ORGANIZATIONAL MATURITY AND FIRM SUSTAINABLE PERFORMANCE OF MANUFACTURING INDUSTRIES

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ABSTRACT

The study examined the effect of Organizational Maturity and Firm Sustainable Performance of Manufacturing Industries. The specific objectives of the study were to determine the change management on firm sustainable performance and ascertain the effect of digital maturity on firm sustainable performance. The study adopted survey research design; data was collected by structured questionnaire in five-point scale format. Data sources were through primary and secondary sources. The total population of this study consists of 500 members. The population of the study comprises of employees of six enterprises drawn from South-South, Nigeria. The sampling object used for this work comprises of the employees of the selected institutions. The Bowley’s proportional allocation formula was used to draw a sample size of 217. The two hypotheses were tested by regression at 0.05 level of significance. The findings revealed that change management (CM) has significant effect on firm sustainable performance (FSP) (β=0.0019; <0.05). The study also revealed that digital maturity (DM) has a significant effect on firm sustainable performance in (0.0024<0.05). The study concluded that Successful organizational change management requires a commitment to transform from what an organization is into what it wants to be. All firms are going through change. The
researchers recommends that Since change is a fact of life, managers in the Nigerian firms should anticipate effective process of managing change and organization enablers such as culture, structure people and its infrastructure need to be considered for improvements if organizational performance is to be achieved.

**Keywords**: Organisational Maturity, Change Management, Digital Maturity.

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**INTRODUCTION**

Today, leading organizations pay special attention to the concept of maturity. To put an organization on the path of continuous improvement, it should insist on maturity at individual, processes, and organizational levels. It is not so simple to develop a mature organization or to move toward maturity, but it requires careful planning and a long-term strategy. Therefore, assessment of organizational maturity is an effective and reliable method for efficient management of organizations, Kifordu, Eneh, Effiong & Etuk (2022). The process of maturity can be used to update, simplify and agile structures, methods, and processes to increase organizational adaptability. By determining the organizational maturity level, organizations will be able to identify their strengths and weaknesses to develop strategies appropriate to their level of organizational maturity, Kifordu and Igweh (2022).

For this reason, assessment of organizational maturity in all areas is of main concerns of top management in organizations, because the managers and industrialists are interested to know the level of organizational maturity at different periods of corporate life from a certain point of view regarding innovation and technology strategy (Shahriari, Pilevari, & Haghight, 2016). Organizational maturity may be measured because of organizational structure, organizational culture, technology storage and human resources which in turn can be obtained from the life cycle process of knowledge areas (Jia, Chen, Xue, Chen, Cao, & Tang, 2011). Today, the concept of knowledge is treated systematically as if it is a tangible resource and the exploration in the field of knowledge management is used to improve and strengthen competitiveness (Akbari & Moradi, 2013). In recent decades, many have come to believe that knowledge management in an organization plays a crucial role in the success of a business (Floyde, & Lawson, 2013).

Regularly, organizational maturity is assessed in different areas of an organization. According to the managers, that part of any organization that may have a fundamental role in organizational activities is appraised and the maturity of organizational unit and strategies to improve and develop its processes are investigated (Shahriari, et al 2016). According to the desired unit and various aspects of activities in the areas of interest, any organization will be at a level of maturity indicating the level of maturity in that area, Kifordu, Ibegbulem, and Odita (2023).

The investigation of change and development in organizations is one of the most relevant themes in management studies (Rafferty, Jimmieson, & Armenakis, 2013). Recently, the global scenario has radically been transformed due to the ongoing pandemic of coronavirus disease and the economic fallout generated by the lockdown in different countries. It seems that the embracing of digitalization and the transformation of business organizations integrating digital technologies have become paramount for the survival of firms (Peter, Kraft, & Lindeque, 2020).
In this study, digital maturity refers to the competitive advantages gained by a firm in transforming its fundamental business processes into digital processes. Such transformation is led by change management integrated within the organizational culture (Ukko, Nasiri, Saunira, & Rantala, 2019). Prior research has suggested that digital maturity embedded across the business processes can increase benefits from current strategic assets when it is integrated within a wider corporate strategy (Li, Su, Zhang, & Mao, 2017). Furthermore, digital maturity entails organization transformation, thus, changes in strategy and structure need to be managed to improve business performance (Cha, Hwang, & Gregor, 2015).

