
Intangible Resources Management and Sustainability of Selected Manufacturing Organizations in Nigeria

¹Madu, Ifeanyi Leo PhD, and ²Nnaeto, Japhet Olusadum PhD and ³Eyikorogha Queen

¹Department of Business Administration, Gregory University, Uturu, Abia State, Nigeria

²Department of Political Science, Gregory University, Uturu, Abia State, Nigeria

³Department of Political Science, Federal University Otuoke, Nigeria.

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ABSTRACT: *Organization managers have rarely recognized the link between intangibles and entrepreneurial activity, consequently many firms are unable to identify and evaluate the contributions of intangible resources management to organizational sustainability. This unparalleled significance of intangible resources in contemporary business world has made intangible resources management necessary. Presently, many organizations are yet to adopt this practice. Thus, there is need to develop strategies to match the new paradigm shift. To this end, the study sought to ascertain the impact of intangible resources management on the sustainability of manufacturing organization in Nigeria. The researchers adopted survey design. Data were collected by structured questionnaire in Likert's five scale format. The sources of data were through primary and secondary sources. Sample size of 503 was derived from the application of Cochran's formula for finite population while Bowley's proportional allocation method was adopted to determine the allocation of questionnaire to each organization. . A test-retest method was used to determine the reliability of questionnaire using Spearman's Rank Order Correlation Coefficient. The result gave a reliability coefficient of 0.93. The two hypotheses were formulated and tested through Simple Linear Regression at 0.05 level of significance. The findings revealed that: firm's resources and capabilities significantly enhanced competitive advantage ($r = 0.895801$; $p < 0.05$). Employees' competences had significant positive effect on organization's image ($r = 0.763$; $p < 0.05$). The study concluded that it in the present dispensation, the global business is no more dependent upon the tangible resources as such intangible resources imbedded in organization members are the enablers of other corporate resources and the base for sustained organizational viability. The study recommends that in this economic paradigm where sustainable competitive advantage is tangled to individual workers' and organizational knowledge; there is need to develop strategies heavily on improving intangible resources imbedded in individuals to march the new situation that imposes new requirements on the management of manufacturing organizations.*

KEYWORDS: intangible resources; employee competence; resources capabilities; sustainability; competitive advantage

INTRODUCTION

In the advent of classicalism, organization management as an art and a process witnessed lopsided and skewed growth. This, however, negated improvements in management techniques and significantly deteriorated performance. George (1972) posits that “as organizations grew and became more complex, minor improvements in management tactics produced impressive increases in production quantity and quality.” In this epoch, intangible resources management is very insignificant.

He further adds that “the emergence of economies of scale drove managers to struggle for further growth.” The opportunities for mass production shaped by industrial revolution laid extreme and methodical thought about management difficulties and issues particularly efficiency, production processes, and cost savings (Chandler, 1990; Bateman and Snail, 2007). This significant development in the management of organizations was as a result of skills, competences, capabilities, tacit and explicit knowledge possessed by employees and controlled by the people that handled those firms.

The wealth generating capability of the organization is founded on the knowledge and abilities of its employees (Savage, 1990). Organizations are successful since the novel upper level environment views themselves as learning organizations tracking the aim of uninterrupted development in intangible resources (Senge, 1990). Presently knowledge and information are essentially the focus of growing revenues, as opposed to the dwindling earnings that is characteristic of the old-style resources. This means that knowledge and information are even more important to organizations than before (Arthur, 1996).

Apparently, we are in an economic paradigm where sustainable competitive advantage is tangled to individual workers’ and organizational knowledge. Reliance on tangible resources and skills of managers do not explain investments made and riches created by novel and succeeding organizations instead, influencing capabilities is the main reason credited to organizational success tales (Organization for Economic Co-operation and Development, 1996).

It is worthy to note that the escalating expenditures on essential organizational needs such as cost on maintenance of machines, human resource training and development, imports expenditure, electricity generation in order to sustain production processes brought about high cost of manufacturing, rise in price of finished products, and resultant dwindling demand by consumers. This condition has rendered manufacturing sector a risk for bank lending. In addition, this sector is expected to attain the level of 15 percent value added contribution to GDP but contributes very little proportion. (Adegbe, & Adeniji, 2014).

Adding to much efforts by the government at federal and state levels the development of manufacturing organizations is inhibited by many factors; some of them include: high interest rate, inconsistent government policies, company income tax, lack of access to affordable credit, weak corporate governance and poor management skills, low human capital development and vast majority of manufacturing organizations may lack the capacity to access, process and use information provided through ICT.

