



Lean Entrepreneurship and SME Practice in a Post COVID-19 Pandemic Era: A Conceptual Discourse from Nigeria

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Abstract This study investigates lean principles among Nigerian entrepreneurs and SME managers in the operational process in the aftermath of COVID-19 pandemic in Nigeria. It offers the panacea to the challenge of social-economic shocks and their adverse effects on SMEs' business activities in Nigeria. The study adopts a conceptual approach to investigate lean entrepreneurship practice by SMEs in Nigeria. It relies on data from extant literature, using a conceptual approach to examine the social-economic effects of COVID-19 pandemic and critical environmental factors on the lean entrepreneurship practice in Nigeria. Furthermore, the study explores the

influence of lean practice among SMEs and entrepreneurs in Nigeria and suggests a broad model for lean entrepreneurial practice in post-COVID-19 pandemic Nigeria. Findings highlight the broad social-economic effects of COVID-19 pandemic and other challenges such as theft, host community pressure, weak legal system, and inadequate government policy support affect lean entrepreneurship practice. These factors constitute complex operational issues that would require the adoption of a more comprehensive approach to address. It also highlights crucial factors for post-COVID-19 pandemic SMEs' operational success in Nigeria due to deficits in infrastructure and regulatory efficiency for SMEs' operations to address the various challenges of business failures in Nigeria. The study suggests a lean SME and Entrepreneurial Practice model in the post-COVID-19 pandemic era. It emphasises the need to refocus the active interest of the lean entrepreneur on critical business sustainability. The study recommends a critical review of the internal operational process among practicing entrepreneurial businesses and a re-modification of public policies system that governs the operational functions of entrepreneurial practices for reasonable and resilient post-COVID-19 pandemic entrepreneurship practices that can support the SMEs and economic growth in Nigeria.

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Introduction

Adopting lean principles among organisations has become a popular norm among practitioners in various sectors. Lean has been viewed as an operational philosophy. Others prefer to implement its principles in their operational



process (Bhasin & Burcher, 2006). It also stands as a critical tool to address the unplanned emergency in the business environment, such as COVID -19 pandemic. At the same time, the COVID-19 pandemic resulted in a worldwide issue of critical concerns across economies and supply chains (Khan et al., 2021). These include social distancing, mandatory use of sanitary practices, controlled movement and total lockdown of the economy, with the broad intention to address the effects of the COVID-19 pandemic (Yu et al., 2021). Generally, lean practice has fundamental principles for operations management such as continuous improvement, identification and elimination of waste in an operational process, teamwork and innovation to keep delivering customer values. Lean seems to become a widely accepted practice among entrepreneurs and SME managers, both in the developing economies where the challenges of inadequate environmental support for business operations tend to be prevalent (Babalola et al., 2019; Hampel et al., 2020). This study explores lean entrepreneurship and how it can be adapted to facilitate sustainability and effective operation in a post-COVID-19 pandemic era in Nigeria.

The traditional lean method examines the business process to enhance value-adding activities for the customer and remove non-value-adding parts (Liker, 2004). However, the emergence of the COVID-19 pandemic has resulted in critical disruptions to operational business practices, which has embedded restrictions and adverse impacts on SMEs and entrepreneurial practices in Nigeria. These adverse effects of COVID-19 pandemic tend to leave the Nigerian entrepreneurs and SMEs operators responsible for developing a resilient approach to achieve stability in their entrepreneurial practices while striving for effective post-COVID-19 business management. According to Yu and Rehman Khan (2021), this will require a concerted effort of innovation and creativity through an engagement with relevant partners and stakeholders to find a suitable means to cope with the aforementioned profane challenges, especially in the areas of resource and sustainability management. It is also justified that most entrepreneurship outfits in Nigeria have minimal governmental support for their survival (see, Ufua et al., 2020, 2020a; Ufua, Olujobi, et al., 2020; Ufua, Osabohien, et al., 2020; Midgley, & Lindhult, 2021).

This study focuses on how lean entrepreneurship, apart from addressing the issue of waste, can also provide resilience for the Nigerian entrepreneurship and SME practitioners to withstand the environmental and social-economic challenges of COVID-19 pandemic. Narasimhan et al. (2006) recognised different types of waste that could be eliminated, including excessive setup times, large amounts of buffer stock, variability in material flow,

overproduction of finished goods, transportation waste, defects waste and motion waste.

Lean principles can be applied to an entrepreneurship startup to develop and sustain values and eliminate waste (Bieraugel, 2015; Ogunade, 2019). A startup can imbibe lean principles in setting up a new business by an entrepreneur(s) to launch new products or services. This also presents the challenge of resources constraint and risk management regarding the viability of the intended startup operations, especially concerning critical environmental challenges such as the social-economic effects of COVID-19 pandemic (Eisenmann et al., 2012; Contigiani, & Levinthal, 2019).

