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COVID-19 AND LEAN ACCOUNTING IN NIGERIA'S BANKING SECTOR

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ABSTRACT

Despite the successful application of lean thinking across a wide range of industries, and institution, lean accounting which have been a main stay in the banking sector seems to be gaining relevance in recent times, the talk of its relevance was pushed to the fore as a response factor to the policies and protocols put out to control the spread of the Nobel Covid-19 virus in organizations in attempt to return business to normalcy. The Mammoth crowd at the premises of the bank, the customers complaints on time wasted and the daily customer turnover by the banks, spore the study to examine covid-19 and the implementation of lean accounting in Nigeria banking sector. The objective of the study was to investigate the impact of the Covid-19 pandemic on the current status of lean application, examine the barriers to the implementation of lean accounting and identify the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic. The descriptive survey research design, was adopted for the study using primary data generated from a sample 384 conveniently selected respondents in attempt to answer the research question and test the hypothesis of the study. 377 questionnaires were return and satisfied useful for the study, and analyzed using mean and percentage tools for statistical analysis, while the hypothesis was tested using the Pearson's product moment correlation coefficient statistic was used to test the hypotheses of the study at 0.05 level of significance. The finding reveals that there is a significant relationship between covid-19 pandemic and the implementation of

lean accounting in Nigeria banking sector. The study findings among other establishes that that the covid-19 pandemic has been a cog in the wheel of progress of lean accounting practice in the current Nigeria banking environment. Thus the researcher recommends that the banking sectors should ensure that HRM practice is at premium, with square pegs in square hole and traditional organizational culture should be tweaked a bit in some cases to accommodate possible external factors that may demand their efficiency above all pronounced odds.

Keywords: Covid-19, Lean Accounting, Nigerian Banking Sector, Lean Implementation

INTRODUCTION

Background to the Study

The banking industry of the 21st century was almost at the crossroad of their evolution to a 'highly techy' industry before the arrival of one of the most ungodly events of the 21st century, the novel virus-coronavirus disease 19 (COVID-19). Before the covid-19 virus, this was said to have originated from Wuhan, China, in December 2019. The banking industry was at the verge of delivering a seamless simple and easy service, reduce the issue of crowed in the banking hall, and manage customers challenges, and still remain efficient, and ensure employees job satisfaction and improved organizational citizenship behaviour. These goals have seen the banking industry making tremendous strive for effective but efficient service delivery and customers satisfaction, through the adoption and integration of the internet technology to improve services, alienate wastages in operations, ensure customers loyalty, and still staying profitable. Evidences of these goals are seen in the introduction of the internet banking, the Automated Teller Machine (ATM), mobile banking, etc.

But with Report from World Health Organization (WHO) (2019), stating that the virus is ravaging economies, placing a massive demand on the health care system, with over 1.25 million recorded death cases and 49.8 million people infected worldwide, calls for several measures to prevent the spread of the novel coronavirus. Such measures as, social distancing, lockdown, wearing of face mask, also quarantining and self-isolating in homes in many countries, etc. (Hang 2020; Ren, 2020).

These which saw the emergency paradigm shift in the banking industry operations, with containing the spread of the virus their major concern. To achieve this, measures like the compulsory use of face mask to access the banking premises and hall, giving of numbers to customers to reduce the number of customers in the hall at a given time and keeping social distance at the bank Automated Teller Machine (ATM) units. The consequence of this measure includes low income/customers deposits per day as a result of wastages from the transaction processes, reports, and accounting methods throughout adopted. Thus the call for lean accounting practices in the banking sector.

Lean concept is a Western interpretation of the Japanese Production Philosophy in the car manufacturing industry (Bertelsen and Koskela 2005). The core concept behind Lean Production is to enable the flow of value creating work steps while eliminating non-value steps (Dulaimi and Tanamas 2001). Abdul-Razek et al. (2007) believe that the core idea of Lean is to reduce or eliminate waste, represented in non-value adding activities, and increase the efficiency of value adding activities. Lean is essentially all about getting the right things to the right place at the right time, in the right quantity and at the same time, minimizing waste and being open and responsive to change with underlying philosophy

that, by eliminating waste, quality can be improved, and production times and costs reduced (Kempton, 2006).

Given that lean practice is everything about wastages elimination in operations. Lean thinking in the banking sector during the Covid-19 pandemic cannot be ruled out. Recent studies have shown that the covid-19 pandemic placed a huge demand on the banking industry. The government institution sees the banking sector as the last resort to the survival of the people and economic recovery during the pandemic. However is the policy by government to erases liquidity support, borrower assistance, and monetary easing and moderated the adverse impact of the crisis. The consequence of these palliative interventions by the government in that it has succeeded in exacerbated the stress for banks that are already undercapitalized and/or operate in with already left with huge loan recovery task, also is the stresses that come time for book keeping and report preparation (Johnson, 2006).