Under the conditions of the modern economy, intangibles are increasingly recognized as factors critical to the performance and competitive advantage of organizations which can lead to organizational sustainability. What is clear is that the context in which manufacturing organizations operate is both dynamic and evolutionary. However, approval of this standard highlights the need for the development of new foundations of competitive advantage and headways to creating sustainability in organizations. Therefore, it is necessary then to consider the implications of this changed environment and to revise the traditionally applied approaches of managing manufacturing organizations in order to maintain competitiveness and remain sustained by surveying the impact of intangible resources management on sustainability of selected manufacturing organizations in Nigeria. This therefore draws attention to this study.

Statement of the Problem

In contemporary business environment, organizations managers focus on intangible resources as a source of competitive edge. This stands against the traditional concept that considered tangible resources as the core source of organizational sustainability. The values of goods, services and organizations are fashioned by intangible resources. Knowledge content of products/services is speedily improving and the ownership of resources resides on the heads of employees called the knowledge workers who are rich in tacit knowledge and constitute part of wealth of intangible resources to organizations. The successful organizations are undoubtedly those constantly introducing the innovations based on new technologies as well as on knowledge, experience and improvements of their employees.

Manufacturing organizations are very important to the growth of any nation's economy. This is because they hold pronounced capacities for generating employment, local technology advancements. In Nigeria, many manufacturing sub-sectors have registered gross under performance. Organization managers have rarely recognized the link between intangibles and entrepreneurial activity and consequently they may not be identified and evaluated as factors contributing to organizational sustainability. Most organizations are not aware that market value associated with intangible assets is often higher than the value associated with the cash flows generated from tangible resources. This challenge calls attention of the organization to bring out processes and structures that can manage and make something out of these intangible resources as traditional management systems focused on managing tangible resources.

Notwithstanding the competitive edge gained, many organizations may not be conscious that best performance is as a result of effective and efficient intangible resources management practice. This however implies that research in this area is necessary as any corporate strategy especially in manufacturing organizations that does not incorporate intangible resource management practice in order to attain organizational sustainability may end up achieving goals of the organization tangentially.

Objectives of the Study

The broad objective of the study is to ascertain the impact of intangible resources management on the sustainability of selected manufacturing organizations in Nigeria. However, the specific objectives of the study are to:

- i. Explore the extent to which firm's resources and capabilities affect competitive advantage in selected manufacturing organizations in Nigeria.
- ii. Ascertain the extent to which employees' competences affect organization's image in selected manufacturing organizations in South-East, Nigeria.

Research Questions

The following research questions will guide this study:

- i. To what extent does firm's resources and capabilities affect competitive advantage in selected manufacturing organizations in Nigeria?
- ii To what extent does employees' competences affect organization's image in selected manufacturing organizations in Nigeria?

Research Hypotheses

The following research hypotheses are formulated to guide this study:

- i.Firm's resources and capabilities have significant effect on competitive advantage in selected manufacturing organizations in Nigeria.
- ii.Employees' competences have significant positive effect on organization's image in selected manufacturing organizations in Nigeria.

Conceptual Framework

Intangible Resources Management

Recently, several organizations have come to understand that market value associated with its intangible assets are frequently higher than the value associated with the cash flows generated from its tangible assets. The challenge faced by these organizations is to devise business practices and structures to manage and make something out of these intellectual assets as traditional management systems directed much attention towards managing tangible assets. So many organizations have not also developed processes, organizations or systems to effectively manage and leverage intellectual assets, and opportunities are missed to realize the greatest possible value from them (Morris, 2014).

The above opinion is in alignment with the position of Teece (2000) who opines that "the competitive advantage of firms in today's economy does not result from market position but from difficult- to-replicate knowledge based assets and the manner in which they developed and deployed somehow represents the current dominant view of intellectual capital management. In another way Paloma, Cristina & Marta (2000) state that management of intangibles is a much wider concept than knowledge management. Its key aim is augmenting a firm's value through the creation of competitive advantages. Managing intangibles comprises identifying them, assessing their links with the present and future value of the firm, measuring their value, discovering intangible activities and, being able to efficiently manage those activities. Knowledge creation is an intangible that firms should manage as well as other main intangibles, so it means that knowledge management is a subset of the management of intangibles.