A key component of the lean startup method is the iterative “build-measure-learn” process (Ries, 2011, p. 9), which allows an organisation to remove the normal wasteful activities in an operational process. Researchers (for example, Midgley & Lindhult, 2021; Obialo, 2019) identified the usefulness of lean entrepreneurship theory noting that it provides the option to engage a more resilient business approach beyond the conventional thinking about how businesses survive to create innovative new services. Obialo (2019) emphasised two critical ideas embedded in lean entrepreneurship and SMEs, including the need for uniqueness in startup features and the recognition of uncertainties faced in entrepreneurship practice, especially in a developing economic background, fraught with high unpredictable business emergencies in the business environment. Babajide (2012) affirmed that the SME sector provides a driving force to consistent job creation, poverty reduction, wealth creation, income distribution, and reduction in income disparities. Lean startup, therefore, embraces the adoption of a combination of business ideas and approaches driven by experimentation iterative product releases on an operational platform of continued learning (Ghezzi & Cavallo, 2020; Mansoori, 2017). This entails dominant process operational activities to achieve operational process novelty (Bocken & Snihur, 2019).

The widespread coronavirus disease, also known as the COVID-19 pandemic, originated from Wuhan, Hubei Province of the Peoples Republic of China (PRC), in December 2019. However, the declaration of COVID-19 pandemic as a global pandemic by the World Health Organisation (WHO) and the spread of the disease to over a hundred countries in the world have resulted in many social problems, including; the shutdown of the national economy in affected countries, lockdowns, business closure, income loss, unemployment, poverty, deaths, increasing positive cases, huge demand on existing health care facilities and increased government budgets and spending on health care (Gershon et al., 2000); Olonade et al., 2021). These have posed enormous challenges for countries leaving many governments to grapple with the pandemic. In light of the

preceding, the rationale of this study is to assess a lean entrepreneurship approach to address highlighted challenges affecting SMEs and entrepreneurial practices in Nigeria and facilitate the refocus on lean entrepreneurship as an operational approach to enhance critical business sustainability. It is worthy to note that SMEs should remain in business in the post-COVID-19 pandemic era in Nigeria. The question is, how feasible is this assertion?

This study, therefore, contributes to knowledge by taking a holistic overview of how SME entrepreneurs can use lean entrepreneurship practices in Nigeria to sustain the survival of SMEs in a presumed difficult post-COVID-19 pandemic era in Nigeria. These entrepreneurs need to develop a resilient survival strategy that will make them remain in business despite the environmental and operational challenges. Also, this study provides an insight to the SME operators on the need to use lean entrepreneurship to develop products/services that can deliver perceived fit 'value-gap' to the customers/clients. This would help retain these customers/clients, thereby ensuring the sustainability of these SMEs.

This study is structured as follows: following this introductory section is section two, which presents a literature review on lean entrepreneurship practice. Section two provides some insights from the literature. This is followed by the details on the methodology engaged in the study. Section four presents the suggested model for lean entrepreneurship practice in Nigeria, followed by further discussion of the factors indicated in the study. The next section is the conclusion and recommendation.

Literature Review on Lean Entrepreneurship Practice

The practice of lean startup is embedded in lean entrepreneurship practice. This encompasses adopting lean principles in entrepreneurship to maximise identified opportunities (Harms & Schwery, 2020). It also entails the embrace of vital lean practices such as value stream mapping, innovation and continuous improvement to enhance customer value delivery and sustainability on a platform of continuous identification and elimination of waste in an entrepreneurship business practice (Bieraugel, 2015; Ufua, Emielu, et al., 2021; Ufua, Ibidunni, et al., 2021).

While there seems to be no clear definition of what lean entrepreneurship, business management practitioners and entrepreneurs adapt, re-invent these approaches in their operations. At the same time, complementary approaches are also being developed, in line with continual changes and demands from operational processes (Priyono & Idris, 2018). Lean entrepreneurship, therefore, embraces the

responsibility of effective progress monitoring, operational objective setting, work prioritisation, and right decision making, based on available information on customer value perception and preferences (Watt & Abrams, 2019).

According to Holweg (2007), vital environmental factors were traceable to the support of practical lean take off at the inception of its development among operations managers. These included favourable government policy, operational advantage, commitment supply chain partnership, technology and cultural diversity. Therefore, lean entrepreneurship provides the needed guide for entrepreneurs to continuously meet customer values while also keeping an effective operational process that can yield long-term efficiency (Adler et al., 1999). This leaves the lean entrepreneur to continually strive for operational process improvement to meet customer value demands. Lean entrepreneurship also demands the entrepreneur's embrace of changes from the business environment that can determine or affect customer perception of value (Ufua, Emielu, et al., 2021; Ufua, Ibidunni, et al., 2021). Therefore, entrepreneurship researchers and practitioners reckon that lean is operated on a continual search of what values demands a continuous improvement on the operational process to reflect changes in the business environment and customers' needs (Babalola et al., 2019). This tends to push to create the need among lean entrepreneurship researchers and practitioners to continuously search for approaches that can address the spatial effects of profane environmental challenges such as the socio-economic shocks of the COVID-19 pandemic. These can affect the implementation of lean entrepreneurship, especially from the context of Nigeria focused in this study.