Over the years they have been serious studies on the impact of Covid-19 pandemic on the financial sector. Such studies includes; study by Iwedi, Kocha and Onakpono (2020), assessing COVID-19 global pandemic trade and impact on the Nigerian economy, employing descriptive methodology to evaluate Covid-19 pandemic global trade wars and its impact on the Nigerian economy. The finding of the study shows that coronavirus crippled the Nigerian economy in terms of social, religious and economic activities while the measures taken to contain the spread of COVID-19 impacted on Nigerian citizens in many ways including job losses, higher prices, and damage to healthcare and seriously on education services. Tesfaye (2020) explore the impact of COVID-19 pandemic on the Ethiopia's private banking system, adopting ten years historical data from 2010 to 2019. The study establishes that the pandemic has effect on both balance sheet and income statement of banks. Wakode (2020) studied the influence of COVID-19 on the credit exposure of a bank. The study employed the statistical tool of the multivariate analysis of variance and found that there is a significant impact between COVID-19 and bank risk metrics. Demirguc-Kunt, Pedraza and Ruiz (2020) assessed the impact of banking sector performance during the COVID-19 crisis. The study found that the crisis and the countercyclical lending role that banks are expected to play and put banking systems under significant stress with bank stocks underperforming in their domestic market than other non-banking financial firms. Baret, Celner, O'Reilly and Shilling (2020) investigated the impact of the COVID-19 pandemic on the financial market and banks. The study found evidence of significant effects of COVID- 19 on the general financial markets as recently the world experienced fall in share prices, oil prices, equities and bonds' prices. Demirguc-Kunt, Pedraza and Ruiz-Ortega (2020), studied banking sector performance during the COVID-19 Crisis. Using a global database of policy responses during the crisis, the study also examines the role of financial sector policy announcements on the performance of bank stocks. Overall, the results suggest that the crisis and the countercyclical lending role that banks are expected to play have put banking systems under significant stress, with bank stocks underperforming their domestic markets and other non-bank financial firms.

Nigeria is not an exception; knowledge is still sparse in the literature on the impact of Covid-19 on the banking sector. However, some studies have been carried out on covid-19 impact on the financial sector using different approaches (Ajayi, 2020; Oyeneyin and Kuyoro, 2020). The study approach of Ajayi (2020) was basically an assessment of the impact of the Covid-19 pandemic on the financial sector using qualitative technique. While

Oyeneyin and Kuyoro (2020) emphasized on the impact of the pandemic on the banking sector, but do not look at its impacts on banks' operations. Also is a study by Osagie, Maijamaa & John (2020), on the Effects of COVID-19 outbreak on the Nigerian Stock Exchange performance.

Hitherto, none of these studies provides information on the impact of the pandemic on lean accounting in banks across the country. This is unfortunate, because it has increasingly been acknowledged that given the protocols that come with the attempt to control the spread of the virus, banks in order to remain competitive put up with these protocols, which have seen them attend to less than 10% of customer's population before the pandemic. This has seen the emergence of wastages in their operations. Therefore is the need to examine covid-19 and the application of lean Accounting in Nigeria banking sector.

Aim and Objectives of Study

The aim of this paper is to examine covid-19 and the implementation of lean accounting in Nigeria banking sector. Specifically, this is achieved through the following objectives, which is to:

- i. Investigate the impact of the Covid-19 pandemic on the current status of lean application in the current Nigeria banking industry
- ii. Examine the barriers to the implementation of lean accounting in the Nigeria banking industry.
- iii. Identify the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic.

Research Questions

To achieve the objective of this study, the following research questions will aid this study.

- i. What is the impact of the Covid-19 pandemic on the current status of lean application in the current Nigeria banking industry?
- ii. What are the barriers to the implementation of lean accounting in the Nigeria banking industry?
- iii. What are the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic?

Research Hypotheses

This paper is guided by the following hypothesis:

H₀₁: There is no significant relationship between lean accounting practices and performance of banks in Nigeria during the Pandemic.

LITERATURE REVIEW

Theoretical framework

The contingency theory was proposed by Fred Edward Fiedler in his landmark 1964 article "A Contingency Model of Leadership Effectiveness". This theory based on the theory that management effectiveness is contingent, or dependent, upon the interplay between the application of management behaviors and specific situation. In other words, management activities or outcomes are a function of circumstances. Thus these circumstances may be circumstances beyond the control of the manager, such circumstance

as government policies and programmes. The contingency theory claims that there is no best way to organize a corporation, to lead a operation, or make decision. Instead, the optimal course of action is contingent that is dependent upon the internal and external situation. Such situation as good working environment, motivation, etc. and the external situation like government policies, or as in this case government policies as a result of the pandemic. The contingency theory emphasizes that in various conditions, the managerial functions or performance of organizational functioning in different situations require different approaches. Business organizations need to research and use their knowledge resources in to enhance their organizational performance in a competitive environment.

The performance of Business organizations can vary with the selection of strategy adopted. This study tries to examine the influence of external factor such as the covid-19 pandemic and the aftermath government policies on the performances of Banks in Nigeria. More specifically, the contingency theory emphasizes the influence of government covid-19 measure on the managerial practice of lean accounting in Nigeria Banking sector. Thus, in order to examine the proposed relationships between covid-19 safety measures and how it affect lean accounting practice in banks, the current study developed the following proposition.

