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Lean Accounting and Lean Entrepreneurship

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ABSTRACT

This study examined the relationship between lean accounting and lean entrepreneurship in Nigeria. The study adopted a quasi-experimental design and cross-sectional design. Data were generated by quantitative and qualitative method. The employed used purposive sampling techniques and non-proportionate stratified random sampling techniques. A total population of 400, a sample size estimate of 200 was determined using Krejcie and Morgan Table. Also, 200 copies of the questionnaire were distributed to the accessible entrepreneurs, while 189 copies were completed and retrieved. The instruments were validated with a reliability above 0.7 Co-efficient, using Parallel Method to determine the reliability. Two research questions and two hypotheses were raised which were tested with regression analysis and KMO/Bartlett's test for the sampling adequacy for data appropriateness and sphericity respectively via SPSS 25 version. From the findings, the concept of lean accounting positively impacts business creation. In conclusion, lean improvement and lean thinking have a significant influence on the business creation of firms. Based on the findings and conclusion, this study contributes to the knowledge that business creation could be achieved by practicing lean entrepreneurship on value creation, value capture and wealth creation. It could be recommended that lean improvement and lean thinking should be practiced without compromise and bias. The top management of enterprise should engage services of professionals in lean entrepreneurship to train staff and intrapreneurs on business creation. Business creation should be paramount mindset of the stakeholders of organizations.

INTRODUCTION

With the growth of artificial intelligence, robotics, automation, and agility in the rapid change in organizations globally, there is a need to harmonize new trends of concept, strategies and tactics to cope with speed, cutting edge and timeliness to facilitate productivity. In other to adapt to the industrialized changes in the business world and climate 'Lean Entrepreneurship' needs to be adopted (Ovharhe, 2022b).

Lean entrepreneurship is instrumentation processes that capture the value streaming process with application of risk culture, innovation-skills, creativity, waste elimination, and logistics management which fine-tune strategies to focus on customer demand that facilitates high return on profitability and wealth in the organization (Ovharhe, Woko & Ezeocha, 2021). This actualized the fact the lean entrepreneurship bend on utilizing risk culture capability and ability of the entrepreneur's competency to managed the risk assessment, risk tolerance, risk dashboard, risk metric, appetite, risk alert and risk awareness toward accomplishing high return on asset, return on investment and return on equity in the organization (Chibuike & Ovharhe, 2022). The waste elimination process is credible vital instrument in the lean entrepreneurship. Most entrepreneurs lack the competency to eliminate waste on timeliness, speed, material, resources, and equipment with lot more (Ovharhe & Woko, 2022). The waste elimination process enhances logistics control in fleet management, lead time, and demurrage. This always support waste

elimination during supply chain management process in deterioration, infringement, adulteration, conceal and apparent damages, obsolescence, larceny and pilferage (Ahunanya, Ovharhe, Eminike & Otto, 2022a).

Lean entrepreneurship benefits could not be over-emphasized in the modern-day industrial trend that facilitates agile and agility organization rapid growth and development in changes to meet invention of future customer demand (Ovharhe, Okolo, Woko & Igboke, 2022). The front and bottom line of lean entrepreneurship is boiled down on anticipation and satisfaction of client and customer demands in the short-term and long-term, also in the face on motivating employee (intrapreneurs) satisfaction (Ahunanya, Ovharhe, Eminike & Otto, 2022b). More so, lean entrepreneurship is the instrument that drives innovation skills of the short-term and long-term targeted goals (Chibuike, Ovharhe & Abada, 2022). These include process innovation, market innovation, competitive innovation, product innovation, technology innovation, administrative innovation and service innovation. The spirit of innovation cannot be rule out in the transformative process of enterprise growth and development. With innovation in any enterprise there will be no transformation of product and service, whereby the absence of these might leads to the lifelessness of the enterprise (Ovharhe, 2022a).

Moreover, creativity in any enterprise circles around the idea, philosophy, networking and brain storming are instrument which cannot be ignored in any process

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of growth, development and transformation in the organization meaningfulness. This is the brain box, organizational memory, information storage and knowledge bank of the sustainability, survival and success of the enterprise. For entrepreneurs to activate the process of lean entrepreneurship dynamics, lean accounting must be paramount.