The conventional lean philosophy entails key operational approaches including; waste elimination, just in time, continuous improvement, and value stream mapping. Lean entrepreneur adopts similar approaches based on the context of their operations (Womack & Jones, 1994). For instance, Watt and Abrams (2019) suggest key characteristics among lean entrepreneurs such as transparent operations with prompt record-keeping, confidence, evaluation in their pursuit of set objectives which revolves around the creation and sustenance of customer value.

Lean practice conspicuously portrays the pursuit of values for the customers (beneficiaries) to a business system while also craving the identification of waste items and developing strategies to eliminate them. This is effectively appropriated through a process-driven change initiative that enhances better operational practice and output effects that are beneficial to the customers (Burgess, & Radnor, 2013; Leyer, & Moormann, 2014; Losonci, & Demeter, 2013; Marodin et al., 2018).



Lean researchers seem to focus on large and corporate organisations (Karlssoon, & Åhlström, 1995; Hines et al., 2004; Liker & Convis, 2012; Byrne, 2013). It has also been proven to be helpful to entrepreneurs, especially those in developing economic backgrounds who tend to strive and sustain their operational process with minimally visible support from the public sector. Lean entrepreneurship, therefore, involves a proliferation of relatively unrelated methods embedded in lean, with varying degrees of rigour and relevance to entrepreneurial operational practices needed to better the operational process (Mansoori, & Lackeus, 2019). For instance, Smeds (1994) emphasised innovation to achieve continuous improvement practices that reflect effective lean entrepreneurship practices to meet sustainable customer value generation. This is predicated on a platform of focus on ubiquitous learning and transcending the borders of formal, informal, and non-formal learning (Harms, 2015), plethora of methods, concepts, and approaches that the innovation and entrepreneurship terms may carry for people with different backgrounds (Pedrosa, 2016).

Furthermore, lean entrepreneurs' set up business boundaries and define the product/service to offer that can deliver perceived to fit values-gaps to the customers (Trimi, & Berbegal-Mirabent, 2012; Ufua, 2020, 2020a). This gives the entrepreneur the leveraging platform to engage lean principles in their operational practices, identifying and eliminating waste while sustaining value in an operational process. However, the extent and mode of adoption of lean among entrepreneurs, especially in a developing background such as Nigeria, tends to be unclear. While many Nigerian organisations adopt lean principles in their operations, they tend to decline from accepting it as a compound operational practice. This could be due to certain factors ranging from leadership thinking and contextual operational practices that may not align with complete adaptation to lean operations (Ufua et al., 2020, 2020a; Ufua, Olujobi, et al., 2020; Ufua, Osabohien, et al., 2020).

On the other hand, the continued craving to serve customer needs and effective operational utilisation has resulted in the overriding choice and adoption of lean among Nigerian entrepreneurship practitioners and SME operators in their operational processes. For instance, Nigerian SMEs and entrepreneurs embrace team practice collaboration with internal organisation members and operational process partners. This has also become a broad necessity as the search for resilient approaches to address business operational challenges, especially among SMEs in Nigeria. This has tended to facilitate their sustainability amid environmental challenges such as the effects of COVID-19 pandemic (Ozili, 2020).

Whilst lean operational philosophy has been widely applied among these practitioners, both to the end

customers and the organisation, many operating SMEs and entrepreneurship businesses in Nigeria seem to develop more values from joint development of working approaches to implement important lean principles (Agboli & Ukaegbu, 2006). Such practices are aimed to sustain their position in the target market and secure a relatively unified operational system to achieve operational effectiveness and efficiency in the long run. Alkhoraif and McLaughlin (2016) noted that such can create a formidable social platform for effective SMEs' practices. This aligns with the lean entrepreneur's continual strives to refocus the process towards achieving set operational objectives. It also encourages commitment and collaborative learning across boundaries (Olokundun et al., 2019). Saosaovaphak et al. (2009) believed that these practices would improve mutual trust, reduce complexities in relationships, and foster more effective communications amongst SME and entrepreneurship partners.

Adopting lean practices in an operational process enhances better understanding and effective implementation of lean principles, especially in identifying and eliminating wastes in the operational process (Sanda & Ntsiful, 2013). This can become advantageous to the lean practising SMEs and entrepreneurs, especially during a critical challenge period such as COVID-19 pandemic, in a developing economic background such as Nigeria. This is because there seems to be minimal public sector support for SMEs' operations compared to the western world (Mapunda, 2019). Lean can, therefore, constitute a means to curtail the waste surrounding the social-economic wastage in the complex challenges heralding the emergence of COVID-19 pandemic in the Nigerian SME sector, focused in this study. The concept of maintaining staff retention and commitment is particularly relevant as researchers. This was widely embedded in the operations of Toyota Company in Japan at the inception of lean operations' development (Womack et al., 1990).