- i. Lean accounting practices dependents on both internal and external factors and
- ii. the external factor is so vital, considering that fact that the internal factors sometimes are functions of the external factor (covid-19 protocols)

CONCEPTUAL FRAMEWORK

Concept of Lean Accounting

Given the very large and complex, processes requiring huge amounts of non-value work in the banking sector, to provide accurate, timely and understandable information motivates the idea of lean accounting. This way, accounting as a primary source for decision making is crucial for the success of the lean transformation process (Maskell & Kennedy, 2007) thus arising the need for lean accounting. Just like lean manufacturing is focused on the simplification of processes and the reduction of waste in production, lean accounting must simplify the accounting, control and assessment systems (Carnes & Hedin, 2005). Above all, lean accounting is a new accounting approach stemming from the growing interest of companies in embracing the culture of lean thinking. In the words of Mathew (2020), lean accounting is an accounting practice than agendas elimination of processes that causes wastages in banking operations. Lean accounting process includes however methods such as cost organization by value stream, changes in inventory valuation technics, and changes in financial reports so that they include non-financial information (Brosnahan, 2008). With this introduction of lean thinking, traditional financial and accounting systems start to be seen as inadequate (systems directed towards mass production and the achievement of economies of scale), because they go against lean principles. Reversely, lean measures reflect the company's strategy, motivate lean actions, and can be collected and presented in a simple and visual way (Maskell & Baggaley, 2003; Carnes & Hedin, 2005; Maskell & Kennedy, 2007). Maskell and Baggaley (2006) mention that the traditional accounting systems are extensive, complex, and have waste generating processes, with tasks that create no value. They also point out the fact that the available reports are difficult to understand by people outside the accounting department. Lean accounting developments are essentially directed towards management accounting, since the

information for financial reporting follows very strict rules. On the other hand, financial information cannot in any way be considered a waste since it stems from a legal obligation.

Critical Success Factors

Concept of success factors (CSFs) in the words of Rockart (1979) “is the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization”. Critical success factors are crucial to the success of a program, and if the objectives associated with these factors are not achieved, the application program will also lead to failure (Rockart, 1979). According to Boynton and Zmud (1984), the CSFs are “those few things that must go well to ensure success”. The CSFs are the actions and processes that can be controlled by the management to achieve the organization’s goals (Brotherton and Shaw, 1996). Any improvement initiative means high expenditure, investment (Ranjan and Bhatnagar, 2008) and high risk (Umble et al., 2003) for an organization. So it is important to identify the factors that can determine the success of the implementation and avoid the risk of failure. If these CSFs are not emphasized, not only there could be a significant difference in the success gained, but also losses in terms of effort, time and money (Coronado and Antony, 2002). The critical success factors are essential parts that must be addressed by management or the manager to ensure that 'things must go right' for a project or activity to achieve management objectives and business growth. In the context of lean implementation, CSFs represent the essential ingredients without which the implementation stands little chance of success.

Identifying Critical Success Factors for Lean Implementation

A number of researchers have considered the role of the CSFs in lean implementation. Achanga et al. (2006) identified four factors that are critical for the implementation of Lean Manufacturing within organizations. The factors are: Leadership and Management, Financial Capability, Skills and Expertise and Organizational Culture. Sua’rez-Barraza and Ramis-Pujol (2010) identified various enablers and inhibitors during the implementation of lean-kaizen in a Mexican Public service organization. The enablers and inhibitors are as follows. Enablers:

- i. Commitment to and wish for improvement
- ii. Clear resolve to improve
- iii. Focus on the simple and practical
- iv. Active leadership
- v. The service is outcome/customer/stakeholder- oriented
- vi. Holistic and transversal thinking
- vii. Establishing a system for measuring service process performance
- viii. Effective implementation of best HRM practices

Inhibitors:

- i. A “classical bureaucratic mode” organizational structure, creating “small fiefdoms.”
- ii. The influence of trade unions with little interest in change and/or improvement.
- iii. Resistance to change by employees who enjoy their own quota of power (influenced by the trade union) and their own way of doing things in the HRO sections (a legacy of the approach of this kind of area).

- iv. A lack of sound professional training in Lean-Kaizen techniques and tools.
- v. A lack of credibility of certain middle management, with these efforts viewed as imposed by a management group in power or as a passing fad.
- vi. Excess regulation can block thinking about improvement and quality of services.
- vii. The lack of a strong link between Lean-Kaizen efforts and the HRM best practices required to consolidate them.

According to Scherrer-Rathje et al. (2009), lean implementation success depends on: the evidence of management commitment to, and involvement in, the lean effort; employee autonomy to make decisions regarding business process changes; information transparency of lean goals; and evidence of initial performance improvements and long-term sustainability of lean efforts. The six lessons for lean implementation success are:

- i. Lean will not succeed without visible management commitment
- ii. Develop formal mechanisms to encourage and enable autonomy
- iii. Openly disclose mid- to long-term lean goals
- iv. Ensure mechanisms are in place for the long-term sustainability of lean
Communicate lean wins from the outset
- v. Continual evaluation during the lean effort is critical