Lean accounting is streamlining accounting processes within an enterprise to maximize productivity, service quality, customer satisfaction, inventory control and profitability (Teixeira, Santos, Akkari & Munhoz, 2019). Lean practices are not related to reporting requirements, tax evasion and compliance, but rather to internal processes that are improving the corporate accounting process. Lean accounting is the management accounting system for a lean enterprise in the micro and macro setting. It provides the relevant financial and non-financial information for lean policy and decision making (Rehman, Malik, Baig, Rehman & Hashim, 2021).

Lean accounting can also be express as the auxiliary function of value stream and continuous improvement on lean entrepreneurship process in the micro and macro enterprise. The prospect is to constitute maximum lean enterprise efficiency by implementing just in time inventory process and careful consideration of quality delivery methods in the enterprise (Ovharhe *et al.*, 2021).

Lean accounting allows enterprise to provide relevant financial report according to their value streams rather than per unit costing. Traditional accounting does not aid lean enterprise accurately reports on the effectiveness and efficiency of lean process (Rehman *et al.*, 2021). Simultaneously, lean accounting allows micro enterprise or macro enterprise to lean process report. This facilitates perfect correlation between lean accounting and lean entrepreneurship in the enterprise. Hence, streaming harmonization of lean accounting and lean entrepreneurship in Nigeria is the focus of this study.

Purpose of the Study

This study investigates the emergence of lean accounting and lean entrepreneurship in Nigeria micro firms. However, the following specific objectives are:

1. To investigate how the lean thinking influence business creation
2. To investigate how the lean improvement influence business creation.

Hypotheses

The hypotheses were formulated in null form at 0.05 level of significance as

H01:Lean thinking does not significantly influence business creation

H02:Lean improvement does not significantly influence business creation.

LITERATURE REVIEW

Conceptual Foundation

The lean initiatives concept drawn from Toyota, aids in value

stream costing, lean thinking, lean culture, lean production and lean improvement. The essence of lean is to save cost, manage time, improved on learning, increase investment and stimulate growth with patronage. This is achieved by minimizing cost, eliminating waste, pursuing zero degree defect and errors (Amusawi, Almagtome & Shaker, 2019).

The lean drives to achieving value chain increase in productivity by maximizing customer patronage, customer perception and customer value on flexible changes that stimulate satisfaction. The lean processes re-structure decision making toward product sustainability and customer satisfaction. Considering the work lean entrepreneurship gives room for innovative, creative, brainstorming and lean thinking that opens new channel of investment and growth that is sustainable. The sustainability aspect of lean creates hope and trust for the stakeholders' future in the enterprise, society and the customer value (Osman, Mamat & Ali, 2020). The lean business creation increases the return on equity (ROE), return on asset (ROA), return on investment (ROI), high internal rate of return (IRR) and return on capital employed (ROCE).

Lean accounting in an enterprise assist entrepreneur to guide and utilized their knowledge effectiveness to be result oriented in both short and long-term. Lean accounting guides entrepreneur on cost-benefit analysis that will justify the level of overhead and prime costin alignment with realization of increased profit after tax (Ovharhe, Woko & Ogolo, 2021; Almashkor, 2021). Lean accounting assist entrepreneur in order processing, economic order quantity, lead time and demurrage. This is done by detecting error, minimizing waste, time management, just in time application and value stream costing. Lean influence on sustainability stimulates action towards customer requisition order, delivery time and strengthens the production system. Lean enable entrepreneur to control inventory cost (Ovharhe, Ahunanya & Woko, 2022). The problem a lot of enterprise is to manage their inventory cost daily, weekly, monthly and per annum. Lean creates continuous improvement on enterprise entrepreneurship process. This could be perceived as lean entrepreneurship (Ovharhe & Igbokwe, 2021).

Lean entrepreneurship guarantee speeds, swift take off time, expediting and follow-up, prompt inspection and monitoring of the enterprise process (Neamaha, Sabbar & Abdulridha, 2020). Streamlining the synchronization of lean accounting and business creation in Nigeria is to focus on its alertness and shock absorber in the micro firms. In the light of the above, this study would focus on the current pitfalls and catastrophe poses threat during the pandemic.

Business Creation

The concept of business creation is position on Lean Entrepreneurship. Business creation is centre on three key words;Value creation, Value capture and Wealth creation (Ovharhe, 2023).

Value Creation

The benefit and cost analysis is very important in value creation, in the nutshell the profitability index must be put to play when considering factors responsible for value creation. Value creation is identifying specific factors that would attract customer patronage by continuous improvement on product and services. Value creation deems on gaining customer focus and attention towards retainership on the satisfaction that leads to the frequency of patronage, volume of patronage and time of patronage (Ovharhe & Igbokwe, 2021). The bottom-line is creating satisfactory value for your customer to gain the trust and relationship on continuous patronage while maximizing profitability.