Digitalization is considered to be an efficient tool to support sustainable environmental, social, and economic development (Seele, & Lock, 2017). Information and communication technologies (ICT) can improve emission reduction, waste management, and production cleanliness, and can enhance the implementation of green development strategies to benefit the ecosystem in which firms operate. To reach sustainability goals, green development needs to be supported by organizational change within a firm (Park, 2018). Still, as it has been acknowledged, organizational change is difficult to implement, and a wide range of firms struggle to cope with digitalization connected to products, services, and business operations in general (Rafferty, et al 2013). As Li, Su, Zhang, & Mao (2017) argued, SME entrepreneurs’ capabilities are often limited, and the firms’ digital transformation is enforced by the ecosystem in which they operate. In the case of SMEs, the founders, owners, or top managers are in charge to lead digital transformation and analyze the position the firm holds compared to their competitors. Thus, a better understanding of their views on digital transformation and sustainability is essential to capture the ongoing processes in moderately competitive regions, Kifordu(2022).

The discussion on SMEs and large companies’ digitalization has revealed the managerial and operational challenges of this transformation (Ukko, Nasiri, Saunira, & Rantala, 2019). The complexity of change management within the public and private sector across different industries is strongly influenced by the economic, political, social, and cultural environment of the ecosystem in which firms operate (Acs, Stam, Audretsch, & O’Connor, 2017). A firm’s capability to allocate resources to manage change in structure, strategy, and processes in a continuously evolving business scenario evolves through the actions of business actors, managers, and employees (Peter, et al 2020). The study therefore aims to examine the effect of organizational maturity on firm sustainable performance.

**The Problem**

Organizational maturity is assessed in various aspects of organizations. According to the experts and managers, that part of any organization that plays a key role in organizational development is assessed to find solutions for improving the level of maturity. Considering activities at various areas, any organization will have a level of maturity representing the current situation in that area. The two basic questions as the main concerns of organizational managers and leaders are: What is the current situation of organization in the relevant areas? What should be done in these areas to improve the current situation of organization?

To reach an acceptable level of maturity, organizational structures and processes should be equally developed and maturated. With mature processes, the structures, methods and processes can be agile, simplified and updated to increase organizational adaptability. After maturation of processes, organizational maturity indicators can be developed. By determining
the level of organizational maturity, organizations will be able to identify their strengths and weaknesses to develop strategies appropriate to the maturity level. In the field of business, assessment of the effect of organizational maturity indicators on maturity achievements will determine those maturity indicators that should receive much attention for sustainable and successful organizational development.

Objectives
i. Ascertain the effect of change management on firm sustainable performance.
ii. Determine the influence of digital maturity on firm sustainable performance.

Research Question
i. To what extent has change management affected firm sustainable performance?
ii. to what extent has digital maturity affected firm sustainable performance?

Research Hypotheses
H01: There is no significant positive relationship between change management of firm sustainable performance.
H02: There is no significant positive relationship between digital maturity and firm sustainable performance

REVIEW OF RELATED LITERATURE

Conceptual Review
Organizational Maturity
Throughout the history, many organizations have tried to define long-term and short-term goals and design strategies to help achieve those (Demir & Kocabaş, 2010). Due to the rapid, widespread and even unbridled developments in all fields of science occurred in recent years, only mature organizations that have competent and experienced workforces as well as creative managers who have trained their minds to fertilize their own organizations are able to adapt (Ghouchani & Ghouchani, 2012). Maturity models have become specifically an essential tool in assessing the current capability of organizations which help them to realize changes and improvement (Jia et al., 2011). The concept of maturity used within an organization refers to the state in which the organization is in perfect condition to achieve its goals. Maturity is known as achieving (or having) maximum development (Andersen & Jessen, 2003).

Organizational maturity is a new category deemed to be a superior solution in organizations and has been approved by experts and the management science. Organizational maturity introduces special skills and their relationship with cases such as organizational culture, job satisfaction, leadership style, management, efficiency etc. leading to meet the needs of the organization by providing better organizational models and strategies (Hosseini, Yarmohammadian & Ajami, 2009). Mature organization is the most suitable place where the organization can achieve its goals. In the process of development, maturity is considered of the utmost importance by the organization (Soltani & Bahramnezhad, 2010).

Maturity models are used in a wide range of application domains including cognitive science to business and engineering programs (Pigosso, & Rozenfeld, 2013). Maturity models have turned out to be an essential tool for assessing an organization's existing capabilities and helping them to implement changes and improvement (Jia, et al. 2011). Maturity models identify and define different levels of bottom up maturity as well as any level of behavioral maturity institutionalized in the organization (Ngai, & Chau, 2013). Maturity Model is a (simplified) representation of reality to measure business processes. Maturity level or stage is
used to describe different levels of skills obtained (Kluth, & Jäger, 2014). The concept of maturity in an organization refers to the state where the organization is in ideal condition for achieving its goals (Andersen & Jessen 2003).