Crute et al. (2003) considered five factors significant for lean implementation: Change strategy targeted and holistic; Effects of company culture; Product focus; senior management commitment; Timing for performance improvements According to Czabke et al. (2008), three factors are great importance for the successful Lean implementation. These factors are: Communicating the vision of the new initiative at every organizational level; Necessary change in the organizational culture; consequently following the new practices and principles. Kettinger and Grover (1995) as cited in (Motwani, 2003) points out that any significant process change requires the following success factors: Strategic initiative of top managers acting as leaders in defining and communicating the vision of change; Willingness to learn; Culture readiness; Balanced network relationships; Knowledge sharing; Prescribed process management and change management practices. Mefford (2009) identified the following four essential components for successful implementation of lean: Belief in the new program, that it will work; Commitment for implementing it from managers; Involvement of the whole organization – employees, resources; Patience and long term view for the results According to Pedersen and Huniche (2011), the following factors are important for lean implementation: Goals and values; Complexity and importance; Balance of power; and resources and capabilities. According to Sim and Rogers (2009), the lean implementation problem lies primarily with an aging and high seniority hourly workforce and a lack of committed leadership at this research site. Grove et al. (2010) identified the challenges faced during a lean implementation in a health service environment. These were: high process variability; a lack of understanding of lean; poor communication and leadership; target focused; problems defining waste; and difficulty in determining the customers and the value from customer's perspective. The barriers to lean implementation could be overcome with upfront planning, transformational leadership, excellent communication, identification and sharing of best practice and, above all, a shared vision. Henderson and Evans (2000) listed seven components of successful Six Sigma

implementation as upper management support, organizational infrastructure (OI), training, tools, link to human resource- based actions, measurement system, and information technology infrastructure.

Antony and Fregusson (2004) pointed out ten critical success factors for software industries from a pilot study, these are leadership engagement and uncompromising commitment of top management, supporting, cultural change, Six Sigma training, linking Six Sigma to business strategy, accountability, customer involvement, understanding of Six Sigma methodology, project management, project prioritization, and selection. The findings from the same study also show that the most critical success factors are leadership engagement and uncompromising commitment of top management, cultural change, linking Six Sigma to business strategy, and customer involvement. Bhasin (2011), found the following barriers to lean implementation: Need to convince shareholders/owners; Insufficient external funding; Insufficient internal funding; Insufficient understanding of the potential benefits; Cost of investment; Cultural issues; Insufficient management time; Insufficient skills to implement lean; Employee attitude/resistance to change; Insufficient supervisory skills to implement lean In this paper, we have compared and reviewed the existing CSFs proposed by various researchers in the literature.

Based on the review, we have found that some of the CSFs are consistently identified and which have relevance to the implementation of lean principles. Such CSFs could therefore also be relevant to measuring the degree of success of lean implementation in Banking. We have proposed a set of CSFs for lean implementation, which is believed to be more relevant to the Banking sector. Each of the proposed CSFs is discussed below.

Proposed CSFs for Lean Implementation in Banking Sector

The literature reviews reveals that different sets of CSFs have been put forward by different researchers. However, these CSFs can possibly be grouped into a number of generic factors. These are common in lean implementation in different organizations and therefore, these CSFs are also believed to be applicable to Banking sector. However, one should also consider the needs and situations of banking sector when developing CSFs for them. There are some distinctive issues that require considerable attention in the Banking sector. In order to address these issues and to compensate for the drawbacks of previous studies, new factors should be introduced. By integrating the common factors and introducing some new ones, this study adopted by Kundu and Manoha (2018) comprehensive model of CSFs for implementing lean in banking sector. The proposed CSFs are:

- i. Management leadership
- ii. Management support
- iii. Top management commitment
- iv. Organizational Culture
- v. Communication
- vi. HRM
- vii. Financial Capability
- viii. Measurement Framework

METHODOLOGY

The study employed a descriptive survey research design. The choice of this design is due to the difficulty involve in studying the entire population of knowledgeable respondents in Rivers State with twenty three (23) Local Government Areas and an estimated population of over six million persons. The method is economical, dependable, convenient and practicable. It does not impose decision on the researcher, management and government but equips them in making value decision aimed at examining covid-19 pandemic and lean accounting in the banking sector. The population of this study comprises the bankers, academics and bank customers in Port Harcourt, Rivers State, who are affected directly or indirectly by the protocols adopted by banks to mitigate the spread of the virus. The Population of Port Harcourt is 1148665 ((world population review, 2019). Due to the population size (1148665), time and resources, it became necessary to select sample from the population that could easily be studied and inference made to the population. The study adopted a sample size of 384 consisting of staff of selected banks, academics (Lectures of University of Port Harcourt) and bank customers in Port Harcourt. This was determined using the sample size determination table by Morgan's (2006) which states that at + or — 5% error margin, a population of over 1000,000 (where in this case is 1148665) would have a sample size of 384. The convenient non probabilistic sampling technique was used to select the respondents of the study.

Table 1: Table showing the sample distribution of the Respondents

S/N	Categories	Sample Distribution	No of questionnaires returned
1	Academics	7	7
2	Bank Staff	56	51
3	Customers	321	319
	Total	384	377

(Source Data, 2021)

The instrument used for the study is a structured and unstructured questionnaire. The questionnaire was designed by the researcher to contain section A, the demographic data of the respondents and Section B, the items that address the research questions of the study. The four points modified Likert Scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) will be used for rating the questionnaire that is;

- SA = strongly agreed 4
- A = Agreed 3
- SD = Strongly Disagreed 2
- D = Disagreed 1

To validate the instrument for data collection, a draft of the research instrument was presented to psychometrist in educational psychology in the University of Port Harcourt for content and face validation. Their useful corrections and suggestions were carefully effected to ensure the content and face validity of the instrument. The researcher finally proof read the items and effectively eliminated the systematic errors which affect the validity of the instrument. The study applied the test-retest method to establish the reliability of the items in the questionnaire. The questionnaire used for the study was randomly distributed to a selected 20 respondents outside the study area. The data collected was analyzed using the Pearson's product moment correlation coefficient to determine the reliability coefficient r.

the result found r to be 0.89, which is above the acceptability limit on a Crombach's Alpha Scale for reliability test.