For example, when you go to a bread shop, you may want Cheese, Butter, Margarine, Hot Dog to blend with it to yield excess satisfaction. During patronage, it will be observed that the customer develop upward spiral of awe, joy and happiness that leads to an increase on return on investment (ROI), return on asset (ROA) and Return on Equity (ROE). Value creation is anchor on customer convenience, customer feedback, customer satisfaction and customer care (Ovharhe, 2023). Value creation is circles on creating value for your client/customers satisfaction. The more the value, the better the care and satisfaction, the better the profitability. The cycles is about investing in something valuable to the customer and benefiting something more valuable in return.

Value Capture

Value capture is nurtured to focus on specific and directional aspects of the product and services in the enterprise that is relevant to customer needs and wants which is tailed to maximum satisfaction. Vale capture is a specific aspect of an enterprise product or services that trigger happiness or atheism for client/customer which is deem to be valuable to their specific needs or taste.

For example, if a product such as the 'color' is the selling point that might lead to customer increase in patronage of 10%, the value capturing from the product has added to the revenue and profit. The enterprise needs to focus on capturing rejuvenated strategies and tactics on the coloring at all time. It might be any value that is capture; the enterprise must know that value capture is the strength, sales point and competitive advantage of the enterprise.

Wealth Creation

Wealth creation is the process of investing in various enterprises Portfolio that aims to achieve the short-term and long-term corporate goals. It is important to note that you can maximize wealth and minimizing profit. This means wealth maximization is different from profit maximization. Wealth maximization focuses on increasing your net present value, worth or value, moreover profit maximization is about increasing your total revenue over the total cost. Wealth creation drives towards achieving benefits of employees, shareholders,

government, economic, asset and technology. It is broad than just focusing on profit. Wealth creation has in mind the market competition, diversification, market extension, market development and product development.

Theoretical Underpinning

Value Stream Costing Approach

The implementation of value stream costing system starts with the formation of the very essence of lean accounting, that is, essential value streams. The costs in a lean accounting system are accumulated by the streams and not the producing departments (Bellisario & Pavlov, 2018). Generally, value streams are specified as one of the groups such as: order execution, demand creation, or product development. Value stream costing is hailed by many researchers and practitioners as the most suitable system for cost accumulation and financial reporting in lean philosophy. This system is characterized by collecting costs in terms of value stream costs, and by the significant elimination of overhead allocation. It provides information that is easily understood and recognized by every member of the value stream team (Büyükipekci, 2019).

This translates into informed decisions, encouragement to affect lean initiatives wherever needed within the value stream, and unambiguous accounting reports (Čečević & Đorđević, 2020). The costing reports are prepared weekly. This provides for an excellent cost control mechanism, because the value stream manager can access the information and the appropriate action taken while it is still relevant and recent. In a value-stream-based costing standards for materials, labor and overheads are not set, rather costs are accumulated in actuals (DeBusk & DeBusk, 2012). Because of simplified transactions, the need to identify costs by job is not required, resulting in simplified reporting for labor. It is the value-stream costing only, as an accounting system, which could achieve all of the goals of a lean system (Rosa, Cristina, Machado, & João, 2013). In value stream costing, labor costs and materials tracking transactions are eliminated. Also, with a pull system in operation, there is no need to have documents that track production transactions-effective visual management methods do not require these documents. All of this, along with the corresponding system, saves the time and investment that can be used to pursue further lean initiatives(Hilker, 2011). JIT

Six Sigma Approach

Bill Smith, while working for Motorola in 1986 promulgated the Six Sigma (6σ) that cultivates model for improving an existing business enterprise ad creating new enterprise product and process design. The model aids to achieve zero defect and error at 99.99966% (Khaw, Zailani, Iranmanesh & Heidari, 2019; Patel & Patel, 2021). The six sigma is an entrepreneurial technique that strives to facilitate enterprise processes and product continuous improvement for better status by avoiding and reducing defect and error.