Furthermore, adopting lean principles among Nigerian SMEs and entrepreneurship businesses can facilitate their drive to continuously meet customers' expectations and the conspicuous exertion of effort to keep identifying waste activities and acting to eliminate them. Lean practitioners and researchers identify lean operational wastes such as inventory, motion, defects, transportation overproduction, processing, and waiting (Elnamrouty & Abushaaban, 2013; Mezgebe et al., 2013; Womack & Jones, 2003).

Waste identification and elimination have remained a critical part of lean practice among business organisations from different industrial demarcations. However, researchers (e.g., Ufua et al., 2018) highlight the difficulty in establishing a complete definition of waste in the operational process, particularly in a context where there is a high level of instabilities in the business environments that influence business

activities. This leaves the lean entrepreneurs and SME managers with the challenge to develop a reliable operational system that can suitably define and address the challenge of waste identification and elimination based on the context of their operational process.

These contextual factors include the human capital skills and ability to respond to business growth demands and institutional factors such as availability of finance, government policies, the effectiveness of the legal and regulatory system, insurance support. Other environmental factors include cordial relationship with partners and host community (Gregori et al., 2000). Waste may not be universal but contextual. Therefore, the lean entrepreneurs and SME managers need to embrace the spatial and the emergent meaning of waste in an operational process (Ufua et al., 2019). This also calls for productive innovation and re-invention of existing operational traditions to create a new wave of better practices to effectively sustain operations and address critical challenges such as business failures or insolvencies (Hampel et al., 2020).

Nevertheless, due to the differences in contexts and operational focuses, it is arguable to note that outright replication of lean philosophy can be impossible for entrepreneurship practitioners and SMEs. What seems an apparent reality is an adaptation of the lean principles via a process of engagement with both the affected stakeholders and the deployment of available resources towards the pursuit of set lean objectives (Elias, 2019; Ufua et al., 2022). This is also relevant to the Nigerian lean entrepreneur who tends to operate on a 'stand-alone basis as there is minimal public sector support, especially in a critical situation such as the challenging effects of COVID-19 pandemic (Imanche et al., 2020; Jelilov et al., 2020).

The Nigerian lean entrepreneurs and managers need to explore their cognate experiences and skills required to implement lean practice in an operational process effectively. This is necessary to address the need for Nigerian entrepreneurs and SME managers to be proactive in ensuring that the proper steps are taken by the suitable personnel, using the correct information in their lean management processes, to enhance productivity (Ijeoma, 2018; Ufua et al., 2020). Moreover, Oyelaran-Oyeyinka and Barclay (2004) observed that low human skills development, among other factors, have been responsible for low-performance levels among organisations on the African continent more generally. As a result, projects often suffer delays, inadequate supervision, cost overrun and sometimes abandonment. It, therefore, seems relevant to note that only a skilful application of lean principles can guarantee significant results in the operational process.

While lean practice has been widely acclaimed to result in operational productivity, lean practice with inadequate financial backing can tempt the entrepreneurs and SME

managers to misinterpretations that may not be comfortable to the affected stakeholders. This is especially prone to developing economic contexts such as Nigeria where the environmental issues such as poor access to the credit facilities needed for business growth and expansion, weakness of the legal system towards SMEs, and related business (Inegbenebor, 2006; Osemeke, & Adegbite, 2016; Owolabi, 2007). These observations negate the intent of effective lean practice that requires adequate investment in the operational process and rewards for participants. Otherwise, it can amount to multitasking of an organisation, resulting from operational instabilities such as staff turnover, deflated employee morale, and poor individual work performance (Hossain, 2004; Sawhney et al., 2010; Osabohien et al., 2020).

The threat of security, theft and criminalities tend to pose significant environmental issues to the progress of lean practice among Nigerian entrepreneurs and SME operators (Cooney, 2002; Enyinda et al., 2011). The Nigerian entrepreneurs and SME managers tend to be interested in lean practices despite every conspicuous odd. These environmental threats tend to have the propensity for an increase due to critical issues such as the effects of COVID-19 pandemic (Fagade & Tryfonas, 2016). Therefore, the practising lean entrepreneurs and SME managers need to address these environmental issues to implement effective lean practices that can yield expected results. However, what remains an unanswered question is how the adoption of multifaceted operational principles such as lean can be modified to suit emerging contexts such as the social-economic effects of COVID-19 pandemic by Nigerian entrepreneurs and SMEs in the various sectors? This study aims to explore the influence of these complex effects of COVID-19 pandemic on lean entrepreneurship practices and how lean adoption can resiliently address the complexities in Nigeria.

Overview of the Emergence of COVID-19 Pandemic and the Need for Lean Entrepreneurship in Nigeria

The emergence of heralding events such as the COVID-19 pandemic requires critical business operational process reviews and more resilient approaches that can enhance sustainability and the focus on set objectives (Donthu & Gustafsson, 2020). Entrepreneurship practitioners in the various sectors in Africa, particularly Nigeria, had faced the critical challenge of coping with the social-economic shocks and other effects of COVID-19 pandemic (Mbagwu, 2020). These range from total lockdown of business activities, prolonged restrictions on the movement of man and logistics, bad debts, theft, critical health challenges to entrepreneurs and partners, especially in developing countries such as Nigeria. The majority of business



risks are born by the entrepreneurs and owners of SMEs (Kumar et al., 2020).