Pearson's Product Moment Correlation test model:

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

The data collected for the quantitative approach were analyzed using simple percentage frequency table, and other descriptive statistical tools such as the mean to answer the research questions, the weighted mean was $\frac{4+3+2+1}{4}=2.50$ which was deemed fit as the criterion mean for accepting or rejecting items of the questionnaire. Any item that has a mean score of 2.50 and above will be accepted, below 2.50 will be rejected. The Pearson's product moment correlation coefficient statistic was used to test the hypotheses of the study at 0.05 level of significance.

RESULTS AND DISCUSSIONS

Answers to research questions

Research Question One:

What is the impact of the Covid-19 pandemic on the current status of lean application in Nigeria banking industry?

Table 4.1: Mean and Simple percentage on the respondent's position on the current status of lean application in Nigeria banking industry

S/N	Description	SA	A	D	SD	Total	Total on a Likert Scale	Mean	Rank
		4	3	2	1				
1	The covid-19 measures adopted in banks today are responsible for the numerous issues of customer complaints	275 (72.94%)	86 (22.81%)	10 (2.65%)	6 (1.59%)	377 (100%)	1384	3.67	1
2	The covid-19 measures adopted in banks today are responsible for the numerous issues of customer dissatisfaction	221 (58.62%)	145 (38.46%)	6 (1.59%)	5 (1.33%)	377 (100)	1336	3.54	2
3	The covid-19 measures adopted in banks today are responsible for the numerous issues of delays in service delivery time	215 (57.03%)	122 (32.36%)	23 (6.10%)	17 (4.51%)	377 (100%)	1289	3.42	3

Result in table 4.1, shows that the mean values for item, 1,2, and 3 are greater than the criterion mean of 2.5.

Considering the research question one Table 4.1: Above, , the result shows that shows that two hundred and seventy five (275) respondents which represent that 72.94% of the covid-19 measures adopted in banks today are responsible for the numerous issues of

customer complaints, 86 respondents which represent 22.81% of the population agreed, 10 respondents which represent 2.65% of the population disagreed, while 6 respondents which represent 1.59% of the population strongly disagreed. Two hundred and twenty one (221) respondents which represent 58.62% of the study population strongly agreed that the covid-19 measures adopted in banks today are responsible for the numerous issues of customer dissatisfaction, 145 respondents which represent 38.46% of the population agreed, 6 respondents which represent 5 of the population disagreed while 47 respondent which represent 11.33% of the population strongly disagreed. Also two hundred fifteen (215) respondents representing 57.03% of the population strongly agreed that the covid-19 measures adopted in banks today are responsible for the numerous issues of delays in service delivery time, 122 respondents which represent 32.36% of the population agreed, 23 respondents 6.10% of the population disagreed while 17 respondents which represent 4.51% of the population strongly disagreed. Relatively the study shows that a great percentage of the respondents strongly agreed that the covid-19 pandemic has adversely affected the current status of lean application in the current Nigeria banking industry.

Research Question Two:

What are the barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic?

Table 4.2: Mean and Simple percentage on the respondent's position on the barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic

S/N	Description	SA	A	D	SD	Total	Total on a Likert Scale	Mean	Rank
		4	3	2	1				
4	The efficiency of the internet services in Nigeria is barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic	231 (61.27%)	112 (29.71%)	18 (4.77%)	16 (4.24%)	377 (100%)	1312	3.48	3
5	Promotion sentiments that help to put square peg in round holes, can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic	230 (61.01%)	131 (34.75%)	10 (2.65%)	6 (1.59%)	377 (100%)	1339	3.55	2
6	The cost of deploying the system can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the	254 (67.37%)	100 (26.53%)	12 (3.18%)	11 (2.92%)	377 (100%)	1351	3.58	1

	Covid-19 pandemic								
7	Keeping to the traditional working culture can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic	209 (55.44%)	100 (26.53%)	54 (14.32%)	14 (3.71%)	377 (100%)	1258	3.34	4
8	Poor human resource management to a great extent serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic	211 (55.97%)	156 (41.38%)	5 (1.33%)	5 (1.33%)	377 (100%)	1227	3.32	5

Result in table 4.2; shows that the mean values for item, 4, 5, 6, 7 and 8 are greater than the criterion mean of 2.5.

Considering the research question one Table 4.2: Above, ,the result in ranking order shows that shows that hundred and fifty four (254) respondents which represent 67.37% of the study population strongly agreed that the cost of deploying the system can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic, 100 respondents which represent 26.53% of the population agreed, 12 respondents which represent 3.18% of the population disagreed while 11 respondent which represent 12.92% of the population strongly disagreed. Two hundred thirty (230) respondents representing 61.01% of the population strongly agreed that Promotion sentiments that help to put square peg in round holes, can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic, 131 respondents which represent 34.75% of the population agreed, 10 respondents 2.65% of the population disagreed while 6 respondents which represent 1.59% of the population strongly disagreed. Two hundred and thirty one (231) respondents which represent 61.27% of the population strongly agreed that efficiency of the internet services in Nigeria is barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic, 112 respondents which represent 29.71% of the population agreed, 18 respondents which represent 4.7% of the population disagreed while 16 respondents which represent 4.24% strongly disagreed. Two hundred and nine (209) respondents which represent 55.44% of the population strongly agreed that keeping to the traditional working culture can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic, 100 respondents which represent 26.53% of the population agreed, 54 respondents which represent 14.32% of the population disagreed while 14 respondents which represent 3.71% strongly agreed. And two hundred and eleven (211) respondents which represent 55.97% of the population strongly agreed that Poor human resource management to a great extent serve as a barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19