Intellectual capital management (ICM) is the "direction of the value-driven transformation of human and relational capital into the structural capital of the organization" (Lynn, 1998). Corporate processes such as recruitment, training and compensation help nurture creativity and innovation. Appropriate technology and structural capital create and share

organizational knowledge which, when exploited and applied to external knowledge and relational capital produces corporate competitive advantage. The outputs of knowledge management are innovations or intellectual assets. Intellectual assets such as patents and trademarks are normally legalized in order to obtain legal, propriety rights upon them, producing intellectual property. Together with structural capital (technology, procedures, processes, etc.), tangible assets and relational capital are managed to create profitable new products and services (Roos, Roos, Dragonetti, & Edvinsson, 1997; Edvinsson & Malone, 1997; Webster, Sugden, & Tayles, 2004).

Sustainability

Sustainability should be viewed as an umbrella concept that encompasses environmental quality, social justice, business ethics, governance, employee health and safety, diversity and philanthropy. Looked at this way, it's clear that sustainability becomes an integral part of any company's business strategy. How a company manages its three major resources—the "people, planet, profit," as Elkington calls it—provides the basis for receiving society's "permission to operate"; building the "bank of goodwill" for when times are tough and, most important, a strategic approach to sustainability that can have a positive impact on a company's bottom line (Hakensen, 2017).

Companies are being urged to shape the content of their corporate strategies to achieve a higher level of mutuality between their own strategic needs and those of society (Porter & Kramer, 2006), what sometimes is referred to as "corporate social responsibility" (CSR) or "environmental, social, and governance" (ESG) concerns. More companies are undertaking to achieve success on a broader and more balanced array of outcomes such as those delineated by the "triple bottom line" of people, planet, and profits (Savitz & Weber, 2006).

Some will say sustainability is equivalent to "corporate social responsibility." Some call it corporate citizenship. Others identify sustainability with the environment, and health and safety because their companies have been tracking their efforts in this area. Still others view it as a part of a broader environmental, social and corporate governance movement. And there are skeptics who view sustainability simply as a company's PR efforts to be "green" (Hakensen, 2017). Today, more companies see the need to look beyond traditional concerns of running a business for immediate profit and begin to deal with factors in the greater world that impinge on their medium to long-term success. "Sustainability" is fast becoming a byword for threats and opportunities as never before (Harmon Fairfield & Behson, 2009). In fact, many are taking on a strategy of sustainability because of the competitive advantages more than the desire to become better corporate citizens (Bansal & Roth, 2000).

Resources and Capabilities

Fernández & Suárez (1996) define a resource as "any production factor that is ready for the company, which is to say that it can be controlled in a stable manner, even if it does not entail clear property rights." Grant (1991) posits that resources are "elements, inputs or factors, from which the firm performs its activities."

Capabilities are “organizational routines, a routine or a set of interacting routines” (Nelson & Winter, 1982; Grant, 1991). “Capabilities arise from the combination and coordination of different resources and lie in organizational routines that are intangible by themselves.” (Amit & Shoemaker, 1993; Leonard-Barton, 1992). Capabilities are knowledge based. The main source of it is organizational learning (Teece et al., 1997). They rise from conditions of uncertainty and complexity, requiring of social interaction, in a continuous feedback between tacit and explicit knowledge (Nonaka, 1991). Learning, as a result of historical dependency constantly shapes organizational capabilities, which are the source of highly specific sustainable rents for the firm.

The main differences between resources and capabilities are that resources are independent, simple and static, while capabilities are collective, complex and dynamic. The independent and simple character of the resources makes it easy for identification, whereas capabilities, due to their complex and collective character are harder to identify (Black & Boal, 1994).

Competitive Advantage

Up to the 1980s, the conventional management theory focused on business environment (industry structure) as the premise for understanding competitive advantage. In association with the ideas of neo-classical economics, it was anticipated that resources were equally distributed within the industry and that they were easily reachable by competitors in the same industry. Knowledge was assumed to be equal to information and furthermore, it was free, available, all-purpose and easily adapted to the firm's needs. Then, the role of management was to find the way to combine products and markets, given the bargaining power of suppliers and customers, entry barriers and potential substitute products and technologies. The message of this line of thinking was to worship the environment instead of focusing on the inside of the firm (Paloma, Cristina, & Marta, 2000).

Later, those previous ideas were challenged by what was later designated resource based perspective describing some elements that had already been announced by Penrose (1959). Followers of this school suggested that competitive advantage was not reached only by different combinations of products and markets in a given industry but, on the contrary, it was mainly due to differences in organizational resources of different kinds (Wernerfeld, 1984). As resources cannot always be transferred or imitated, we should look inside the company for the identification of real sources of sustainable differences among firms. That is, to focus on the internal aspects of the firm and not only on its environment (Roos, 1996).

