue that in the knowledge economy, “knowledge is recognized as the major source of wealth production, and managing knowledge effectively and efficiently is considered to be a key success factor to gain sustainable

competitive advantage for organizations”. This implies in Knowledge production and management to build the much needed capabilities of an organization.

1.1 Objectives of the study

The main objective of the study is to explore how use of knowledge management paradigm in human capital development can enhance productivity in the manufacturing sector in Zimbabwe. The specific research questions of the study were:

- a) Is there any connection between knowledge management and building organizational resilience?
- b) How can knowledge management be used as a catalyst to building resilient and effective human capital for organizational competitiveness?

1.2 Theoretical Framework

There are two theories underpinning this study, namely the Endogenous Growth Theory (EGT) (Grossman and Helpman, 1994) cited in Antonelli (2017) and the Human Capital Theory (HCT) (Becker, 1966). The EGT argues that that economic growth is driven by the improvement and enhancement of human capital (by means of innovation) to constantly create new, effective, and efficient processes and ideas from within the organization or system itself, without recourse to external factors of any sort. The HCT refers to the stock of habits, knowledge, social and personality attributes embodied in the ability to perform labour so as to produce economic value. Human capital is unique and differs from any other capital. It is needed for companies to achieve goals, develop and remain innovative. Even though fragmented and politically disorganized criticisms exist on the usefulness of the HCT, the theory provided a framework for training and development of human resources. From the two theories it can be argued that companies ought to place value on their human resources for they alone bring change to an organization and that building the sort of teams desired for specific tasks leads to competitive advantage. The two theories point to the fact that knowledge generation based on resilient cultures creates value in the employees which lead to constant improvement and high productivity resulting in significant economic growth (Pelinescu, 2015).

2.0 Literature Review

The current global trends show a rapid emerging of markets that are fast growing, leaders in the business arena are now relying on data analytics for decision making, more discerning consumers with access to product information, rapid innovation and isolationist economic policies. In such a business environment there is need to embrace knowledge driven solutions coupled with business intelligence to confront business challenges. The World Development Report (2019) posit that the changing nature of work demands skill sets that improve the adaptability of workers, allowing them to transfer easily from one job to another. Across countries, both higher-order cognitive (technical) skills and socio-behavioral skills are consistently ranked among the skills most valued by employers. Employers in Benin, Liberia, Malawi, and Zambia rank teamwork, communication, and problem-solving skills as the most important set of skills after technical skills. Knowledge management is an idea-generating process that must be shared within the organization through tacit means or

explicit knowledge which leads to the alignment and integration of human resources' skills, competences and abilities to the positions held by the various incumbents in the organization. Knowledge management also implies the product value and features should match the cultural and physical inclinations of that community for it to be of any use or market value. Thus, fusion of knowledge management into human capital development leads to development of employees who are able to make decisions in uncertain scenarios and make organizations successful. The concept of human capital refers to the abilities and skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (Okojie, 2005). Knowledge is a new form of labour. Building organizational resilience and effective human capital create a conduit for business success whose decisions are made from an informed point of view in the context of being innovative and robust in strategy formulation. According to Hitt, et al (2006) a company with skillful and knowledgeable human resources has higher human capital and is more likely to create knowledge, make appropriate decisions, innovate and properly utilize organizational resources for its benefit. Zimbabwean manufacturing companies face challenges of foreign currency, raw materials due to poor agricultural production affected by many variables, inflation rate, unstable exchange rate, unpredictable cost of goods and at times redundant human capital skills.