Understanding a firm’s current level of maturity is something which every organization should be concerned about. Without adequate levels of maturity, processes, functions and decisions cannot be performed robustly. Organizational maturity is a measure of an organization’s readiness and capability expressed through its people, processes, data and technologies and the consistent measurement practices that are in place. When maturity is measured against a standardized framework and scale, it normalizes activity in a common language and forms a baseline for measuring improvement. This maturity assessment covers four aspects of your organization:

- **People** – Their ability to Influence the delivery of IT Services
- **Process** – The integration of IT Financial Management into the decision making process
- **Data** – Measuring the accuracy, reliability and availability of financial and operational data
- **Technology** – The ability to align financial and operational data to deliver transparency

### Change Management

Change management is understood as a firm’s capability to allocate resources to manage strategic change in a continuously evolving business scenario (Hair, Hult, Ringle, & Sarstedt, 2017). Change management refers to the extent to which such capability is embedded within corporate culture (Higgs, & Rowland, 2000 as cited by Irimiás, & Mitev, 2020). The construct was modeled as a reflective construct using four self-developed items based on prior literature. Applying SAF theory, it can be identified that the successful introduction of structural, strategic, or production changes highly rely on the capabilities of top-managers/founders to make change part of the firms’ organizational culture (Li, et al 2017, Fligstein, & McAdam, 2011).

Searching for continuous improvement requires firms to develop new competencies and to use resources and capabilities to reach competitive advantage. Thus, how and what the firm is able to perform is determined by such capabilities. A firm with strong capabilities and commitment is able to deploy proactive strategies that benefit the firm and its environment (Irimiás, & Mitev, 2020). Having a commitment to green development is unlikely to create financial benefits, but in combination with managerial capabilities to drive organizational change and to implement new structural, strategic, or productive processes, financial benefits may be gained (Fligstein, & McAdam, 2011, Hart, & Dowell, 2011).

### Digital Maturity

The term digitalization refers to the transition from traditional business activities to the conducting of business in a digital form (Peter et al 2020). Thus, digital maturity can be defined as the degree of completion of the digital transformation of a firm compared to its industry peers (Remane, et al 2017). Firms across different sectors have recognized that investments in infrastructures to foster the digital transformation of operations, production processes, and strategy are paramount to gaining competitive advantage and generating increased business performance (Peter, et al 2020; Ukko, et al 2019; Park, 2018). The digital maturity of a firm means that the managers/owners of the company are familiar with existing digital tools and applications and are better at adopting and deploying such tools and applications compared to their competitors (Irimiás, & Mitev, 2020).
Digitalization-led sustainability transition can act on multiple levels and can have micro- and macro-perspectives linked to the firm’s sustainability goals. As Stuart Hart already claimed in 1995, the interaction between a firm’s organization and the surrounding natural environment is compelling and will allow it to gain competitive advantage in the long-term (Irimiás, & Mitev, 2020). For this reason, Hart & Dowell (2011) position sustainable development among the three key strategic capabilities following pollution-prevention and product stewardship. Firms adopting a sustainable development strategy do less environmental damage and consider the wider social as well as the economic sustainability aspects of their operations (Hart, 1995 as cited by Irimiás, & Mitev, 2020). As prior research has evidenced, firms and organizations are hesitant to adopt sustainability strategies because the financial benefits of such investment can hardly be traced in the short-term (Hart and Dowell, 2011). The exhaustive digitalization firms are undergoing, and the digital maturity of successful companies, can foster the adaptation of sustainability strategies as well.

**Firm Sustainable Performance**

Business performance is defined by the most relevant financial metrics of a firm (Remane, Hanelt, Wiesboeck, & Kolbe, 2017). In line with prior studies, using the most common measures of the output of a firm’s performance, in this study, business performance was captured by three widely used measures: market share, revenue-to-profit, and return on equity (Remane, et al 2017). Congruent with prior studies, and because objective measures are confidential, the study relied on perceptual performance measures (Edeling, & Himme, 2018; Gruber, Heinemann, Brettel, & Hungeling, 2010). Past studies show that the correlation between perceived performance and objective business performance is high and, in some cases, perceived performance even proves to be more reliable (Cantele, & Zardini, 2018).

**Relationship between the variables of organizational maturity and Firm Sustainable Performance**

**Digital Maturity and Firm Sustainable Performance**

Today's organizations face numerous challenges, such as the demand for highly customized products/services, effective business processes, and high-performing supply chains. Hence, digitization has become a necessary capability of an organization to cope with these challenges (Blatz, Bulander, & Dietel, 2018). The digital world compels organizations to achieve digital transformation to be competitive. Digitally mature organizations benefit from higher profitability and revenue enhancement more than low-mature organizations (Jafvert & Gustafsson, 2019). Organizations' competitiveness depends on their innovation capabilities and their success in offering value-added products and services for customers. Customer requirements and the necessity for the rapid adoption of new requirements through organizational assets are the major drivers of digitalization (Dombrowski & Ritcher, 2018). Ghobakhloo & Ching (2019) stated that digital technologies offer performance enhancement through contributing sales improvement, providing effectiveness in customer and supplier relationships, and promoting the organization's capabilities.