Six-Sigma (6σ) is an approach use for process continuous improvement in an enterprise. While working at Motorola in 1986, Bill Smith an American engineer introduced the six-sigma. Six-sigma phenomena assume 99.99966% of business creation as free of defects and error (Khaw, Zailani, Iranmanesh & Heidari, 2019; Patel & Patel, 2021). Six-Sigma strategies seek to improve business creation by sorting out bottlenecks responsible for causes of defects and errors that reduce the specifications and standard of the transformation process into predetermine goods and services in the enterprise. The viability of the six-sigma is towards yielding effective customer satisfaction and product sustainability which is favorable to the enterprise (Shafiq & Soratana, 2020; Patel & Patel, 2021). This is done by statistical analytical method of considering cost-benefit analysis from the empirical and statistical tool employed. The process aid lean thinking, lean improvement and lean entrepreneurship (or business creation) towards customer satisfaction by not endangering the environment and livelihood of the client (Geoffrey, 2017). The process also confirm with the five pillars for product survival sustainability; entrepreneur, entrepreneurial, entrepreneurship, entrepreneurial eco-system and enterprise (Chibuike & Ovharhe, 2021). Enterprise that adopted and integrate lean entrepreneurship should operate with the six sigma in the long term and short term consideration so the entire process should be beneficial towards sustainability. Also, the business creation process should produce long-term defect levels below 3.4 defects per million opportunities (DPMO). The 3.4 dpmo is based on a “shift” of ± 1.5 sigma postulated by Mikel Harry. The statistical metric is based on the tolerance in the height of a stack of discs (Shafiq&Soratana, 2020); (Osman,Nordin&Rahman, 2020); (Patel &Patel, 2021). For the purpose of this research, Six Sigma asserts that

1. Continuous improvement strategies seek to accomplish viable and forecasting results oriented processes that facilitate business creation.
 2. Enterprise processes should have features that can be identified, defined, measured, analyzed, improved, and controlled.
 3. Promoting enterprise and product sustainability with the involvement of lean entrepreneurship.
 4. Fine-tuning demand that boost the increase of return on investment and capital employed
 5. Synchronizing management involvement and line operations to yield credible results
 6. Participating in technical dashboard framework of lean policy and lean thinking with proficiency of sustainability
- Six Sigma's drives to continuously improvement of all processes in an enterprise by application of lean culture and lean thinking not bonded to the 3.4 DPMO level (Patel & Patel, 2021). Enterprise fine-tune and regular convenient degree of lean sigma to improve and monitor the possible benefit of business creation. Hence, the lean entrepreneurship should determine the drive for area of specialty and application of the lean six sigma (LSS). In accounting, synchronizing the LSS on cashier, budgeting, and bursary are key area of advantage of lean accounting and lean entrepreneurship. The processes could also involve payment of local purchase order, vouchers, payroll, order processing and salaries. For the business creation, the vital key of LSS is integrated with the DMAIC which represents; i. Define, ii. Measure, iii. Analyze, iv. Improve, v. Control methodology. Synchronizing the DMAIC correlates with LSS tactics provides credible means to categorically analyze the processes of the value creation, value capture and wealth creation in an enterprise (Patel & Patel, 2021). The backbone of LSS is that it employed quantitative

Conceptual Framework

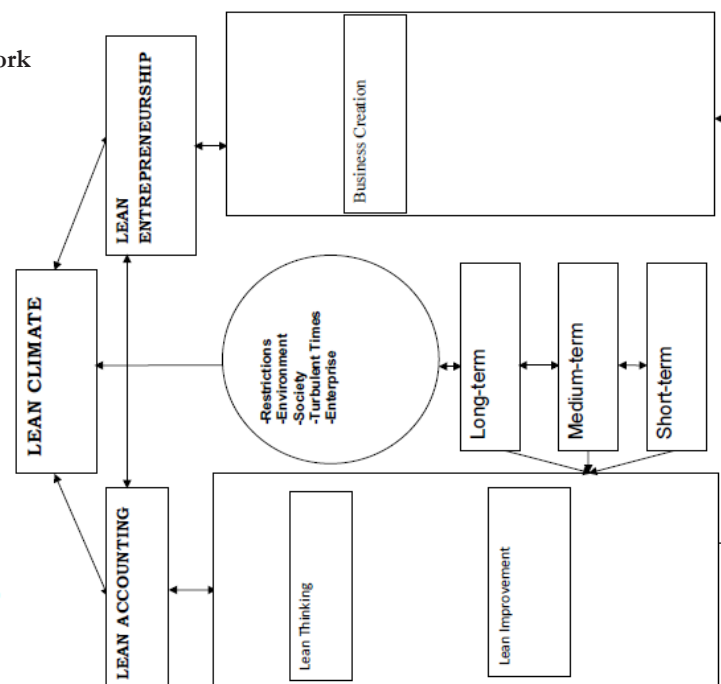


Figure 1: Analytical Framework of Lean Accounting and Lean Entrepreneurship

techniques to identify key points of impact (KPI). When the KPI is recognized and streamline, it can be applicable as possible remedies to address business creation problems. A framework and dashboard need to be structure to control and manage this scenario. Also, this could strengthen and synchronize the five pillars of survival and sustainability (Chibuike & Ovharhe, 2022).