2.1 Building resilient and effective human capital

In their study, Ho, et al (2014) concluded that development of capabilities and capacities of human resources is an essential piece of the “organizational toolbox” through which organizational resilience is built. Organizational resilience is thought to be important in how organizations respond to external events and highly dynamic environments. Vogus and Sutcliffe (2008) cited in Visser and Jacobs (2019, p.3) define resilience as “the maintenance of positive adjustment under challenging conditions such that the organization emerges from those conditions strengthened and more resourceful. By ‘challenging conditions’ they include discrete errors, scandals, crises, and shocks, and disruptions of routines as well as ongoing risks (e.g. competition), stresses and strain”. For this to be realized, there is need for new knowledge generation, management and good governance such there is higher degree of sustainability and survival of the organization. Knowledge building and application make disruptions to organizational existence manageable and create knowledge-able employees who can study their environment and take necessary strategic decisions on behalf of their principals. The changing nature of work also implies upgrading the skills of employees so that they remain relevant and committed to their work. Suryaningtyas, et al (2019) argue that in the Fourth Industrial Revolution Era (4IR) is unavoidable in the face of the digital technology which has become the main driver of economies disruptions. In such a situation, organizations need to build resilience mechanisms that help them to respond and adapt within the shortest possible space of time to adversities in order to maintain the sustainability of their businesses. It is a fact that without proper knowledge management, capabilities to maintain positive changes are slim in the face of difficult situations which make organizations fail to attain their desired goals. Bell (2002) cited in Obioma, (2017, p.145) argues that organizations are living in times “of unprecedented change, wrenching economic instability and business discontinuities that demand

organizational agility and organizational resilience. In many respects, resilience represents the next phase in the evolution of traditional place-centric enterprise structures to highly virtualized, people-centric structures that enable people to work anytime, anywhere.” This implies that investing in human capital as a strategic resource in the organization, is important in building a culture of resilience as well as being able to survive external and internal business threats through adoption of new strategies, innovations and technologies. Knowledge sharing is one way of building organizational resilience and helps the organization to remain strong and endure any pressures until success is achieved as reflected in the Figure 2.1 below.