pandemic, 156 respondents which represent 41.38% of the population disagreed, 5 respondents which represent 1.33% of the population disagreed while 5 respondents which represent 1.33% strongly agreed. Relatively the study shows that a great percentage of the respondents strongly agreed that there are strong barriers to the implementation of lean accounting in the Nigeria banking industry during the Covid-19 pandemic

Research Question 3:

What are the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic?

Table 4.3: Mean and Simple percentage on the respondent's position on the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic

S/N	Description	SA	A	D	SD	Total	Total on a Likert Scale	Mean	Rank
		4	3	2	1				
9	Management leadership style is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	256 (67.90%)	87 (23.08%)	17 (4.51%)	17 (4.51%)	377 (100%)	1336	3.54	8
10	Management support is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	265 (67.90%)	105 (27.85%)	7 (1.86%)	0 (0.00%)	377 (100%)	1389	3.68	4
11	Top management commitment is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	366 (97.08%)	0 (0.00%)	0 (0.00%)	11 (2.92%)	377 (100%)	1475	3.91	2
12	Organizational Culture is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	318 (84.35%)	46 (12.20%)	10 (2.65%)	3 (0.80%)	377 (100%)	1433	3.80	3
13	Human resource management is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	275 (72.94%)	86 (22.81%)	10 (2.65%)	6 (1.59%)	377 (100%)	1384	3.67	5

14	Financial Capability is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	215 (57.03)	162 (42.97)	0 (0.00)	0 (0.00)	377 (100)	1346	3.57	7
15	Measurement Framework is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	266 (70.56)	81 (21.49)	14 (3.71)	16 (4.24)	377 (100)	1351	3.58	6
16	Organizational communication is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic	361 (95.76%)	9 (2.39%)	4 (1.06%)	3 (0.80%)	377 (100)	1482	3.93	1

Result in table 4.3; shows that the mean values for item, 16, 17, 18, and 19 are greater than the criterion mean of 2.5.

Considering the research question one Table 4.3: Above, , the result shows in ranked order that Three hundred and sixty on (361) respondents which represent 95.76% of the population strongly agreed that Organizational communication is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 9 respondents which represent 2.39% of the population agreed, 4 respondents which represent 1.06% of the population disagreed while 3 respondents which represent 0.80% strongly agreed. Three hundred and sixty six (366) respondents which represent that 97.08% of the population strongly agreed that Top management commitment is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 0 respondents which represent 0% of the population agreed, 0 respondents which represent 0.00% of the population disagreed, while 11 respondents which represent 2.92% of the population strongly agreed. Three hundred and eighteen (318) respondents which represent 84.35% of the study population strongly agreed that Organizational Culture is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 46 respondents which represent 12.20% of the population agreed, 10 respondents which represent 2.65% of the population disagreed while 3 respondent which represent 0.80% of the population strongly disagreed. Also two hundred and sixty five (265) respondents representing 67.90% of the population strongly agreed that Management support is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 105 respondents which represent 27.85% of the population agreed, 7 respondents 1.86% of the population disagreed while 0 respondents which represent 0.00% of the population strongly disagreed. Two hundred and seventy five (275) respondents which represent that 72.94% of the population strongly agreed that Human resource management is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 86 respondents which represent 22.81% of the population agreed, 10 respondents which represent 2.65% of the population

disagreed, while 6 respondents which represent 1.59% of the population strongly agreed. Also two hundred and sixty six (266) respondents representing 70.56% of the population strongly agreed that Measurement Framework is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 81 respondents 21.49% of the population disagreed, 14 respondents 3.71% of the population agreed while 16 respondents which represent 4.24% of the population strongly disagreed. Two hundred fifteen (215) respondents representing 57.03% of the population strongly agreed that Financial Capability is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 122 respondents which represent 32.36% of the population agreed, 23 respondents 6.10% of the population disagreed while 17 respondents which represent 4.51% of the population strongly disagreed. Two hundred and fifty six (256) respondents which represent 67.90% of the population strongly agreed that Management leadership style is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, 87 respondents which represent 23.08% of the population disagreed, 17 respondents which represent 4.51% of the population disagreed while 17 respondents which represent 4.51% strongly agreed. Relatively the study shows that a great percentage of the respondents strongly agreed that these factors are the critical success factors (CSFs) in driving lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic.

Test of Hypotheses

This paper is guided by the following hypothesis

H_{01} : there is no significant relationship between lean accounting practices and performance of banks in Nigeria during the Pandemic.