**Knowledge Management and Firm Sustainable Performance**

Ohiorenayo & Eboreime (2014) established positive relationship of KM with overall performance, innovation, growth and competitive advantage. Ngoc-Tan & Gregar (2018) revealed that positive association between knowledge creation and innovation (technical and
administrative) in academic setting. KM can transform organizational new levels of effectiveness, efficiency, and scope of operation, using advanced technology, data and information made available to users for effective productivity (Dhamdhere, 2015). Culture of collaboration contributes to creation of new knowledge by sharing experiences and knowledge among employees and by assisting others in performing tasks (Ali et al, 2015). Successful KM process enhances business performance and employee satisfaction (Khanal & Raj, 2017). Evaluation of KM performance has become increasingly to enhance their performance and competitiveness (Nasser et al, 2012). Hajamoohideen & Jeyanthi (2017) suggested that KM practice support knowledge-sharing culture leads to increased productivity, improved cycle times for business processes, and innovation. Effective KM practice can improve creativity of employees’ leads to innovation helps for growth success. Khoualdi & Saleh (2015) indicated that highly positive significant relation between job satisfaction and each process of the KM.

**Theoretical Review**

**Capability Maturity Model (CMM)**

According to the processes defined in capability maturity model (CMM), there are five levels defined for organizational maturity (Armistead, 1999):

1. **Initial**: The first possible level for an organization. At this stage there is no legal rule and even a chaos exists, so to get to this stage requires no original process.
2. **Repeatable**: in this level the organization is partially regulated. In other words, the organization can repeat previous successes in similar circumstances.
3. **Defined organization**: At this level, based on some regulations governed on the organization, guidelines and procedures and standards are defined and documented across the organization and services provided can be consistently organized and promoted.
4. **Managed**: At this level the organization is in a position that can detect and improve quantifiable qualitative objectives. In other words, it can assess the quality quantitatively.
5. **Optimizing**: At this level, organizations can plan short- and medium-term objectives and set specific goals based on the planning. So the organization can offer new technology or service to have continuous improvement (Armistead, 1999).

**People Capability Maturity Model (P-CMM)**

People Capability Maturity Model helps organizations to identify the needs of organizational maturity and enhance the maturity of their workforces. This model assists organizations to characterize the maturity degree of their workforce practices, develop a planning for continuous improvement, prioritize activities related to development, integrate the workforce development with the improvement process and create a culture of excellence (Couturiaux, 2005). Organizational Maturity Model of P-CMM is a model of organizational change. The model provides a map of changes for an organization by continuously improving its labor force activities (Yarmohammadian et al., 2008).

**Decision Making Capability Maturity Model (DMCMM)**

Decision Making Capability Maturity Model deals with two areas: maturity levels related to decision making ability and levels related to knowledge management maturity. Five levels of Decision-Making Capability Maturity include: Ad-hoc, planned, defined, sustained decision
making, controlled decision-making. The four levels of knowledge maturity linking these levels are: the ability to receive and absorb individual knowledge; to organize and enhance collective knowledge; to measure and evaluate knowledge, to reapply the earlier effective decisions.

Each level is broken into four categories of activities that include knowledge learning, knowledge storing, knowledge assessment and retrieval and reuse of existing knowledge. These models are developed with the aim at improving decision-making ability of the organization through appropriate management of decision system-supporting knowledge (Javedani et al., 2009).

**Strategic Action Field (SAF) Theory**

Adopting Fligstein & McAdam’s (2011), Strategic Action Field (SAF) theory to change management, it is argued that digitalization can be perceived as either a threat or an opportunity and challenges the rules and practices that were once taken for granted (Irimiás, & Mitev, 2020). To leverage on digitalization as an opportunity, collective action within the firm needs to be based on shared understandings of the benefits of digitalization. In SAF theory, a firm is a strategic action field that interacts in the ecosystem with its competitors, different market forces, and social movements (Fligstein, & McAdam, 2011; Tsoukas, & Chia, 2002). Fruitful exploitation of resources, capabilities, and the path development to renew business processes can be achieved when change management is led by intra firm communication and the sharing of common interests and benefits (Peter, et al 2020). As prior research has evidenced, pitfalls along this transformation process cannot be avoided, thus, change management needs to be implemented to gain competitive advantage within the industry (Peters et al 2020; Ukko, et al 2019; Li, et al 2017).