Lean Accounting and Business Creation

Business creation and survival pillars in today's world are vital tools for triumphant victory for the life cycle of any enterprise (Chibuike & Ovharhe, 2022). According to Ovharhe *et al.*, (2021) the sustainability and survival of any enterprise depends on its ability to survive the enterprise environment in the short-term and long-term. The enterprise environment is very reckless, troublesome, dynamic and competitive in this turbulence time especially with the ongoing unpleasant conditions (Ovharhe & Chukwuemeka, 2023). Hence, enterprise has to innovate, create and develop product to meet the needs of client for sustainability in the market, because customer perception, customer loyalty, customer taste and customer value are more dynamic in this times than ever. Forecasting the market trend base on the competitive parity and riskiness in the enterprise system is so cumbersome. Predicting the future on the basis of the firm vision and mission is not hundred percent guarantees. Product sustainability metric needs to be integrated as the course line of action. An important metric concept to ascertain the line action is to invoke the lean accounting alertness, lean enterprises and lean entrepreneurship. Lean concept approach makes important contribution to innovate, fine-tune and transform enterprise.

Lean accounting professionals should provide support framework and metric that are comprehensive, precise, consistent, time consideration and confident information that will transform the enterprise (Soliman, 2020). It stimulates enterprise in lean policy and decision making towards increasing productivity, profitability, market share, patronage and customer satisfaction. The augmentation of finance control can eliminate waste from the accounting process with lean thinking and lean culture implementation.

The lean accounting provides room for the lean culture to enhance continuous improvement and still following accounting rules and ethical standard. Constituted lean accounting provides trusted and confident information for investor to take risk on investment. The accounting department should conduct a thorough metric and assessment on the cost-benefit analysis before the adoption and full implementation of the lean practicing process (Osman *et al.*, 2020). Also, lean thinking clears doubt in ambiguity on traditional accounting method from sales, pricing, order requisition, economic order quantity and inventory control.

METHODOLOGY

Enterprises are always facing threat and reckless

circumstances in the business world. But every firm needs competitive advantage to cope with such threats to stabilized enterprise stability and healthiness. The emergency response adopted in the study is focus on lean accounting concepts and business innovation in Nigeria. The quasi-experiment and cross sectional survey method was used to design the framework. Attention was drawn to 400 firms own by entrepreneurs that deal on product development and services in the country. From the four hundred firms were selected from the six geographical regions randomly. The sample size of 200 entrepreneur headship was unavoidably chosen. The Krejcie and Morgan approach was adopted at 5% Alpha level. Purposive sampling techniques and non-proportionate stratified random sampling techniques were used to select the appropriate respondents. A nine self-frame instrument was constructed for the study to generate data from the respondent using 4-point likert scale ranges from; most satisfactory (4), moderate satisfactory (3) rare satisfactory (2) and none satisfactory (1). The instrument was validated and the internal consistency was determined by using Parallel method for the reliability, which was analyzed with the SPSS 25 version statistical tool for analysis with Spearman Brown Prophecy Formula. The regression analysis was edge to analysis the two hypotheses with Statistical Package for Social Science (SPSS) version IBM 25.

Although, 200 copies of questionnaire were distributed to the accessible entrepreneurs in the micro firms, while 189 copies were completed and retrieved. The nature of the sample variances from group relationship was ascertain by the sphericity of Bartlett's test to show their equality and suitability for the study was adopted that confirm the data appropriateness among the predictor and criterion variable. This further revealed the transformation nature of variables to a convenient set of new component which do not have correlation which each other. Moreover, the sphericity of Bartlett's Test was determined by the variance of set of component that are extremely significant at $p=0.000$

RESULTS AND DISCUSSION

To conduct factor analysis for the variability of the sample adequacy, the KMO test was introduced being supported with Bartlett's test to determine the sphericity of the threshold sample resultant output confirmation. The result of the KMO (Kaiser-Meyer-Olkin) measure of Lean thinking was 0.907 of sampling adequacy which determinant threshold value is lower than 0.5450900. While Lean improvement was 0.672 of sampling adequacy which determinant threshold value was 0.2847291. Nevertheless the criterion variable proxy of business creation was 0.840 of its sampling adequacy and determinant threshold value of 0.4651321 revealed a significance of appropriateness of data. This support the instrument items expressed in factor analysis adequacy and sufficiency to conduct this study.