Ogunsanya (2020) suggests government education, provision of the right technology and government evaluation of the social-economic effects of COVID-19 pandemic in Nigeria. While these suggestions are tenable, especially from the public perspective, it is arguable to note that the Nigerian entrepreneur or SME operator benefits minimally from extended government support as they tend to bear most operational risks. Similarly, Elias (2021) explored the effects of COVID-19 pandemic on the Indian economy, highlighting the government's successful efforts and other key stakeholders in addressing the critical health challenges of the pandemic in society. However, the findings seemed silent about the socio-economic effects COVID-19 pandemic in SMEs and entrepreneurship practices focused on in this study. This, therefore, leaves the Nigerian entrepreneur with the responsibility to develop and adopt a suitable measure that can support the achievement of set objectives, especially in a post-COVID-19 pandemic era in Nigeria. As Kushner et al. (2021) observed, this can facilitate a fair process embedded in a reflective evaluation that can enhance the appropriateness of adoption to a sustainable strive for a post COVID-19 pandemic entrepreneurship practice. This study argues that lean entrepreneurship can provide this requirement and serve as a means to achieve resilience in addressing the socio-economic effects of COVID-19 pandemic among entrepreneurship businesses in Nigeria.

The current research focuses on how Nigerian entrepreneurs and SME managers can apply lean entrepreneurship to address the operational challenges in the aftermath of COVID-19 pandemic. These challenges include host community pressure, inadequate power supply, theft and criminalities, scarcity of funds, weak legal systems support that can influence lean entrepreneurship practices among these practitioners and managers (Ufua et al., 2020, 2020a; Ufua, Olujobi, et al., 2020; Ufua, Osabohien, et al., 2020). This study embraces the need to search for a suitable approach to addressing these critical challenges, which necessitates the focus on lean entrepreneurship in the current study. It encapsulates the usefulness of operational flexibility in its implementation models, facilitating the strive to retain value development in reflection with emerging environmental changes (Balocco et al., 2019). This can refocus the interest of the lean entrepreneur to the continuous development of sustainable competitive advantage through flexible use of resources to meet environmental shocks such as moving from on-ground to online business activities, that can affect the broad practice of lean entrepreneurship (Contigiani, & Levinthal, 2019; Polas, & Raju, 2021). The current study is aimed to unearth learning on the depth of these business environmental issues on the

pursuit of lean entrepreneurship ambitions while striving to address the social-economic challenges posed by the emergence of COVID-19 pandemic that can affect operational decisions among practising entrepreneurs in Nigeria.

Finally, the study aims to develop and suggest a lean entrepreneurship approach to address highlighted challenges affecting SMEs and entrepreneurial practices in Nigeria. Moreover, it facilitates the refocus on lean entrepreneurship as a resilient operational approach to enhance critical business sustainability platform necessary for a post-COVID-19 pandemic operational success (Olujobi, 2017). A critical question raised in this study is how Nigerian entrepreneurs and SME operators can adopt lean principles and means to address the challenging effects of COVID-19 pandemic in Nigeria? The answer to this research question would hopefully advance learning on the uses of lean entrepreneurship practices, especially in a presumed difficult era such as post-COVID -19 pandemic in Nigeria.

Methodology

The study adopts a conceptual approach to study the social-economic effects of COVID-19 pandemic and critical environmental factors on lean entrepreneurship practice in Nigeria. It examines the depth of influence of lean practice among SMEs and entrepreneurs in Nigeria. The choice of a conceptual approach is to provide a fair and precise assessment of the usefulness of lean entrepreneurship practices and the trend of impacts of the environmental effects of COVID-19 pandemic on the Nigerian SMEs and entrepreneurs (Varpio et al., 2020; Yates, & Leggett, 2016).

The study explores the effects of environmental factors on lean entrepreneurship practice in Nigeria. Conceptual data from extant literature will be discussed and utilised to propose a resilient model that can address identified issues in the lean entrepreneurship practice in Nigeria (Ngulube, 2018). This can facilitate the development of values for customers, identification of wastes and joint development approaches to eliminate them (Tamene, 2016).

While authors such as Hayat et al. (2019) adopt the quantitative approach on entrepreneurship leadership orientation and performance, this study relies on extant literature relating to the antecedence of lean entrepreneurship. It also focuses on extant literature on critical factors such as the social-economic effects of COVID-19 pandemic on SMEs' entrepreneurial practices in Nigeria. Similarly, Olutuase et al. (2020) adopted a quantitative approach to explore entrepreneurial skills and education in the African context. They found that entrepreneurship education is not well aligned with

contextual peculiarities, so entrepreneurship effort may not yield the desired outcome. The current study is based on literature focusing on the developmental trends of lean entrepreneurship application from the context in Nigeria.