**Empirical Review**

Dehaghi, M. R. (2019) explored and evaluated employee’s capability maturity level and propose a solution to enhance it at Iran’s Oil Company. It was conducted through descriptive-field and cross-sectional method. The statistical population included 269 employees who were selected through simple random sampling and the sample size was estimated using Cochran formula. Curtis standard questionnaire was employed for data collection. Face validity and content validity of the questionnaire were confirmed by several experts including the management professors and managers of the mentioned company. Reliability of the questionnaire was confirmed through Cronbach's alpha coefficient which was equal to 0.89. Having analyzed the research questions, the findings revealed that maturity level of employees is totally weak from the third level onward. Therefore, maturity of employees is at the second level of maturity model, i.e. this company has defined and executed its primary and repeatable processes. Likewise, one-sample t-test for each level showed that status of dimensions in the second level was more than the average level (mean was equal to 3.54 and the significance level was less than 0.05) and it was less than the desirable level in other levels (2.69, 2.61, and 2.59 respectively).

Nasirzadeh (2015) conducted a study entitled "evaluation of knowledge management maturity based on the integrated model of PCMM and knowledge processes in Isfahan Municipality". He aimed to determine the status of the existing knowledge in Isfahan Municipality and the degree of knowledge gap to eliminate this gap. The results showed that preparation for knowledge management in Isfahan Municipality was far from what was expected and the
applied model was not matured in none of the indexes and levels. Thus, managers have to reduce this distance by doing corrective actions.

Yarmohammadian, Tavakoli, Shams, & Hatampour (2014) carried out a study entitled "evaluation of organizational maturity based on People Capability Maturity Model in medical record departments in Iran". The results revealed that there is no significant relationship between organizational maturity and characteristics of medical record staff. Generally, the use of PCMM model increases the managers and employees' attention to identify the weaknesses of current activities and practices to improve and develop the ongoing processes.

Gharibpour, Aref, & Latifi (2014) explored the relationship between succession process and employees' organizational maturity with leadership style of managers in family businesses. Besides the exploitation of succession process in such businesses, the study suggested that top managers of family businesses have to deal with this process personally and choose their leadership style according to employees' maturity.

Shekari & Sheibanifar (2013) explored maturity level of performance management system in Razavi Khorasan Gas Company based on PCMM model. Their findings disclosed that the processional scope of performance management in Razavi Khorasan Gas Company is at the second maturity level and, thus, is not at a favorable level based on the abovementioned model.

Backlund, Chroneer, & Sundqvist (2014) explored various models of project management maturity in a paper entitled "project management maturity models". The required data was collected from seven engineering and construction companies in Sweden via interview. According to content analysis and the results of the study, it is expected that firms with high levels of project management maturity act more successfully in qualitative and quantitative terms in project management and finally reach competitive advantage. This study also showed the importance of project management maturity in engineering and construction companies.

Yavarzadeh, Salamzadeh, & Dashtbozorg (2015) investigated the relationship between organizational maturity and knowledge management implementation. Statistical population was 350 including executives, vice presidents, directors and employees of Iran Power Development Company of which 183 were selected by Cochran formula as the sample. This is an applied research design and the methodology is descriptive-survey. The results indicate that there is a significant relationship between organizational maturity and knowledge management maturity and its dimensions in Iran Power Development Company. The highest correlation coefficient was for the organizational maturity with the leadership reflecting the important role played by leadership in organizational maturity and knowledge management maturity. Therefore, it can be concluded from the findings that as the organizational maturity is at a higher level, a higher level of knowledge management maturity will be achieved.

Hatampour Yarmohammadian, Tavakoli & Shams (2011) in a study examined and identified the needs of organizational maturity levels of Medical Records Department staff in Isfahan public hospitals and determined their strengths and weaknesses and skills using PCMM model. The findings showed that the mean score of skills and capabilities of Medical Records Department staff in Isfahan public hospitals in the second level of maturity was 35 out of 56. Medical Records Department personnel of Isa Ibn Maryam Hospital with a mean score of 55 had the highest level of maturity at the second level, managed level, of PCMM model and the staff of Medical Records Department of Shariati and Kashani Hospitals with the mean score...
of 24 were at the lowest level. There was no significant relationship between organizational maturity and the characteristics of Medical Records Department staff of these hospitals.

**Gap in Reviewed Literature**

Majority of the extant literature measured organizational maturity as a result of organizational structure, organizational culture, technology storage and human resources which in turn can be obtained from the life cycle process of knowledge areas. None of the reviewed literature examined the effect organizational maturity may have on firms’ sustainable performance. Therefore, the study aims to fill this gap in literature.

**METHODOLOGY**

A study design is a diagram or plan that outlines how data on a certain population should be collected and processed. The entire research plan for the study is known as the research design (Mark, Philip & Adrian, 2009).