The KMO sampling size is greater than 60% (0.6) and

less than 0.05 alpha level of significance. These shows the null hypotheses of the variables were rejected and the alternative hypotheses of the variable should be accepted. Since all the proxies exhibit significance value at 0.000, that further revealed that the predictor variable positively influence the criterion variable, in the nutshell;

H01: There is significant influence of lean thinking on business creation in the firms

H02: There is significant influence of lean improvement on business creation in the firms

Therefore, micro firms' suitability of the proxies shows that the variables viability and eligibility for subsequent tests to prove the authenticity of the KMO of sampling adequacy test and Barlett's test of sphericity result to be adopted.

Hypothetical Parametric Checks

To conduct the parametric test of the hypotheses, the regression analysis was employed.

Research Question One

How does lean thinking influence business creation in the firms?

Test of Hypothesis One

H01: There is no significant influence of lean thinking on business creation of micro enterprise.

Regression Coefficient Model

Unlike the first model, it can be observed that lean thinking and lean improvement shows a positive influence

Table 1: Multiple Regression Coefficient and Significance

Coefficients					
Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	1.002E-013	.011	.000	1.000
	Lean Thinking	.682	.047	14.632	.000
	Lean Improvement	.469	.036	13.085	.000
Dependent Variable: Business creation					

Source: Author's Field Survey (2023)- SPSS version 25 output

on the effectiveness of business creation operations. This shows that for every unit increase in lean thinking and lean improvement, business creation will increase per units with respectively variable. Although explanatory variable exhibit positive coefficient with the measure of the criterion variable, which shows that a one unit increase will lead to a 0.682 and 0.469 unit respectively in the effectiveness of business creation. This therefore shows in terms of flexibility, aggressive Lean thinking and lean improvement might ensure the effectiveness of the firms, although this goes against immediate theoretical literatures but shows a peculiar behavior observable in the Nigerian firms. While the observations from the explanatory variable tallies with theoretical underpinnings that predicts higher firm effectiveness with better flexibility in operation in value creation, value capture and wealth creation.

CONCLUSION

The study reveals that lean accounting is a major means of viability and authenticity for lean entrepreneurship. Two hypotheses were raised that revealed the explanatory variables influence the responses variable. This implies that there were positive significant influences of lean improvement on business creation, while lean-thinking influence business creation.

This concludes that the predictor variable (lean accounting concepts) has positive influence on the criterion variable (lean entrepreneurship).

RECOMMENDATIONS

The following recommendations were made from the

findings.

1. Lean improvement and lean thinking should be practice without compromise and bias.
2. The top management of enterprise should engage services of professionals in lean entrepreneurship to train staff and intrapreneurs on business creation.
3. Business creation should be paramount mindset of the stakeholders of organizations.

Recommendation for Further Studies

Itemized below are further recommended studies.

1. Lean entrepreneurship and business creation in micro enterprise firms
2. Lean culture and business creation in the macro enterprise

Contribution to Scholarship

The contributions of knowledge in the study are comprehensively:

- Value creation, value capture and wealth creation of business creation provides narrow escape for entrepreneurs in the micro/macro enterprise to maintain continuous improvement.
- The practices and process of lean improvement, lean culture and lean thinking are major strategy to blink and glow lean entrepreneurship in the micro/macro firms in Nigeria.
- Business creation could be achieved by practicing lean entrepreneurship on value creation, value capture and wealth creation