Employees Competences

Competence is the capacity of a job holder to do a job correctly. A competency is a set of defined behaviors that provides a structured guide to enable the identification, evaluation and development of the behaviours in singular job holders. Some scholars see competence as a combination of practical and theoretical knowledge, cognitive skills, behaviour and values used to improve performance; or as the state or quality of being adequately or well qualified, having the ability to perform a specific role (Wikipedia, 2017). “Competency

is a person-based concept which refers to the dimensions of behavior lying behind competent performance" (Woodruffe, 1991).

Competencies are also what people need to be successful in their jobs. Job competencies are not the same as job task. Competencies include all the related knowledge, skills, abilities, and attributes that form a person's job. This set of context-specific qualities is correlated with superior job performance and can be used as a standard against which to measure job performance as well as to develop, recruit, and hire employees. Core competencies differentiate an organization from its competition and create a company's competitive advantage in the marketplace. An organizational core competency is its strategic strength (Robinson, 2010).

Organization's Image

In the present dispensation, corporate image has become a common phrase denoting an organization's reputation. Image is what public is supposed to see when the corporation is mentioned. A good corporate image is a genuine asset; it translates into money at the counter and higher stock valuation. It is how a company is observed. Management tries to shape an organization's image by brand selection, communications, and promotion, use of symbols, and by letting the public about its actions (Roger, 2005). Corporate image is the understanding of a corporation held by the public based on how it is exposed through branding, public relations efforts, news media, stakeholders, employees, labour unions and consumer advocacy organizations. Companies invest a substantial portion of marketing and advertising dollars to build and maintain a positive corporate image which is critical to their competitive standing (Murcko, 2017).

Every small firm or organization has the corresponding corporate image as it has repute among its stakeholders like: employees, customers, vendors, neighbours, and the government agencies. The first exploit of a firm owner in choosing the name of business is a duty in erecting a corporate image. This process lasts in several ways such as: in the selection of brand names to be used, the location of leased space, office decorations and/or store equipment selected the company's Website design if the business has an internet presence, its sales literature, and so on. Others are outward symbols; quality of products or services; knowledge, skill, and friendliness of its employees; its promptness in paying bills; its effectiveness in mounting promotions; and the list goes on (Roger, 2005).

Theoretical Framework

Dynamic Capabilities

Dynamic capability is the capability of a firm to decisively familiarize a firm's resource base. Teece, Pisano, & Shuen, (1997) allude that dynamic capability is "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments." In the plural form, (dynamic capabilities), the concept emphasizes the ability to react adequately and timely to external changes requires a combination of multiple capabilities. The idea of dynamic capabilities can be compared to the concept of operational capabilities which discusses the current operations of an organization and dynamic capabilities discusses a firm's capacity to efficiently and responsively change operations and develop its resources

Capability development places importance on people and their capacity to perform at high levels in a rapidly changing working environments and contexts. Developing skills and knowledge is just one aspect of capability development. Being able to apply those skills in different contexts, with confidence, differentiates skill and capability. Creating capability is about moving away from segmented activities of development to holistic activities that have more meaning and purpose. Dynamic capabilities have the capacity to reconfigure, redirect, transform, shape and integrate central knowledge, external resources and strategic and complementary assets. They will allow the firm to respond to the challenges presented by the Schumpeterian competitive world, made of competition and imitation, changing so fast and pressured by temporal factors (Teece, Pisano, & Shuen, 1997).

Through the use of dynamic capabilities, organizations get to integrate, to build and to reconfigure their internal and external capacities to face fast changing environments. Organizational capabilities emerge over time through a process of organizational learning. Knowledge-based capabilities are considered to be the most strategically important ones to create and sustain competitive advantage

Teece, Pisano, & Shuen, (1997) contribute that three dynamic capabilities as necessary for a firm to meet new challenges. The first capability is the ability of employees to learn quickly and to build new strategic assets; the second capability is integration of these new strategic assets, including capability, technology and customer feedback, into company processes; and the third capability is transformation or reuse of existing assets which have depreciated. Successful implementation of these three stages is developing "corporate agility".

This research work is anchored on dynamic capabilities theory which focuses more on the issue of competitive survival in response to contemporary business conditions as against other views that pay attention to just competitive advantage. The main assumption of this framework is that a firm's basic competencies should be used to create short-term competitive positions that can be developed into sustainable/longer-term competitive advantage.

Dynamic capabilities theory is concerned with the development of strategies for successful organizations to adapt to radical intermittent change, while maintaining minimum capability standards to ensure competitive survival. For instance, a firm which has been relying on a particular manufacturing process cannot continuously change this

process on short notice on the arrival of a new technology.