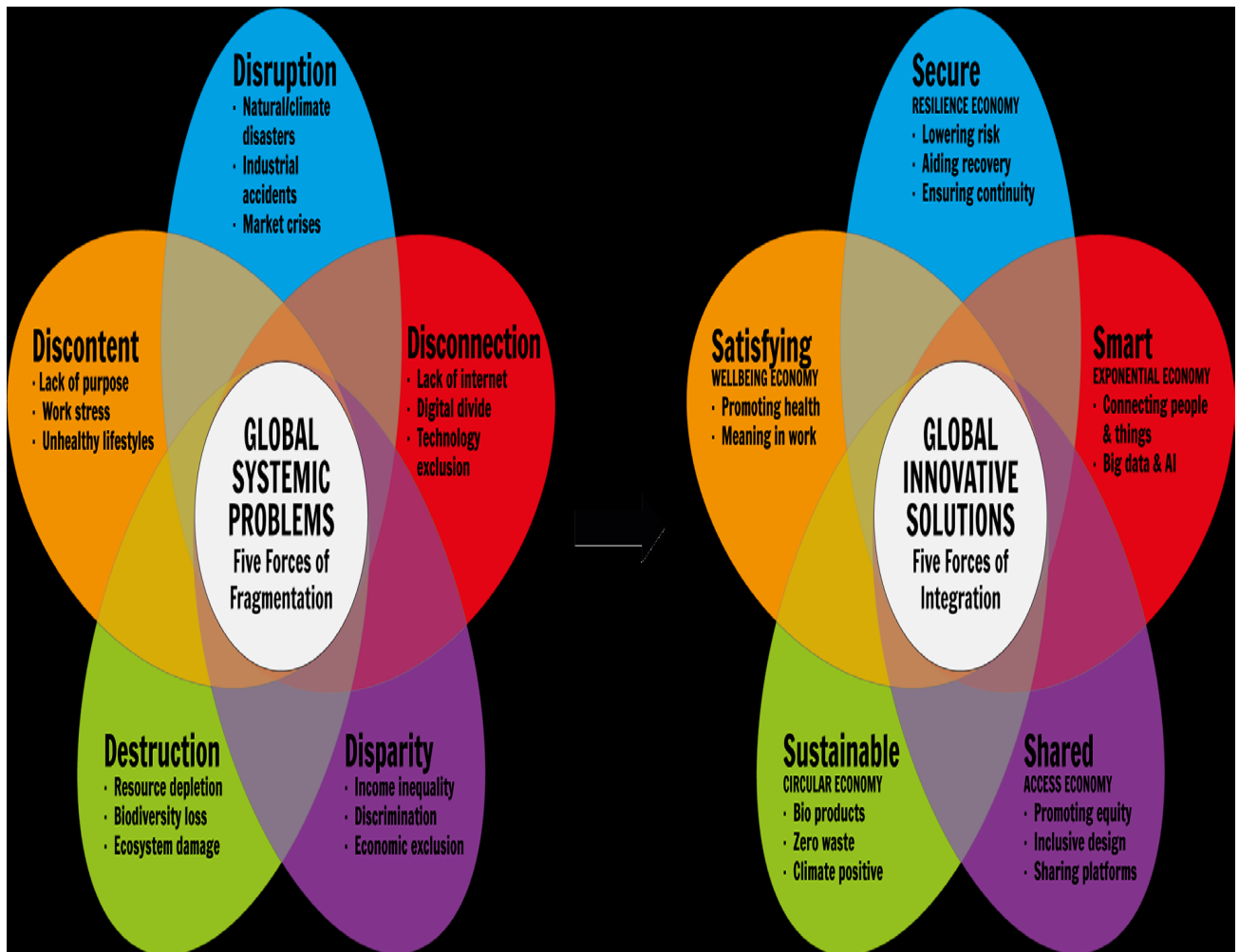


Figure 2. 1: Moving from systems breakdown to systems breakthrough

Knowledge management (KM) is a strategic asset or weapon that can be used in an organization to improve its performance and buttress its culture. Jennex and Olfman (2006) refer to KM as the practice of selectively applying knowledge from past experiences of decision making to current and future decision-making activities. According to Behringer and Sassenberg, (2015), KM is viewed as one of the critical elements of organizational success and an enabler of competitiveness in local and global contexts. It is one fundamental activity of the business to learn how to generate knowledge, build knowledge management systems in order to configure and reconfigure its business processes in the context of new strategies through effective

information management. Building the KM systems require an added dimension of human capital development in order to create an organization culture with the sort minds, fortitude and inclinations the business wants. Attia and Salama (2018) reinforce the role of KM as assisting organizations to remain competitive through sharing information with the external partners and knowing their competitors' products, services, strategies and best practices. Thus manufacturing companies need to embrace KM as a strategic tool to enhance their competitiveness on the market as well as developing the human skills that help employees to steer the organization in the right direction amidst economic difficulties. Beck, et al, (2011, p.1) allude to the fact that "in turbulent, surprising, continuously evolving marketplace environments only flexible, agile, and relentlessly dynamic organizations will thrive. In fact, firms often must be able to move beyond survival and actually prosper in complicated, uncertain, and threatening environments. Unstable environments create frequent challenges and even relatively stable marketplaces experience occasional jolts or undergo periodic revolutionary shifts". This with a much strong thrust in KM, chances are high that the organization becomes more proactive and highly risk calculating for the good of strategic decisions and as well as organizational prosperity.

The current economic shock waves that are affecting Zimbabwean manufacturing companies, strategists and shareholders need to view these challenges as windows of opportunities rather than stumbling blocks to economic success and competitive growth. Embracing the tenets of knowledge management can be used to overcome challenges threatening organizational survival. Resilient employees tend to be resourceful and are capable of interpreting their environment without panicking or emotional imbalance which is good for an objective assessment of both the internal or external factors that affect the organization. Knowledge management coupled with good motivation strategies and corporate governance help to develop a character within an employee that increases sturdiness and logical thinking. Employees tend not to withhold information that is useful to the next person in the in organization for improved decision making processes that lead to organizational success. Knowledge-intensive organizations need to develop a culture that promotes organizational learning; that encourages innovation and the development of novel systems and processes, products and services El-Farr and Hosseingholizadeh (2019).