**Population of the study**

Population is the totality of any group, persons or objects which is defined by some unique attributes. The population of this study consists of customers of the firms under study which includes Wichtech Limited, Preswin, Permolit Paints Nigeria, Giovanni Marbles and Granites Limited and Coleman Technical Industries Limited. The research population comprises customers of the firms under study. The total population, estimated at 500, consists of the customers of the organization under study. It was difficult and challenging to identify the total customers of the organizations understudy, therefore the researcher adopted a purposeful population size of 500 customers to guide the study, which is represented below in table 3.1.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Firms</th>
<th>No of Customers</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wichtech Limited</td>
<td>109</td>
<td>21.8%</td>
</tr>
<tr>
<td>2</td>
<td>Preswin Limited</td>
<td>97</td>
<td>19.4%</td>
</tr>
<tr>
<td>3</td>
<td>Permolit Paints Nigeria</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Giovanni Marbles and Granites Limited</td>
<td>70</td>
<td>14%</td>
</tr>
<tr>
<td>5</td>
<td>Coleman Technical Industries Limited</td>
<td>124</td>
<td>24.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: The Manufacturers Association of Nigeria (MAN) (2023)

**Sample Size**

The sample size of this study is a proportion of individuals drawn from the population to investigate strategic marketing practices and brand performance. The subset of the population which is studied in place of the entire population was determined using Krejcie and Morgan (1970) as cited in Kenpro (2012) sample size determination table. To make up this subset, the approximate number is two hundred and seventeen (217) (see appendix I for clarification). To allocate the sample size of 217 to the selected manufacturing firms, the study adopts the simple random sampling method to give a fair representation to the customers of selected firms. The Bowley’s proportional allocation formula was used. The formula is as stated below.

\[ n_h = \frac{nN_h}{N} \]

Where:

\( n_h = \) Number of units of customers allocated to each firms

\( N_h = \) Number of customers in each firm stratum in the population
n = Total Sample
N = The total population size under study

**Wichtech Limited**
\[ n_h = \frac{217 \times 109}{500} = 47 \]

**Preswin Limited**
\[ n_h = \frac{217 \times 97}{500} = 42 \]

**Permolit Paints Nigeria,**
\[ n_h = \frac{217 \times 100}{500} = 44 \]

**Giovanni Marbles and Granites Limited**
\[ n_h = \frac{217 \times 70}{500} = 30 \]

**Coleman Technical Industries Limited**
\[ n_h = \frac{217 \times 124}{500} = 54 \]

Table 2

<table>
<thead>
<tr>
<th>Firms</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wichtech Limited</td>
<td>47</td>
</tr>
<tr>
<td>2. Preswin Limited</td>
<td>42</td>
</tr>
<tr>
<td>3. Permolit Paints Nigeria</td>
<td>44</td>
</tr>
<tr>
<td>4. Giovanni Marbles and Granites Limited</td>
<td>30</td>
</tr>
<tr>
<td>5. Coleman Technical Industries Limited</td>
<td>54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>217</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey Analysis (2023)

**Reliability of Research Instrument**

The concept of reliability is concerned with an instrument's consistency or accuracy. Unlike validity, which is determined by a value judgment, reliability is determined through statistical processes. The test's consistency is demonstrated by its reliability. Olannye (2006). Cronbach’s Alpha was used to determine whether the constructs' reliability coefficients were within acceptable limits. A reliability value of 0.7 or higher is considered good, whereas a reliability coefficient of 0.6 or lower indicates poor reliability (Sekaran, 2003).

Table 3

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.868</td>
<td>.866</td>
</tr>
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</table>

Source: Statistical package for social sciences, version 23

From the above table 3, A reliability coefficient of 0.868 and above, is high and is acceptable while a reliability coefficient 0.5 and below shows poor reliability (Sekaran, 2011).

**Method of Data Analysis**

The statistical instrument or procedures used in processing the data obtained to arrive at accurate findings are referred to as data analysis methods/techniques (Elikwu, 2008). Using SPSS version 23, the statistical approaches used in this study were pearson correlation and multiple regression analysis. The choice was justified because it generated a stable and predictable result because it is extremely efficient and technically reliable (Olannye, 2006). To test the hypotheses, regression analysis was employed with a significance level of 0.05.
The information gathered was evaluated with descriptive statistics. Descriptive statistics use frequencies, mean, and standard deviation to describe the sample's response to a topic. The hypothesis was tested using Pearson's correlation co-efficient analysis to see if the variables were connected.

**Correlation Analysis:**
Where X = Independent Variable, Y = Dependent Variable, n = Number of variables
The range of value ‘r’ can take changes from +1 to -1 depending on the type of correlation specifically:

i. The correlation would be perfectly positive if ‘r’ is equal to +1
ii. The correlation would be perfectly negative if ‘r’ is equal to -1
iii. The relationship between the two variables would be considered to be uncorrelated if ‘r’ is equal to zero.