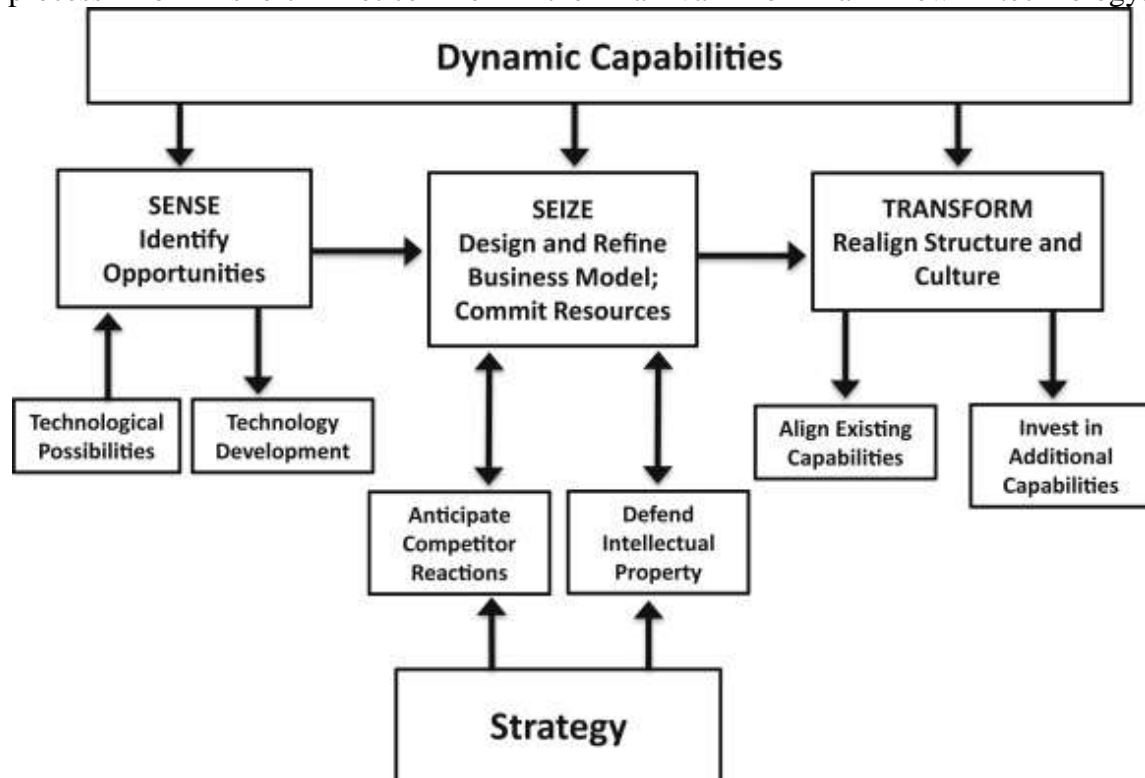


Fig1. Illustration of Dynamic Capabilities

Source: <https://www.sciencedirect.com/science/article/pii/S0024630117302868>

Empirical Review

Maduagwu (2015) conducted a study on “managing intellectual capital for competitive advantage in selected brewing firms in South Eastern Nigeria.” The study analyzed the concept of intellectual capital and how its effective management impacted on competitive advantage of manufacturing industry with special reference to selected brewing firms in South Eastern Nigeria. The researcher adopted a descriptive research. The population of the study was 850 that comprised top management, middle management, and lower management staff of the four selected brewing firms in South Eastern Nigeria. The study applied an exhaustive sampling method and hence the sampling size was 850. Data were collected by five point Likert scale questionnaire, oral interview and model modification. The data generated from the field study were presented and analyzed using frequency distribution tables, and simple percentages. Test of Hypotheses was done using Z-test of population proportion and Z-test for the Likert scale. The study found that effective plan on human capital development had a positive relationship with differentiation advantage, effective relational capital control system had a positive advantage on low cost provider advantage, brain power lead had a positive influence on innovative advantage, and there was a positive correlation between organizational learning and focused advantage strategy. This implies that organizations that have meaningful performance information about its intellectual capital can use it to inform decision making, test and review strategy, and manage risks associated with business activities for better performance. The study recommended that the strategic managers in the brewing firms studied should be backed

by policy, continue to use effective plan on human capital to improve differentiation advantage, continue to use effective relational capital control system to sustain low-cost provider advantage, continue to use brain power leadership to harness innovative advantage, and continue to use organizational learning in the application of focused advantage strategy.