Research Gap

There are a few studies if any carried out on how knowledge management can be used as a vehicle to increased production within the manufacturing sector in Zimbabwe in particular. Furthermore there is a strong laxity from the manufacturing companies on training and development of their employees for enhanced performance. It is against this background that the authors decided to conduct a study on the essence of knowledge management perspective in human capital development as a conduit to shape attitudes and foster ethical values for higher productivity leading to the attainment of the middle income level by 2030 by the government.

2.4 Empirical Reviews

There are numerous empirical reviews on human capital development and organizational purposes but the study has restricted itself to three seminal studies. Firstly, a study by Alawamleh, et al (2019) on the bilateral relationship between

human capital investment and innovation in Jordan identified four main pillars required to support economic development and achieve a competitive advantage using the country's human capital namely the "Habilitation, Opportunity, Power Distance, and Entrepreneurship (HOPE)". They further noted that culture is central to innovation and economic development. In their study culture is a product of knowledge generation. Their study led to an awakening understanding that Jordan culture and Arab world in general lacked some awareness of the importance of human capital. Secondly, Dawodu, et al (2018), in their study of human capital development and organizational performance in the Food, Beverage and Tobacco Industry in Lagos State, Nigeria, concluded that human capital development may improve the performance of the seven manufacturing companies investigated and should be accorded a premium place in the upgrading of people skills, knowledge and abilities particularly when it comes to preparing and grooming people for the present and future roles in an organization. From their study it can be noted that there is a strong assertion that developing human resources is critical for the survival of an organization. Thirdly, Azam, et al (2015) in their study stretching from 1981-2013 on foreign direct investment and human capital: evidence from 34 developing countries where the thrust was to evaluate the impact of foreign direct investment (FDI) using the Fixed-Effects Model found out that the inward FDI has statistically positive impact on human capital and recommended that policy makers need conducive and investment friendly approaches to enhance more FDI into the host counties and this evidently improve the social welfare of the people of developing countries. By implication human capital is central to competitiveness of an organization.

Thus from the three cited empirical reviews, the only missing link is the use of knowledge management and culture as conduits to building resilient and successful companies.

3.0 Methodology

The study was guided by two main research questions:

- a) Is there any connection between knowledge management and building organizational resilience?
- b) How can knowledge management be used as a catalyst to building resilient and effective human capital for organizational competitiveness?

This was a case study of twenty manufacturing companies in Zimbabwe's Msasa Industrial Area randomly sampled out of a target population of eighty companies. Sample size was based on the Internet Based Sample Calculator with a confidence interval of 19.09 and confidence level of 95% for representativeness. A Case study research allows the exploration and understanding of complex issues and is considered a robust research method particularly when a holistic in-depth investigation is required (Zainal, 2007, Yin, 2013). Both quantitative and qualitative instrumentation were used. Four questionnaires were sent to middle and top management in each of the selected case study unit making it a total of eighty and out of these, seventy-three were retrieved. Five face-to-face scheduled interviews were conducted.

4.0 Discussions and Findings

The sample size N= 78 (73 questionnaire respondents and 5 Interviewees) was used. Before the analysis of the two research questions, two important aspects of the respondents are worth mentioning their statistical figures namely educational level and gender.

4.1 Educational level

From the responses given, the following Table 2.1 shows the educational qualifications of the respondents:

Level	Number of Respondents	Percentage level %
O Level	6	7.69
National Certificate	7	8.97
Diploma	13	16.66
Degree	40	51.28
Postgraduate	12	15.39
Total	78	100%

Table 4.1 Educational Level

The above statistical data serves to demonstrate that the responses given were from credible sources and which can be relied upon. It is also important to establish why KM may not be or is in use in organizations staffed by highly qualified experts.