REFERENCES

- Ahmad, N., Mahmood, A., Ariza-Montes, A., & Han, H. (2021). Sustainable businesses speak to the heart of consumers : Looking at innovation with a marketing lens to reap banking consumers' loyalty. *Innovation*, 13(7). <https://doi.org/10.3390/su13073828>
- Ahunanya, V, Ovharhe, O. H., Emenike, C. G., & Otto, G. (2022). Consignment inventory system and entrepreneurial success among micro warehousing firms. *International Journal of Social Science & Management Research*, 8(5), 18-28. <https://doi.org/10.56201/ijssmr.v8.no5.2022.pg18.28>
- Ahunanya, V., Ovharhe, O. H., Emenike, C. G., & Otto, G. (2022). Consignment inventory system and obsolescence management in the drilling fluid firms in Nigeria. *International Journal of Social Science & Management Research*, 8(5), 1-27. <https://doi.org/10.56201/ijssmr.v8.no5.2022.pg1.17>
- Almashkor, I.A.S. (2021). The effect of integration between throughput accounting and lean accounting on cost reduction (applied study in Saudi industrial sector). *Journal of Management Information and Decision Sciences*, 24(1), 1-14.
- Almusawi, E., Almagtome, A., & Shaker, A.S. (2019). Impact of lean accounting information on the financial performance of the healthcare institutions: A Case Study. *Journal of Engineering and Applied Sciences*, 14(2), 589-599. <https://doi.org/10.36478/jeasci.2019.589.599>
- Chibuike, C. U., & Ovharhe, O. H. (2022). Emergence of risk culture and lean culture in Nigeria during pandemic and crisis era: Using confirmatory analysis. *International Journal of Multidisciplinary Research and Growth Evaluation*, 3(1), 263-271. <https://doi.org/10.54660/anfo.2021.3.1.14>
- Chibuike, C. U., Ovharhe, O. H., & Abada, A. M. (2022). Synchronization of lean accounting alert and entrepreneurial sustainability among micro firms in Nigeria during pandemic and catastrophe: Using confirmatory factor analysis. *The International Journal of Business & Management*, 10(1), 1-13. <https://doi.org/10.54660/anfo.2021.2.6.15>
- Geoffrey, J. (2017). Profits and innovation. A history of green entrepreneurship. Oxford University Press. ISBN 978-019-870697-7.
- Kemper, J., Hall, C., & Ballantine, P. (2019). Marketing and innovation: Business as usual or changing worldviews? *Innovation*, 11(3). <https://doi.org/10.3390/su11030780>
- Khaw, S. M., Zailani, S., Iranmanesh, M., & Heidari, S. (2019). Do lean manufacturing practices have negative impact on jobsatisfaction. *International Journal of Lean Six Sigma*, 10(1), 257-274. <https://doi.org/10.1108/IJLSS-11-2016-0072>
- Lathabhavan, R. (2021). Sustainable business practices and challenges in Asia: a systematic review. *International Journal of Organizational Analysis*, ahead-of-print(ahead-of-print).
- Naseem , S., fu, G. I., Mohsin, M., Rehman, M. Z.U., & Baig, S. A. (2018). Volatility of Pakistan stock market: A comparison of Garch type models with five distribution. *Amazonia Investigation*, 7(17), 486-504. <http://www.udla.edu.co/revistas/index.php/amazonia>.
- Naseem, S, Mohsin, M, Hui,W, Liyan, G., & Penglai. K. (2021). The investor psychology and stock market behavior during the initial era of Covid-19: A Study of China, Japan, and the United States. *Frontier Psychology*, <https://doi.org/10.3389/fpsyg.2021.626934>
- Neamaha, M, F. Sabbar, A., & Abdulridha H. (2020). Lean accounting techniques in the e-commerce and its impact on efficiency of performance: An empirical study in the branches of insurance companies. *International Journal of Innovation, Creativity and Change*, 14(7), 1388-1389.
- Osman, A. A., Mamat, R., & Ali, M. (2020). Lean transformational innovation models: A critical review. *Advances in Business Research International Journal*, 6(2), 1-18. <https://doi.org/10.24191/abrij.v6i2.1058>
- Osman, A. A., Nordin, N., & Rahman, M.F. (2020). Measuring lean culture: Designing a Research Instrument. *Journal of Modern Manufacturing Systems and Technology (JMMST)*, 5(1), 7-17. <https://doi.org/10.15282/jmmst.v5i1.5821>
- Ovharhe, O. H. (2022). Sustainable development goals: Multicollinearity between therapeutic entrepreneurship and rehabilitation therapy among African nations. *International Journal of Small Business and Entrepreneurship Research*, 10(3), 1-59. <https://doi.org/10.37745/ijbser.2013/vol10n3157>
- Ovharhe, O. H. (2023). Light entrepreneurship and customer funded business: Simplified. Moldova: Lambert Academic Publishing.
- Ovharhe, O. H., Woko, E. B., & Ezeocha, V. U. (2021). Remote working: Entrepreneurial risk and entrepreneurial survival in the micro firms in Niger-Delta, Nigeria (COVID-19 Pandemic Prospects). *International Journal of Small Business and Entrepreneurship Research*, 9(4), 11-28. <https://doi.org/10.37745/ijbser.2013/vol9n11-28>
- Ovharhe, O. H., & Chukwuemeka, S. P. (2023). Sustainable Development Goals: Therapeutic Entrepreneurship and Mental Health Conditions. *British Journal of Multidisciplinary and Advanced Studies*, 4(1), 81–119. <https://doi.org/10.37745/bjmas.2022.0107>
- Ovharhe, O. H., & Igbokwe, E. L. (2021). Analytical intervention of remote working correlates on risk culture and entrepreneurial adaptability in South-South Geopolitical Zone, Nigeria: Covid-19 Perspective. *Journal of Education and Practice*, IISTE, 12(3), 34-44. <https://doi.org/10.7176/JEP/12-34-05>
- Ovharhe, O. H., & Okolo, B. S. (2022). Sustainable development goals: Lean entrepreneurship and Green entrepreneurship. *International Journal of Research and Scientific Innovation*, 9(10), 59-71.
- Ovharhe, O. H., Ahunanya, V., Woko, E. B. (2022).