In their study in Ghana, Nyarku and Oduro (2018) applied a quantitative approach to explore the legal system support and entrepreneurship practice. They identified corruption, excessive tax regimes, tight monetary and credit policies, unstable policy climate, unfriendly trade regulations, workforce and labour regulations as key negative issues affecting entrepreneurial development, recommending the need for a resilient legal system to strengthen entrepreneurship practices. The current study focuses on critical issues such as government policy modification and legal system support to facilitate lean entrepreneurship operations. Similarly, Tam et al. (2021) reckon the usefulness of government publicity efforts to create awareness about the critical health effects of the COVID-19 pandemic. However, a key question is how much awareness do the practicing entrepreneurs have about the effects of social-economic challenges of COVID-19 pandemic, and how can these be addressed in preparation for a full post-COVID-19 pandemic business practice? Part of the aim of this study is to project a resilient means to achieve an effective post-COVID-19 entrepreneurship practice in the Nigerian context that embraces the needed flexibility in terms of meeting changes in customer values and other stakeholder interests in the implementation process (Evans & Bahrami, 2020; Singh et al., 2021; Ufua et al., 2020, 2020a; Ufua, Olujobi, et al., 2020; Ufua, Osabohien, et al., 2020).

This study relies primarily on extant literature, ranging from primary, secondary, and tertiary data sources such as newspapers, textbooks, and academic articles relevant to this study's aim. This is hoped to help authors apply the needed flexibility in selecting and referencing literature that can add relevant values to this study, especially regarding lean, entrepreneurial practices in post-COVID-19 pandemic Nigeria (see White & Marsh, 2006; Bamel, & Stokes, 2016). For reliability, the study ensured the limit of over 70% of extant literature to 2015 and later, to maintain recency and authenticity of its contribution to the debate about lean entrepreneurship and the strive for an effective post-COVID-19 pandemic experience for entrepreneurs and SME in Nigeria. The study is aimed to develop a conceptual model that details a practical approach to practising an effective post-COVID-19 lean entrepreneurship practice in Nigeria. It is also aimed to facilitate productive learning and trigger further debate about the usefulness of lean entrepreneurship practice in Nigeria.

Suggested Model for Lean SME and Entrepreneurial Practice Post COVID-19 Pandemic in Nigeria

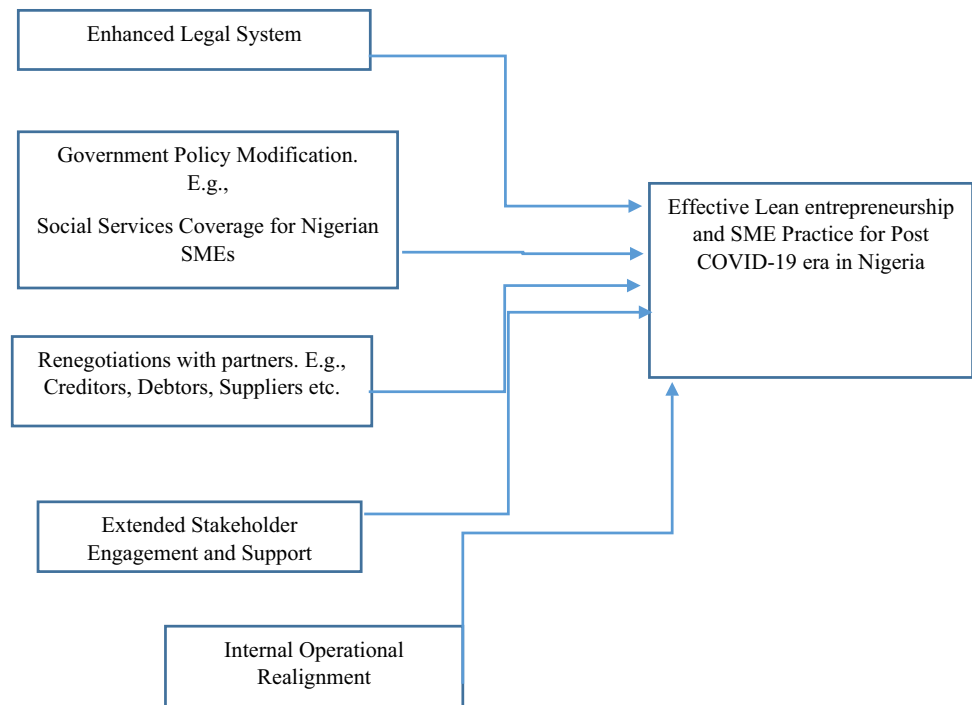
Based on extant literature reviewed, the social-economic effects of COVID-19 pandemic, other challenges such as theft, host community pressure, weak legal system and inadequate government policy support affect lean entrepreneurship practice. These factors constitute complex operational issues that would require the adoption of a more extended approach to address. For effective lean entrepreneurship, we propose and discuss a suggested model presented in Fig. 1

Further Discussion on Suggested Model

The research offers evidence that lean practices are significant in enhancing the performance of SMEs to cut operational costs, improve profit margin, improve the use of facilities to preserve healthy competition among SMEs, to deliver effective services to customers. As noted in Fig. 1, the argument in the current research is for Nigerian entrepreneurs and SMEs operators to continuously strive for operational effectiveness via lean practices. The study highlights the need to imbibe consultation with the key stakeholders and partners who are either engaged with or affected by their operations in the various sector of the Nigerian economy. In their study, Ufua et al. (2019), emphasised that stakeholder engagement is a critical necessity for a cordial relationship between the practising SME and the host community. They reckon that such cordiality can enforce continuous operational progression, which can significantly support the organisational strive to address critical environmental challenges such as the social-economic effects of COVID-19 pandemic in Nigeria.