4.2 Gender response rate

The following Figure 4.1 shows the gender response rate of the case study:

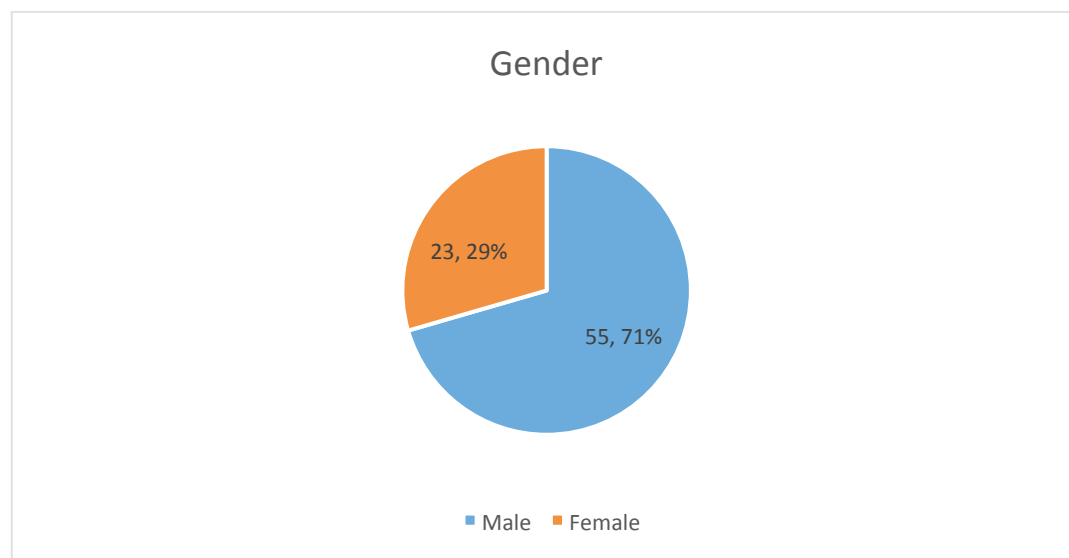


Figure 4.1 Gender

The Figure 4.1 shows 23 (29%) of respondents were female and 55 (71%) were male indicating that the study was gender sensitive and balanced and the recommendations from the study fit in all types of organizations where females and males are constituted for organizational success.

4.3 Connection between Knowledge Management and Organizational resilience

From the responses noted, 37 (44.43%) felt that organizational resilience is built by having a strong culture that is based on organizational values reflected in their vision and mission and these are often displayed in an organization's reception area or in the various management offices. They believed that the personality of the leader is instrumental in shaping organizational resilience. Twenty-seven (34.6%) indicated that the statutory instruments already in place were the source of organizational resilience. They argued that once there is no risk management policy, for example, there was no budget for such an item and if any calamity befalls an organization, there is nothing to fall back on. This creates a challenge. From this observation it can be concluded that the scope of being proactive is there amongst the employees but how strategies are designed may be lacking. Fourteen (17.94%) were of the view that there is a strong link between KM and organizational resilience. The resilience stems from the employee's ability to see beyond the horizon or see things coming and plan ahead so as to future-proof their systems thereby being proactive. However, they believed this solely is the responsibility of top management to strategically position the organization to survive any attacks. This contradicts literature review which refers to information sharing and human capital development as important elements to create a firm foundation for organization resilience and improved performance.