**RESULTS AND DISCUSSION**

**Data Presentation**
A total of two hundred and seventeen (217) copies of questionnaire were administered to the employees of selected banks (Wichtetech Limited, Preswin Limited, Permolit Paints Nigeria, Giovannia Marbles and Granites Limited and Coleman Technical Industries Limited). Out of the two hundred and seventeen (217) copies of questionnaire administered to the respondents, two hundred and seventeen copies (217)100% were retrieved, and out of the two hundred and seventeen (217)100% copies retrieved, only two hundred and one (201) 92.7% copies were properly filled, while sixteen (16) 7.3% copies were not properly filled. This response was excellent and representative of the population and conforms to Cooper and Schindler (2014) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent. Thus, the sample to be used for the study was the total of two hundred and one (201) respondents which represent 92.7% of the sample size of 217.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>151</td>
<td>75.12</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>50</td>
<td>24.88</td>
</tr>
<tr>
<td></td>
<td>201</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below 30 years</td>
<td>47</td>
<td>23.38</td>
</tr>
<tr>
<td></td>
<td>31-40 years</td>
<td>117</td>
<td>58.21</td>
</tr>
<tr>
<td></td>
<td>Above 41 years</td>
<td>37</td>
<td>18.41</td>
</tr>
<tr>
<td></td>
<td>201</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>67</td>
<td>33.33</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>134</td>
<td>66.67</td>
</tr>
<tr>
<td></td>
<td>201</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>Educational Background</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WAEC/NECO/GCE OND</td>
<td>18</td>
<td>8.95</td>
</tr>
<tr>
<td></td>
<td>HND/B.Sc</td>
<td>63</td>
<td>31.34</td>
</tr>
<tr>
<td></td>
<td>MBA</td>
<td>105</td>
<td>52.23</td>
</tr>
<tr>
<td></td>
<td>OTHERS</td>
<td>12</td>
<td>5.71</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1.49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>201</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

From the Table 4 above showing the demographic characteristics of employees of the selected small and medium enterprises (Wichtech Limited, Preswin Limited, Permolt Paints Nigeria, Giovannia Marbles and Granites Limited and Coleman Technical Industries Limited). It can be observed that the Table 4.1 above sought to determine the respondents’ gender. It was established that 151(75.12%) of the respondents were male while 50(24.88%) of the respondents were female. The findings showed that respondents were evenly distributed across the gender divide although there were more male than female respondents. In terms of age, it showed that 47(23.38%) are below 30 years, 117(58.21%) are between 31-40 years, while the rest of 37(18.41) are 40 years above. Finally, Out of the 201 respondents, 67(33.33%) are yet to marry while 134(66.67%) are married. Majority of the respondents are HND/B.Sc. holders with the frequency of 105(52.23%), 18(8.95%) were WAEC/NECO/GCE holders, 63(31.34%) respondents were OND holders, 12(5.71%) respondents were MBA holders, while 3(1.49%) were MBA holder. This evaluation establishes that the respondents are educated.

Data Analysis

Correlation Matrix

Correlation analysis is used to examine the relationship between dependent and independent variables. Its values lie between -1 and +1. +1 indicates that there is a positive linear sense between two variables and are perfectly related while -1 indicates a negative linear sense between two variables. This tells the degree of correlation between the independent and dependent variables, whether there is moderate or low degree of correlation.

<table>
<thead>
<tr>
<th></th>
<th>CM</th>
<th>DM</th>
<th>FSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>.380</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>BF</td>
<td>.979</td>
<td>.393</td>
<td>1.000</td>
</tr>
</tbody>
</table>


The Pearson correlation in table 5, showed the coefficient of the type of relationship that exist between the independent variables; Change Management (CM) and Digital Maturity (DM) were assessed in relation to the dependent variable and dependent variable Firm sustainable performance (FSP).

Change Management (CM), has a coefficient of (r= 0.380>0.05) which reveals that Change Management (CM), has strong positive correlation on Firm sustainable performance (FSP), this implies that an increase in Change Management (CM), would have significant effects on Firm sustainable performance (FSP).

Digital Maturity (DM), has a coefficient of (r= 0.305>0.05) which reveals Digital Maturity (DM), has strong positive correlation on Firm sustainable performance (FSP), this implies that an increase in Digital Maturity (DM), would have significant effects on Firm sustainable performance (BF).