- Consignment inventory system and entrepreneurial survival in Lagos State. *International Journal of Social Science & Management Research*, 8(5), 29-42. <https://doi.org/10.56201/ijssmr.v8.no5.2022.pg29.42>
- Ovharhe, O. H., Okolo, B. S., Woko, E. B., Igbokwe, L. (2022). Light entrepreneurship and customer funded business model. *International Journal of Social Sciences and Management Research*, 8(5), 87-106. <https://doi.org/10.56201/ijssmr.v8.no5.2022.pg87.106>
- Ovharhe, O. H., Woko, E. B., & Ezeocha, V. U. (2021). Remote working: Entrepreneurial risk and entrepreneurial survival in the micro firms in Niger-Delta, Nigeria (Covid-19 Pandemic Prospects). *International Journal of Small Business and Entrepreneurship Research (IJSBER)*, 9(4), 11-28. <https://www.eajournals.org/https://doi.org/10.37745/ejsber.2013>
- Ovharhe, O. H., Woko, E. B., & Ogolo, T. M. (2021). Competitive risk strategy and entrepreneurial satisfaction among fast moving consuming goods in Nigeria during covid-19 pandemic using confirmatory factor analysis. *International Journal of Multidisciplinary Research and Growth Evaluation*, 2(6), 267-272. <https://doi.org/10.54660/anfo.2021.3.1.14>
- Ovharhe, O. H. (2022). Sustainable development goals: Therapeutic entrepreneurship and entrepreneurship Injelititis among West Africa Countries. *World Journal of Entrepreneurial Development Studies (WJEDS)* 7(1), 87-113. <https://doi.org/10.56201/wjeds.v7.no1.2022.pg87.113>
- Patel, A.S., & Patel, K.M. (2021). Critical review of literature on Lean Six Sigma methodology. *International Journal of Lean Six Sigma*, 12(3), 627-674. <https://doi.org/10.1108/IJLSS-04-2020-0043>
- Rehman, M., Malik, E., Baig, S., Rehman, H., & Hashim, M. (2021). Lean accounting awareness: A qualitative study on lean accounting perception. *International Journal of Management (IJM)*, 12(6), 28-42. <https://doi.org/10.34218/IJM.12.6.2021.002>
- Shafiq, M., & Soratana, K. (2020). Lean readiness assessment model—a tool for Humanitarian Organizations' social and economic innovation. *Journal of Humanitarian Logistics and Supply Chain Management*, 10(2), 77-99. <https://doi.org/10.1108/JHLSCM-01-2019-0002>
- Soliman, M. (2020). Lean accounting and value stream costing for more efficient business processes. *NovičevićČečević, Đorđević /Economic Themes*, 58(4), 573-592. <https://doi.org/10.2478/ethemes-2020-0032>
- Soliman, M. (2020). Lean Accounting VS Financial Management: Awareness and Overview (February 9, 2020). <http://dx.doi.org/10.2139/ssrn.3534862>
- Sze, J. (2018). Innovation: Approaches to environmental justice and social power. New York University Press.
- Teixeira, H.F., Santos, N. M. B. F., Akkari, A.C.S., & Munhoz, I.P. (2019). Lean accounting: Economic-financial performance of companies with lean manufacturing. *International Journal of Advanced Engineering Research and Science*, 6(5), 444-451. <https://doi.org/10.22161/ijaers.6.5.59>