Ichrakie (2013) studied “Intangible resources and organizational success in Australia.” The researcher examined the impact of intangible resources on the establishment of sustainable competitive advantage within the context of the job network industry in Australia. This is because of the assumption that resources possessed specific characteristics such as being valuable, rare, inimitable and non-substitutable. These characteristics were the key determinants of a firm’s success, and were generally regarded to be intangible in nature. This paper tried to test the core assumptions of the ‘resource-based view’ within the job network industry in Australia. Given that firms access various intangible resources as they try to carry out a market strategy. This study also investigated whether or not, intangible resources (capabilities) classified as skills contributed more to job network providers’ success than tangible resources in the form of assets, as prescribed by the ‘resource-based view’ theory. To carry out this study, a conceptual model of intangible resources was developed based on Hall’s (1992) classification of intangible resources divided into two categories: assets and capabilities, but extends this earlier work by including some other resources available for job network providers in Australia (e.g. relationships abilities and functional routine). A single hypothesis was posited to investigate the assumption that capabilities contributed largely to job network providers’ market and financial performance, rather than tangible assets. This model was tested through a survey that encompassed Job Network providers in Australia. 200 copies of questionnaire were distributed, and a sample of 69 providers was analyzed using multiple regression analysis. Providers’ duration in business was used as a control variable. The findings of the study were: Capabilities were significant contributors to providers’ market performance and not financial performance, after accounting for the effects of other intangible assets and the control variable. By contrast, organizational assets were found to be a significant contributor to both market and financial performance measures. Intellectual property and reputation assets were not found to be significant in predicting providers’ market and financial performance. Therefore, in contrast to the ‘resource-based-view’ theory, capabilities were not found to be the single most important contributor to Job Network providers’ performance.

Eman (2014) conducted a study in Egypt on the topic “The effect of intellectual capital management on organizational competitive advantage.” The study analyzed the effect of intellectual capital management on organizational competitive advantage. The cross-sectional analytical study was conducted in two hospitals in Egypt. The population of the study was 106 and it was also used as the sample size. The analyses show that: i) structural capital variables and competitive advantage variables were significantly related; ii) human capital had positive significant correlation with competitive advantage. The results indicated the following relationships: i) human capital and competitive advantage ($r = 0.79$, $p < 0.01$), structural capital and competitive advantage ($r = 0.73$, $p < 0.01$), and relational capital and competitive advantage ($r = 0.88$, $p < 0.01$). The study concluded that

there was a positive and significant relationship between human capital, structural capital and relational capital with competitive advantage respectively.

Lerro, Linzalone & Schiuma (2014) evaluated managing intellectual capital dimensions for organizational value creation in Italy. The objective of this study was to focus on the relationships between intellectual capital, innovation, performance improvement and competitive advantage in private and public organizations; and at the same time review some relevant theoretical pillars in order to contribute to the ongoing debate on how knowledge assets may impact organizational performance and innovation dynamics. The methodology of this paper is based on a deep analysis of the managerial literature addressing the nature, the role and the relevance of the intellectual capital dimensions for organizational value creation. The conceptual background sets the foundations for a better understanding of the strategic importance of knowledge-based value drivers for innovation and sustainable competitive advantage. This study concluded that the relevance of managing intellectual capital was strongly related to its impact on innovation dynamics and organizational business performance improvement. Nowadays, to get gains, private and public organizations should be able to transform their knowledge domains into profitable products and services as well as they have to dynamically renew their capabilities. The finding is that this paper provides a framework summarizing the key assumptions at the basis of a better understanding the strategic relevance of the knowledge-based value drivers for competitiveness.

METHODOLOGY

This research adopted survey design which collected data and solicits information from people concerning their opinion, beliefs, actions, and attitudes on various issues by using standardized structured questionnaire. The population of this study consists of the 200 registered manufacturing organizations with Manufacturers Association of Nigeria. For the fact that this study focuses on the effect of intangible resources management on the sustainability of organizations, the target respondents were the senior/supervisory staff of the selected organizations. A sample of 503 was determined by Cochran's formula for calculating sample size when the population is finite. The proportionality of the sample among the selected manufacturing organizations is achieved by using Bowley's statistical technique. The major research instrument was the questionnaire. Validity was achieved and reliability of 0.93 was positive. Analysis of the hypotheses was carried out by the application of Statistical Package for Social Science.

Test of Hypotheses

Hypothesis One

Firm's resources and capabilities have competitive advantage in selected manufacturing organizations in Nigeria.