The study was focused on enhancing firms sustainable performance through relationship organizational maturity. The results of the correlation analysis involving all the indicators of relationship organizational maturity development reported positive correlation coefficient values among the measures. This indicated that they are appropriate dimensions of relationship organizational maturity.
Discussion of Findings

Table 6
Multiple Regression Analysis of Measures of Relationship Organizational Maturity and Firm Sustainable Performance

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>0.179</td>
<td>0.322</td>
</tr>
<tr>
<td>CM</td>
<td>0.119</td>
<td>0.029</td>
</tr>
<tr>
<td>DM</td>
<td>0.037</td>
<td>0.016</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FSP

Table 7
Model Summaryb

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.980*</td>
<td>0.960</td>
<td>0.959</td>
<td>0.415</td>
<td>1.908</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), CM, DM
b. Dependent Variable: FSP

Table 8
ANOVAa

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>798.141</td>
<td>4</td>
<td>199.535</td>
<td>1158.810</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>33.749</td>
<td>196</td>
<td>.172</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>831.891</td>
<td>200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: FSP
b. Predictors: (Constant), CM, DM


The results from the multiple regression analysis recorded relationship organizational maturity and firm sustainable performance of selected manufacturing firms in Nigeria. The two variables to measure relationship organizational maturity in this study were Change management (CM) and Digital Maturity exhibited statistically significant effect on Firm sustainable performance (FSP).

The result provided support for the H1 test result which indicated that there is significant positive effect between Change Management (CM), and Firm sustainable performance (FSP) (β=0.119; P=0.019<0.05). The calculated p-value of 0.019 is significant because it is less than 0.05 (5%). It also means that the level of confidence (confidence interval) is 98.1% more than the acceptable level of 95%. We therefore, accept the alternate hypothesis and reject the null hypothesis (Ho1), which states that there is no significant effect between Change Management (CM) , and Firm sustainable performance (FSP) of manufacturing firms in Nigeria. This implies that 1% increase in Change Management (CM) would leads to 1.9% movement in Firm sustainable performance (BF), this is evident with a regression coefficient of 0.019. This is consistent with system theory, which opines the relationships Change Management (CM) between firms and their employee is critical to the survival of firms. This indicate that the complexity of a system emerges from a small number of controlling processing and not from the random association of a large number of interacting factors. This finding is in line with findings of Ajayi (2002) found that change management requires diverse skills, from effective
communication, honesty, persistence and commitment. Having employees participate in the change process has significant importance as they form the basis for change. They become part of the change processes by donating ideas and making crucial decisions. The effect of it is an increased level of commitment on the change agenda.

Similarly the findings indicated that digital maturity activities is found to have significant positive relationship on Firm sustainable performance (FSP) ($\beta=0.037; \ P<0.024$). The findings provided support for the result of $H_2$ which showed that there is a significant effect between digital maturity (DM) and Firm sustainable performance (FSP) (0.024<0.05). The calculated p-value of 0.024 is significant because it is less than 0.05 (5%). It also means that the level of confidence (confidence interval) is 98% more than the acceptable level of 95%. We therefore accept the alternate hypothesis and reject the null hypothesis ($H_0$), which states that there is a significant effect between digital maturity (DM) and Firm sustainable performance (FSP) of manufacturing firm. This implies that 1% increase in digital maturity (DM) would lead to 3.7% movement in Firm sustainable performance (FSP) this is evident with a regression coefficient of 0.026. This finding is in line with Haffke, Kalgovas, & Benlian (2016) found that digitization initiatives of organizations stem from functional areas encompassing sales & marketing, operations, or customer services. Lately, digital initiatives have become wider, intending to achieve a revenue-driving way to the market. The digital realm of enterprises is no longer limited to communication mechanisms, and considerable importance is attained in digital activities.

The study also found strong support for the positive impact of digital maturity on firm performance like research outcomes of (Guo et al., 2020; Zhou & Wu, 2010). On the contrary, Niemand et al. (2020) revealed that technology is not enough for performance enhancement, and it should be combined with strategic vision and entrepreneurial ability to benefit. The study of Ekuobase and Olutayo (2015) also supported this argument. The authors stated that getting benefits from ICT adoption is not always related to the extent of ICT adoption.

**CONCLUSION**

From the findings it can be concluded that:

i. Successful organizational change management requires a commitment to transform from what an organization is into what it wants to be. All firms go through change. Some firm’s productivity opts to change to take advantage of new growth and opportunities; other firms are forced to quickly change to survive and remain competitive for better performance. Performance symbolized by growth rate of revenue, financial strength return on equity, return on assets and profitability. Organisations with engaged employees have customers who use their products more, and increased customer usage leads to higher levels of customer satisfaction.

ii. Organizations with higher levels of maturity have a positive influence on their firm having a sustainable performance, particularly in the cases where they make use of benefits management practices.

**Recommendation**

After close examination and analysis of the research findings, the following recommendations were suggested:

i. Since change is a fact of life, managers in the Nigerian firms should anticipate effective process of managing change and organization enablers such as culture,
structure people and it infrastructure need to be considered for improvements if organizational performance is to be achieved.

ii. Many companies are not investing in digital technologies and business models probably because of the lack of awareness regarding the performance outcomes of digitalization. They should focus on the adoption of advanced technologies to boost their performance. In addition to the adoption of technology and business models, embracing a digital mindset and continuous growth strategy is critically important in digital transformation.

References