Table, 4.4: Z-test analysis of the difference between the mean ratings of respondents on the relationship between lean accounting practices and performance of banks in Nigeria during the Pandemic

Variables	N	Df	Level of Significance	Cal Z- Value	Crit Z-value	Decision
Bank staff	51	58	0.05	6.17	± 1.96	Hoi is Rejected
Academics	7					

The calculated z value of 6.17 is greater than the tabulated z- value of 1.96; hence the null hypothesis is rejected. This implies that there is a significant relationship between lean accounting practices and performance of banks in Nigeria during the Pandemic

DISCUSSION OF FINDINGS

The study on covid-19 and its impact on lean accounting practices in Nigeria banking sector, considering the respondents positions shows that the covid-19 pandemic has a significant effect on the success of lean accounting in banks. The research position was anchored on the following;

1. The impact of the Covid-19 pandemic on the current status of lean application in Nigeria banking industry?

The research finding considering the responses from the respondents shows that the covid-19 pandemic has a significant on the current status of lean application in Nigeria banking sector, this position which is in consonant with the position of the contingency theory. Although Achanga et al. (2006) sees the leadership and management of an

organization, the financial capacity, organizational culture, skills and expertise are key factors that can ensure effective lean implementation in organization. But these according to the contingency theory are internal factors. The theory point out that management effectiveness dependent on internal and external factors and the ability for an organization to acclimatize with it environment is its critical success factor. The covid-19 pandemic due to its scares forced Nations government and organizations to come up with protocols that may help control. But the respondents' position to the research question elucidated the stand, of the contingency theory that organization management effectiveness or success is hinged on two critical factors, the internal and the vital significant external factors.

2. The barriers to the implementation of lean accounting in the Nigeria banking industry.

Sua´rez-Barraza and Ramis-Pujol (2010) pointed out CSFs such active leadership, clear resolves to improve, effective implementation of the best HRM practices among others as enablers during the implementation of lean-kaizen in a Mexican Public service organization. These which are in consonant with the position of the respondents that outside cost, and internet efficiency, that Poor human resource management which agendas promotion sentiments that help to put square peg in round holes, can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry. And also keeping to the traditional working culture, which shows lack of clear resolves to improve and active leadership can serve as a barriers to the implementation of lean accounting in the Nigeria banking industry.

3. What are the critical success factors (CSFs) of lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic?

The research finding position elucidated Kundu and Manoha (2018) position that CSFS for implementing lean in banking sector are:

- i. Management leadership
- ii. Management support
- iii. Top management commitment
- iv. Organizational Culture
- v. Organizational Communication
- vi. HRM
- vii. Financial Capability
- viii. Measurement Framework

Given that the respondents to a great extent strongly agreed that Organizational communication is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, Top management commitment is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, Organizational Culture is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic, and Management support is a key CSF for lean accounting implementation in the Nigeria banking industry during the Covid-19 pandemic among others are critical in implementing lean accounting in the banking sectors during the covid-19 pandemic.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The banking sector in Nigeria are not alien to the practice of lean accounting, the study also pointed out that the banking sector in Nigeria have done appreciably well in

implementing lean accounting practice, but factors like cost of implementation, inefficiency of internet providers, organizational culture and communication, human resource management have been exposed by the Covid-19 pandemic as barriers as well as CSFs to effective lean accounting implementation. Thus, the study concluded that the covid-19 pandemic has been a cog in the wheel of progress of lean accounting practice in the current Nigeria banking environment.

RECOMMENDATIONS

Based on the findings and conclusions of this study, it is strongly recommended that:

1. The banking sectors should ensure that HRM practice is at premium, with square pegs in square hole.
2. Traditional organizational culture should be tweaked a bit in some cases to accommodate possible external factors that may demand their efficiency above all pronounced odds.
3. Leadership style and organizational communication, that agenda organizational citizenship behavior should be adopted to earn employees sympathy and sentiment in cases of unforeseen circumstances.
4. Government policies should consider appreciable financial bailout for the banking sectors during situations beyond their control.
5. Banks should ensure that staff are up-to-date recent technology trends and demands by committing to training and development of their staff

REFERENCES

- Achanga, P., Shehab, E., Roy, R., & Nelder, G. (2006). Critical success factors for lean implementation within SMEs. *Journal of Manufacturing Technology Management*, 17(4), 460-471.
- Ajayi, O., (2020) COVID-19-Impact-on-the-Banking-and-Financial-Services-Sector.
- Antony, J., & Fergusson, C. (2004). Six Sigma in the software industry: results from a pilot study. *Managerial Auditing Journal*, 19(8), 1025-1032.
- Baret, Celner, O'Reilly and Shilling (2020) Deminguc-Kunt, Pedraza and Ruiz-Ortega (2020), Bhasin, S. (2011). Performance of organizations treating lean as an ideology. *Business Process Management Journal*, 17(6), 986-1011
- Boynton, A.C., & Zmud, R.W.(1984). An assessment of critical success factors. *Sloan Management Review*, Summer, 17-27
- Brosnahan, J. (2008). Unleash the power of lean accounting. *Journal of Accountancy*, 206(1), 60-66.
- Brotherton, B., & Shaw, J. (1996). Towards an identification and classification of critical success factors in UK hotels plc. *International Journal of Hospitality Management*, 15(2), 113-135.
- Carnes, K. & Hedin, S. (2005). Accounting for lean manufacturing: another missed opportunity? *Management Accounting Quarterly*, 7(1), 28-35.
- Coronado, R.B., & Antony, J. (2002). Critical success factors for the successful implementation of six sigma projects in organizations. *The TQM Magazine*, 14, 92-99.