Table 1a Model Summary^b

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.895 ^a	.801	.801	.62333	.044

a. Predictors: (Constant), Firm's resources and capabilities

b. Dependent Variable: Competitive advantage

Table 1b ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1563.959	1	1563.959	4025.255	.000 ^b
	Residual	387.760	499	.389		
	Total	1951.719	500			

a. Dependent Variable: Competitive advantage

b. Predictors: (Constant), Firm's resources and capabilities

Table 1c Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.602	.037		16.241	.000
	Firm's resources and capabilities	.937	.015	.895	63.445	.000

a. Dependent Variable: Competitive advantage

R = 0.895

R² = 0.801

F = 4025.255

T = 63.445

DW = 0.044

The model explains a significant proportion of variation in competitive advantage (R² = 0.801, F = 4025.255, p < 0.05) indicating that the model produced 80% of the variation in competitive advantage. The results show that firms resources and capabilities significantly predicted competitive advantage, $\beta = 0.895$, n (500) t = 63.445, p < 0.000. The Durbin Watson statistics of 0.044 which is not more than 2 indicates that there is no autocorrelation. The null hypothesis therefore is not supported and the alternate is accepted. Thus firm's resources and capabilities significantly enhance competitive advantage in selected manufacturing organizations in South-East, Nigeria.

Hypothesis Two

Employees' competences have significant positive effect on organization's image in selected manufacturing organizations in Nigeria.

Table 2a Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.763 ^a	.582	.582	.80186	.021

a. Predictors: (Constant), Employees' competences

b. Dependent Variable: Organization's image

Table 2b ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	893.303	1	893.303	1389.312	.000 ^b
	Residual	641.696	499	.643		
	Total	1534.999	500			

a. Dependent Variable: Organization's image

b. Predictors: (Constant), Employees' competences

Table 2c Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.353	.051		6.929	.000
	Employees' competences	.789	.021	.763	37.273	.000

a. Dependent Variable: Organization's image

R = 0.763

R² = 0.582

F = 1389.312

T = 37.273

DW = 0.021

The model explains a significant proportion of variation in organization's image (R² = 0.582, F = 1389.312, p < 0.05) indicating that the model produced 58% of the variation in employee competences. The results show that organization's image significantly predicted employees' competences, $\beta = 0.763$, n (500) t = 37.273, p < 0.000. The Durbin Watson statistics of 0.021 which is not more than 2 indicates that there is no autocorrelation. The null hypothesis therefore is not supported and the alternate is accepted. Thus employees' competences have significant positive effect on organization's image in selected manufacturing organizations in Nigeria.

SUMMARY OF FINDINGS

Based on the hypotheses tested, the following are the summary of findings from the study.

i. Firm's resources and capabilities significantly enhanced competitive advantage in selected manufacturing organizations in Nigeria (r = 0.895801; p < 0.05).

ii. Employees' competences has significant positive effect on organization's image in selected manufacturing organizations in Nigeria (r = 0.763; p < 0.05).

CONCLUSION

In the present dispensation, the global business is no more dependent upon the tangible assets as such intangible resources imbedded in organization members are the enablers of other corporate resources and the base for sustained organizational viability. Furthermore, intangible resources has some outstanding advantages such as increasing the rate of customer satisfaction, improving employees motivation, growth of the market share, improving the reputation of the organization's brand (Caesar & Rajkumar, 2015)

Recommendations

The study recommends that in this economic paradigm where sustainable competitive advantage is tangled to individual workers' and organizational knowledge; there is need to develop strategies squarely to improve intangible resources imbedded in individuals to march the new situation that imposes new requirements on the management of manufacturing organizations. Since sustainability of an organization is built on the intangible resources domiciled in the workforce, it is recommended that managers see employee motivation as inherent part of the organization's business. This will not only encourage better performance, but also ensure organizational homeostasis.

References

- Adegbe, F. F., & Adeniji, N. A. (2014). The challenges and prospects of the manufacturing sector of Nigerian economy. Retrieved from <http://m.covenantuniversity.nigerian.economy>.
- Amit, R., & Schoemaker, P. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14, 33-46.
- Arthur, W. B. (1996). Increasing returns and the new world of business. *Harvard Business Review*, 100-109.
- Bansal, A., & Roth, N. (2000). Harnessing the power of intellectual capital, *Training & Development*, 51 (12), 25-30.
- Bateman, T. S., & Snell, S. A. (2007). *Management: leading and collaborating in a competitive world*. New York: McGraw-Hill.
- Black, J., & Boal, K. (1994). Strategic resources: traits, configurations and paths to sustainable competitive advantage. *Strategic Management Journal*, 15, 131-48.
- Caesar. W & Rajkumar. B (2015) Cost Modeling: Terms and Definitions. Retrieved from: <https://www.sciencedirect.com/science/article/pii/B9780128014134000143>
- Chandler, A. D. (1990). *Scale and scope: The dynamic of industrial capitalism*. Cambridge, MA: Belknap Press of Harvard University Press.
- Edvinsson, L. (1997). Developing intellectual capital at skandia. *Long Range Planning*, 30 (3), 266-373.
- Eman, (2014). The effect of intellectual capital management on organizational competitive advantage in Egyptian Hospitals. *International Journal of Business and Social Science*, 5(2), 2 123-176.
- Ferna'ndez Rodr'iguez, Z., & Sua'rez Gonza'lez, I. (1996). La estrategia de la empresa desde una perspectiva basada en los recursos. *Revista Europea de Direccio'n y Economi'a de la Empresa*, 5, 73-92.