This observation equally suggests that the failure for an organisation to consider the interest of the key stakeholders in making operational decisions can lead to unintended marginalisation that can create a hostile reaction that can adversely affect the organisation. This is especially the SMEs that take are meant to shoulder most of their operational risks alone (Bakar & Zainol, 2015). This study argues that adopting stakeholder consultation in lean entrepreneurship can lead to an extended advantage in terms of support and cooperation from specific stakeholder groups such as the government and host community, who are critical to business operations in the Nigerian economy. This is because they provide required partnership in business value chain management and regulations, which are also relevant to entrepreneurship and SME success (Ufua et al., 2021).

Fig. 1 Suggested Model for Lean SME and Entrepreneurial Practice Post COVID-19 Pandemic in Nigeria. Source: Authors' Compilation, 2022



According to Sharma et al. (2010), while this leaves the lean entrepreneurs with flexibility in their operations, the critical question is how can they practice flexibility in their operational practices? The stance of this study is that lean entrepreneurship in a turbulent business environment with social-economic shock factors such as the effect of the COVID-19 pandemic requires continued operational flexibility and innovation to meet emerging environmental demands. It would also create the platform to enhance the recovery of existing SMEs from the social-economic effects of COVID-19 pandemic, sustainability and progressive customer value development. The stance of this study is that the engagement of lean entrepreneurship would require the engagement of relevant stakeholders to develop potentials for recovery from the socio-economic effects of COVID-19 pandemic and position the practicing entrepreneurship business for a resilient post-COVID - 19 pandemic operational practice.

Researchers and practitioners have noted that stakeholders' consultation, especially for the SMEs in a challenging period such as COVID-19 pandemic, can be time-consuming and resource required executing. Nevertheless, the consequences can be helpful to the strive by the practising entrepreneurs and SMEs towards overcoming the environmental challenges facing their operations (Elias, 2019; Ufua et al., 2018). Furthermore, a supportive requirement for the effective practice of lean entrepreneurship among Nigerian entrepreneurs and SMEs operators in a post- COVID-19 pandemic era Nigeria is enhancing the current legal system, especially for SMEs

and entrepreneurs. They tend to be more susceptible to the risk of business breaches.

Therefore, it is arguable to suggest a refocus of the need for the current legal system to provide more support for practising entrepreneurs and SMEs, to provide the needed operational stability across various sectors of the Nigerian economy, where these businesses operate (Olujobi et al., 2020a). It is also notable to state that the possible transformation of the current Nigerian SMEs to a broader operational scale is largely predicated on the effectiveness of the legal system in regulating business activities among entrepreneurial partners and SMEs (Ufua et al., 2020, 2020a; Ufua, Olujobi, et al., 2020; Ufua, Osabohien, et al., 2020). This can establish the legality of their practices and facilitate the strive to minimise criminalities among SMEs in the various sectors of the Nigerian economy (Abu et al., 2019). The reform on the current legal systems in Nigeria is also necessary because the regulatory institutions often appear to be discouraging SMEs' operations in ways such as the issue of multiple taxations. This is also accruable to their reactionary approach rather than being business proactive approach adopted in the appropriation of legal system practices in Nigeria. Moreover, it has affected the successes of the SMEs and the economy at large due to regulatory failures, inconsistency, poor electricity supply and other socio-political issues in the country (Effiom & Ede, 2018).

As highlighted in Fig. 1, the re-modification of the moderating policies that govern the operational process of entrepreneurial practices, especially the Nigerian SMEs,

need further modification to provide a more flexible platform to support their strive to address critical emerging environmental issues such as the effects of COVID-19 pandemic. For instance, SMEs create a platform for economic growth through their significant contributions to job creation around the world. According to Dwivedi et al. (2021), this can facilitate an interpretive structure that can enhance productive interactions among value chain partners for effective value development in line with stakeholders' expectations. The modification of operational policies can also facilitate impactful collaboration among entrepreneurs and partners in a collaborative process to address emerging challenges such as the socio-economic effects of COVID-19 pandemic and lean entrepreneurship practices focused in this study. On the broader economy, effective modification of policies is recognised as the basis for rapid economic growth and development in developing countries, including Nigeria, through their potential for job creation and output production (Stokes, 2000; Matthew et al., 2020; UNCTAD, Report, 2021).