4.4 Knowledge management, building resilient and effective human capital.

This question received interesting attention from the respondents and it reflected much on whether KM tools were known and how they impact the human capital and the organizations at large. Seven (9%) respondents from the questionnaires underlined the word "How" on the questionnaire and went on to write small comments like: "application is difficult in life, do we have such a thing, I need to read about this," and this in a way points to some clear understanding that the concept is new or vague to some. The skill to closely scrutinize organizational challenges or opportunities depends on the ability to utilize fully the various KM tools at hand in the organization that help them to do knowledge production or generation, storage, dissemination and evaluation of progress. In this case, sixty-eight (87, 2%) respondents suggested that meetings were one of the most effective tool to gather information for strategy formulation in this ever changing business environment which requires organizations to be innovative and creative. However, the major derailment is a sad culture which leads organizations to be poor caused by lack of understanding on the implementation of meeting resolutions. Before the agreed resolutions are effected, another meeting is called with a different agenda totally divorced from the initial course of action earlier on agreed upon put to waste resources, time, efforts of employees who were tasked to perform certain duties. There is no consistency in sticking to one thing. It is always a butterfly strategy used every day to tackle challenges facing the organization without a solid foundation to base new ideas on. This agrees with Robinson, et al., (2006) and Nonaka, (2007) who argued that any changes in knowledge management are positively associated with changes in innovation. This entails a thorough analysis of the strategy to be followed whether the strategy content is in line with desired course of action. Minutes of meetings must be shared, and then evaluated if the resolutions agreed upon were effective or not without closing that strategy and evolve an emergent strategy that is not related to the initial thrust. Any drift from the initial vision or organizational philosophy without having taken into cognizance the building

of a strong thread to the new path or course of action is suicidal. Three (3.8%) respondents mentioned that at times organizations do not want to train and develop their employees for fear of losing them for greener pastures. Even if the training and development programs were to be conducted, usually companies outsource this function from consultant firms that have no much understanding of the organization. This training must be done by the founders of the company who exactly know their initial intention of establishing the business, have a grounded vision and as leaders, can as pointed out by Mullins (2013) start planning from the future, engage others and then deliver. This helps to keep organizational values intact and these shape the attitude of employees. From the overall perspectives, little of knowledge management is in use in manufacturing companies as indicated by the responses given and the idea seem foreign to policy and strategy formulation.

5.0 Conclusions

The study found out that Knowledge management is central to human capital building and organizational resilience. There is a relationship between investing in organizational resilience and organizational survival. Valuing human capital and building the necessary values, help them to be prepared for any change in the business environment without compromising the needs of customers. Manufacturing companies should budget for knowledge management systems as well as the development of human capital. The study recommends use of research to create knowledge so that decisions are made based on empirical evidence as the strategic route to building strong organizational resilience and competent human capital. The tool below developed by the researchers can be of hand in analyzing the level of resilience of the organization so as to be in a position to align strategic goals to the mission and vision.

The Organization Resilience Tool

Metric Quality	Score or rating:1 is the least score and 5 is the highest				
	1	2	3	4	5
Use of Knowledge Management tools	1				
Employee development			3		
Research, culture and information sharing		2			
Key performance indicators			3		
Use of Disruptive technologies to counter environmental complexities and changes	1				
Total Score	10/25				

Mazhazhate & Mudondo, 2019

Key:

Total Score is expressed as a simple fraction out of 25, the converted into a decimal fraction. Any figure less than 0.5 shows less organizational resilience and 0.5 shows better chances of survival. For example, as obtained in one organization: $10/25 = 2/5 = 0.4$.

Acknowledgements

The authors are grateful to all companies that allowed us to carry out this study at their premises. More special appreciation goes to Harare Polytechnic for support in terms of funding the research up to the participation of authors at the IAFOR 31 October -3 November 2019, in Tokyo. Many thanks to Dr. Eng. T. Mudondo. We also appreciate the support given by all the respondents in the study. Lastly, we acknowledge all the authors whose literature we used and the IAFOR experts who further helped in developing the scope of the research.