-
- George, C. (1972). *The history of management thought*. Eaglewood cliffs, NJ: Prentice Hall.
- Grant, R. (1991). The resource-based theory of competitive advantage: implication for strategic formulation. *California Management Review*, 33, 114-35.
- Hakensen, D. (2017). Sustainability defined? Sorting out what one of the era's biggest buzz phrases actually means.
- Harmon, J., Fairfield, K. D., & Behson, S. (2009). A comparative analysis of organizational sustainability strategy: Antecedents and performance outcomes perceived by U S and non-US-based managers. *International Eastern Academy of Management Conference*.
- Ichrakie, A. (2013). Measuring intangible corporate assets: Linking business strategy with intellectual capital. *Journal of Intellectual Capital*, 1 (1), 68.
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: a paradox in managing new product development. *Strategic Management Journal*, 13, 111-125.
- Lerro, A., Linzalone, R., & Schiuma, G. (2014). Managing intellectual capital dimensions for organizational value creation. *Journal of Intellectual Capital*. 15 (3), 350 – 361.
- Lynn, B. (1998). Intellectual capital. *CMA Magazine*. 10 - 15.
- Maduagwu, E. N. (2015). *Managing intellectual capital for competitive advantage in in selected brewing firms in South Eastern Nigeria*. Thesis submitted in partial fulfillment of for the award of doctor of philosophy (Ph.D.) in management. University of Nigeria, Enugu Campus.
- Morris, T. (2014). *The management of intellectual capital*. Norton Rose Fulbright. Retrieved from <https://www.researchgate.net/file>
- Murcko, T. (2017). *Corporate image*. WebFinance, Inc. Retrieved from http://www.investorwords.com/19040/corporate_image.html#ixzz4WQlmj7Lg
- Nelson, P. R and Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Nonaka, I., (1991). The concept of 'ba': Building foundation for knowledge creation. *California Management Review*, 40 (3), 40-54.
- Organization for Economic Co-operation and Development. (1996). Final report: Measuring and reporting intellectual capital: experience, issues, and prospects, *OECD, Paris*.
- Paloma, S., Cristina, C., & Marta, O. (2000). Management of intangibles: An attempt to build a theory", *Journal of Intellectual Capital*, 1 (4), 312 – 327. Retrieved from <http://dx.doi.org/10.1108/14691930010359225>
- Penrose, I. (1959). Intellectual capital and business start-up success. *Journal of Intellectual Capital*, 3(2), 180-198.
- Porter, M., & Kramer, M. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 78–92.
- Robinson, M. A. (2010). Work sampling: Methodological advances and new applications. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 20, (1), 42–60. doi:10.1002/hfm.20186 .
- Roger, H. (2005). Insight: Corporate reputation. *Accountancy Age*.
- Roos, G., (1996). Intellectual capital analysis as a strategic tool. *Strategy & Leadership*, 29(4), 21-26. <http://dx.doi.org/10.1108/10878570110400116>

- Roos, J., Roos, G., Dragonetti, N., & Edvinsson, L. (1997). *Intellectual capital: Navigating in the new business landscape*. London: Macmillan Business.
- Savage, C. M. (1990). *Fifth generation management: Co-creating through virtual enterprising, dynamic teaching, and knowledge networking*. Newton, MA: Butterworth-Heinemann.
- Savitz, A., & Weber, K. (2006). *The triple bottom line*. San Francisco: Jossey-Bass.
- Teece, D. J. (2000). *Managing intellectual capital: Organizational, strategic, and policy dimensions*. New York: Oxford University Press.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, (7):509–533.
- Webster, M., Sugden, D. M., & Tayles, M. E. (2004). *The measurement and manufacturing of financial innovation*. Wiley.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171–180.
- Wikipedia (2017). *Competence: human resources*. Retrieved from <http://en.m.wikipedia.org/.../competence>.
- Woodruffe, A. (1991). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science*, 6 (1), 76.