The current research argues that a comprehensive modification of the existing SMEs' operational procedures can result in their resilient development and ability to withstand emerging issues such as the effects of COVID-19 pandemic, focused in the current research. For example, government interventions efforts tend to fail to yield the needed transformation due to poor coordination and monitoring and policy inconsistencies, especially in Nigeria, where this research is based (Ben-Caleb et al., 2013). According to Osotimehin et al. (2012), an effective modification of existing moderating policies, entrepreneurs and SME practitioners can leverage on positive factors such as ease of establishment and focus of the entrepreneurs, amongst others, in driving their objectives, irrespective of the critical challenges to their operations (Bin Zhou, 2012).

The above can facilitate lean entrepreneurship practices and support Nigerian entrepreneurs and SME operators in their quest to develop a resilient approach to address the social-economic effects of COVID-19 pandemic, such as increased operational cost impacts and reduction in sales and scarcity of input materials due to lockdown. It can also create the chance for the lean entrepreneurs to minimise operational cost further and increase the resilience through lean operational practices such as team works, upstream partnership with suppliers and effective relationship management and understanding with creditors, to flexibly manipulate their operations to sustain their capacity to maintain customer value deliveries (Mangla et al., 2014; Kaur et al., 2017). This includes an undulating business environment due to the social-economic effects of COVID-19 pandemic in Nigeria (Aderemi et al., 2020).

Finally, a critical requirement for the effective lean practice among Nigerian entrepreneurs and SMEs

operators is the need for internal process examination and realignment to reflect the current realities in the external business environment, such as the effects of COVID-19 pandemic. The original scope of lean practice is on effective internal operational process management in terms of value development and wastes elimination (Womack et al., 1990). The current research argues that the Nigerian entrepreneurs and SME operators must have a further critical review of the internal operational process to provide a necessary gap analysis and implement an adjustment process that can ensure effective compliance of the internal operational process demands. This can suit their operational processes to emerging environmental changes, especially those occasioned by the effects of COVID-19 pandemic (Adeleke et al., 2018; Eti et al., 2006).

On a similar note, an effective internal operational process can enhance an informed negotiation with the partners on the need to address significant operational gaps that could have been highlighted during the re-examining of the internal operational process (Dhir & Sushil, 2017). This can facilitate a learning process among practicing lean entrepreneurs and partners and encourage the development of suitable approaches to address the challenging effects of COVID-19 pandemic in their operational pursuit and position them for sustainability in the post-COVID-19 pandemic business environment. This is because learning among these partners demonstrates the resilient potential to address emerging environmental challenges (Ahmed et al., 2021; Udume et al., 2021). It is argued in the current research that such negotiations with external partners could precede a process of productive redeployment of the organisational resources in an attempt to enhance continuous value generation that meet the customers' requirements as portrayed in lean practice (Adebayo, 2012; Adegbeye et al., 2020).

Conclusion

This paper investigated the practice of lean principles among Nigerian entrepreneurs and SME managers in the operational process by exploring the critical business environmental variables that influence lean practices among these practitioners and managers.

The study provides a re-affirmation of the theory and practice of business sustainability via the critical understanding of the need to enhance the development of values from the use of available resources embedded in the theory and practice of lean entrepreneurship. The study affirmed the usefulness of lean approaches to entrepreneurial practices, especially in a critical time such as post-COVID-19 pandemic, in a developing economic background, where this study was based. The study promotes

continuous development of value from lean entrepreneurship business system to achieve sustained customers' satisfaction, as a means to project long term operational effectiveness, needed to address the social-economic effects of COVID-19 pandemic in an already volatile environment such as Nigeria (Siddiqui et al., 2009). However, the current study suggests the need for sound regulatory policies of the government in the sector to address the deficit in infrastructure and regulatory efficiency in SMEs' operations and address the challenges of business failures, especially in post-COVID-19 pandemic Nigeria.

Also, the government should establish SME development agencies in remote and developing locations in Nigeria. This is essential as it would make access to the needed SMEs' support easier and create more awareness through significant interactions with these operational partners. These can re-assure them of the positive effects of their operations on the host economy that has the specific responsibility of ensuring the proper running of SMEs, controlling their operations. It can also ensure that these lean enterprises are well supported for expansion, providing a platform for more contribution to the national economy, especially in a post-COVID-19 pandemic Nigeria that has the challenge of recovering from the social-economic effects of COVID-19 pandemic.

Recommendations

Based on the postulations of this study, the following recommendations are made; first, this study recommends a comprehensive modification of the existing SMEs' operational procedures, as this would result in their resilient development and ability to withstand emerging issues such as the effects of the present COVID-19 pandemic. Also, the government should embark on reforms on the current legal systems in Nigeria. This has become necessary because the regulatory institutions often appear to be discouraging SMEs' operations in ways such as solving the challenge of multiple taxations. If this is done, SMEs' existence and encouragement will be enhanced to adopt critical operational practices such as lean entrepreneurship that requires a fair and reliable business environment. It will also project a platform for adequate consideration of available alternatives and enhance the choice and development of suitable approaches to a post-COVID-19 pandemic entrepreneurship practice that can minimise the chance of a mismatch that can be misleading or marginalise effective entrepreneurial practices in a post-COVID-19 pandemic Nigeria.

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