- Crute, V., Ward, Y., Brown, S., & Graves, A. (2003). Implementing Lean in aerospace challenging the assumptions and understanding the challenges. *Technovation*, 23, 917-928.
- Czabke, J., Hansen, E.N., & Doolen, T.L. (2008). A multisite field study of lean thinking in US and German secondary wood products manufacturers. *Forest Products Journal*, 58(9), 77-85.
- Demirgüç-Kunt, Asli., Pedraza, A., and Ruiz, O., C., (2020) Banking Sector Performance During the COVID-19 Crisis: *Policy Research Working Paper 9363*
- Grove, A. L, Meredith, J.O., Anjeli, J., & Neailey, K. (2010). Lean implementation in primary care: health visiting services in National Health Service UK. *Quality and Safety in Health Care*, 19, 1-5.
- Hang, M. (2020). Preparing cities for epidemics: lessons from the COVID19 outbreak. *International Journal of Urban and Regional Research*. Retrieved February 24, 2020,
- Henderson, K., & Evans, J. (2000). Successful implementation of six sigma: benchmarking General Electric Company. *Benchmarking and International Journal*, 7(4), 260-281.
- Iwedi, M., Kocha, C. N., & Onakpono, A. E. (2020). Covid-19 pandemic, global trade wars and impact on the Nigeria Economy. *Academic Journal of Current Research*, 7(5), 71-82.
- Johnson, T. (2006). Lean accounting: to become lean, shed accounting. *Cost Management*, 20(1), 6-17
- Kettinger, W., & Grover, V. (1995). Toward a theory of business process change Management. *Journal of Management Information Systems*, 12(1), 1-30.
- Kundu, B. M. Manohar, Poppendieck, M., & Poppendieck, T. (2003). Lean Software Development: An Agile toolkit. Addison Wesley, Boston.
- Kundu, G., and Manoha, M., (2018) Critical success factors for implementing lean practices in it support services. *International Journal for Quality research UDK - 378.014.3 (497.11)*
- Maskell, B. & Baggaley, B. (2003). Practical lean accounting: a proven system for measuring and managing the lean enterprise. New York: Productivity Press.
- Maskell, B. & Kennedy, F. (2007). Why do we need lean accounting and how does it work? *The Journal of Corporate Accounting & Finance*, March/April, 59-73.
- Maskell, B. (2000). Lean accounting for lean manufacturers. *Manufacturing Engineering*, 125(6), 46-53.
- Maskell, B. (2006). Solving the standard cost problem. *Cost Management*, 20(1), 27-35.
- Maskell, B. and Baggaley, B. (2006). Lean accounting: what's it all about? *Target Magazine*, 1, 35-43.
- Mathew, I., G. (2020). Lean accounting and the banking sector, during the pandemic. *Journal of Money, Credit and Banking*, 46(1), 93-121.
- Mefford, R.N. (2009). Increasing productivity in global firms: The CEO challenge. *Journal of International Management*, 5(3), 262-272.

- Motwani, J. (2003). A business process change framework for examining lean manufacturing: a case study. *Industrial Management & Data Systems*, 103(5), 339-346.
- Oyeneyin and Kuyoro, (2020). Ajayi (2020) Oyeneyin and Kuyoro (2020) Osagie, Maijamaa & John (2020), Oyeneyin, E. K., and Kuyoro, M., (2020) Nigeria's banking sector: Thriving in the face of crisis bold ideas to help the industry build resilience and drive long-term sustainability.
- Pedersen, E.R.J., & Huniche, M. (2011). Determinants of lean success and failure in the Danish public sector: A negotiated order perspective. *International Journal of Public Sector Management*, 24(5), 403-420.
- Ranjan, J. , & Bhatnagar, V. (2008). Critical success factors for implementing CRM using data mining. *Journal of Knowledge Management Practice*, 9, 18-25.
- Ren, X. (2020). The quarantine of a megacity: China's struggle over the coronavirus epidemic. *International Journal of Urban and Regional Research*.
- Rockart, J.F. (1979). Chief executives define their own data needs. *Harvard Business Review*. 57, 81-93.
- Scherrer-Rathje, M., Boyle, T.A., & Deflorin, P. (2009). Lean, take two! Reflections from the second attempt at the Lean implementation. *Business Horizons*, available at: www.sciencedirect.com, 52(1), 79-88.
- Sim, K. L., & Rogers, J. W. (2009). Implementing lean production systems: Barriers to Change. *Management Research News*, 32(1), 37-49.
- Sua' rez-Barraza, M.F., & Ramis-Pujol, J. (2010). Implementation of Lean-Kaizen in the human resource service process - a case study in a Mexican public service organization. *Journal of Manufacturing Technology Management*, 21(3), 388-410.
- Tesfaye, B. L. (2020). The impact of Covid-19 on the Ethiopian private banking system. *Published PhD thesis of University of South Africa*.
- Umble, E.J., Haft, R.R. & Umble, M.M. (2003). Enterprise resource planning: Implementation procedures and critical success factors. *European Journal of Operational Research*, 146, 241-257.
- Wakode, S. (2020). Efficacious scrutinizing of COVID-19 impact on banking using credit risk metrics, *International Journal of finance and Banking Research*, 6(3), 51-56
- World Health Organization. (2020). WHO Coronavirus Disease (Covid 19) Dashboard. Retrieved 2020, from COVID- 19.WHO.IMT/region/amro/country/US.