References

- Alawamleh, M. et al (2019). The bilateral relationship between human capital investment and innovation in Jordan, *Journal of Innovation and Entrepreneurship*, vol.8 (6).
- Antonelli, C., (2017). *Endogenous Innovation, The Economics of an Emergent System Property*, Edward Elgar Publishing Limited.
- Attia, A., and Salama, I. (2018). Knowledge management capability and supply chain management practices in the Saudi food industry, *Business Process Management Journal*, 24(2). Azam, M. et al (2015). Foreign direct investment and human capital: evidence from developing countries. *Investment Management and Financial Innovations*, 12(3-1), 155-162.
- Becker, G.S., (1966). *Human Capital: A Theoretical and Empirical Analysis, with special Reference to Education*, National Bureau of Economic Research.
- Beck, E.T., et al (2010). *Developing a capacity for organizational resilience through strategic human resource management*, Elsevier.
- Behringer, N, and Sassenberg, K. (2015). *Introducing Social Media for Knowledge Management: Determinants of Employees' Intentions to adopt new tools*, ResearchGate.
- Dawodu, A.A., et al (2018). *Human Capital Development and Organizational Performance in the Food, Beverage and Tobacco Industry in Lagos State. Nigeria, Nigerian Journal of Management Studies, Vol.18, No.2.*
- De Oliveira Teixeira, E., and Werther, W. B. (2013). Resilience: Continuous renewal of competitive advantages. *Business Horizons*, 56(3), 333-342.
- El-Farr, H and Hosseingholizadeh, R. (2019). *Aligning Human Resource Management with Knowledge Management for Better Organizational Performance: How Human Resource Practices Support Knowledge Management Strategies?* <https://www.intechopen.com/books/current-issues>, retrieved 22 October 2019.
- Government of Zimbabwe (2018). *Transitional Stabilization Program*, Harare.
- Grossman, G. M., & Helpman, E. (1994). Endogenous innovation in the theory of growth. *Journal of Economic Perspectives*, 8(1), 23–44.
- Hitt, M.A., Uhlenbruck, K. and Shimizu, K. (2006). “The importance of resources in the internationalization of professional service firms: the good, the bad, and the ugly”, *Academy of Management Journal*, vol. 49, no. 6, pp. 1137-1157.
- Ho, M. et al (2014). *Organizational resilience and the challenge for human resource management: Conceptualizations and frameworks for theory and practice*, ResearchGate

Ikpe.G, and Amah, U, E, (2013). Knowledge Management and Organizational Resilience in Nigerian Manufacturing Organizations, *Developing Country Studies*, Vol.3. No.9.

Jennex, M.E., (2012). "Identifying the Components of a Knowledge Management Strategy." 18th Americas Conference on Information Systems, AMCIS18

Masten A. Resilience in developing systems: Progress and promise as the fourth wave rises. *DevPsychopathol* 2007; 19: 921–30.

Mullins, L.J., (2013). *Management and Organizational Behavior*. 10th ed. FT Publishing International.

Nonaka, I. (2007). "Knowledge management: theoretical and methodological foundations", in Smith, K.G. and Hitt, M.A. (Eds), *Great Minds in Management: The Process of Theory Development*, Oxford University Press, New York, NY, pp. 373-93.

Obioma, M (2017).Technology on knowledge management and organizational resilience of manufacturing firms, *Scholarly Journal of Science Research and Essay* Vol. 6(6).

Pelinescu, E. (2015). The impact of human capital on economic growth. *Procedia Economics and Finance*, 22, 184–190.

Robinson, H.S., Anumba, C.J. and Al-Ghassani, A.M. (2006), "STEPS: a knowledge management maturity roadmap for corporate sustainability", *Business Process Management Journal*, Vol. 12 No. 6, pp. 793-808.

Stehr, N., and Ruser, A. (2017). *Knowledge Society, Knowledge Economy and Knowledge Democracy*, www.academia.edu.

Suryaningtyas, D. et al (2019). Organizational Resilience and Organizational Performance: Examining the Mediating roles of Resilient Leadership and Organizational Culture, *Academy of Strategic Management Journal*, Vol.18, Issue 2.

Visser, W. and Jacobs, S., (2019). Multi-Level Resilience: A Human Capital Perspective, *AMS Sustainable Transformation Paper Series*, No. 4, University of Antwerp.

Yin, R. K. (2013). Validity and generalization in future case study evaluations. *Evaluation*, 12(1), 219-245.

Zainal, Z. (2007). Case study as a research method, [ResearchGate](https://www.researchgate.net/publication/234411133)

Contact email: cm.saberts@gmail.com