Assessing the impact of MSMEs entrepreneurial competency on transformational entrepreneurship in a developing economy

Odafe Martin Egere, Gideon Maas & Paul Jones

View supplementary material 🗗

Published online: 08 Jun 2025.

Submit your article to this journal 🗗

Article views: 365

View related articles 🗗

View Crossmark data 🗗

Routledge
Taylor & Francis Group

∂ OPEN ACCESS | Check for updates

Assessing the impact of MSMEs entrepreneurial competency on transformational entrepreneurship in a developing economy

Odafe Martin Egere [ID][a], Gideon Maas [ID][b] and Paul Jones [ID][c]

[a]Department of Marketing, Entrepreneurship and International Business (MEIB), Kent Business School, University of Kent, Canterbury, UK; [b]International Centre for Transformational Entrepreneurship (ICTE), Faculty of Business and Law, Coventry University, Coventry, UK; [c]Head of the School of Management, Swansea University, Swansea, UK

ABSTRACT

Previously, it was recognized that Micro, Small and Medium Enterprises (MSMEs') entrepreneurial competencies (EC) play a critical role in supporting MSMEs' systemic development. However, there is minimal literature regarding how MSMEs' characteristics impact ECs in sustaining their systemic development towards producing transformational entrepreneurship (TE). This study addresses this gap and provides an increased understanding of the phenomenon. In this correlational, quantitative study, the MSMEs characteristics and ECs were tested with data collected from 576 MSMEs using SPSS. The study found a positive correlation between the MSMEs' characteristics and ECs. The study identified Nigerian MSMEs' deficit of essential ECs (business ethics, business management, business strategy, financial management, marketing management, and opportunity identification). The study discussed how TE outcomes in Nigeria would assist theory and practice by focusing on ECs development. In addition, it offers potential benefits for developing economies with similar economic conditions. Future research opportunities are also identified.

1. Introduction

In Nigeria, the government encourages entrepreneurship to help rising unemployment and poverty to help socioeconomic development and by so doing, addresses the rising unemployment and poverty rates (Amalu and Ajake 2019; Onyeje, Court, and Agbaeze 2020). However, several policies to help develop Micro, Small and Medium Enterprises (MSMEs) have failed or were inappropriately designed (Joseph et al. 2021; Otisi 2015). As of 2020, available data from the National Bureau of Statistics (NBS) in Nigeria show that 87% of MSMEs are under-performing and lack the mechanism to become sustainable to contribute to economic development compared with emerging countries with similar commercial settings like Nigeria (NBS 2017)). A shortage of foreign capital inflow, market failure, inadequate ecosystem and lack of entrepreneurial competencies (EC) are identified as factors undermining MSME's development and sustainability in several sub-Sahara African countries (SSA) (Amornkitvikai et al. 2022; Egere, Maas, and Jones 2022) and shortage of transformational entrepreneurship TE within Nigeria (Maas, Jones, and Lockyer 2019; Yoruk et al. 2022). EC play a crucial role

(Jones et al. 2018; Sarwoko, Surachman, and Hadiwidjojo 2013; Solesvik 2012) in supporting the development and sustainability of businesses (Hashim, Raza, and Minai 2018; Inyang and Enuoh 2009; Onyeje, Court, and Agbaeze 2020; Oyeku et al. 2014) and driving national development and growth within developing economies (Agyapong and Boohene 2020; Godwin and Simon 2021). This is supported by, Solesvik (2012), Jones et al. (2018), Ratten and Jones (2021), who reported on the criticality of ECs. Within the context of developing economies. Moreover, Inyang and Enuoh (2009), James-Unam et al. (2015), Igwe et al. (2020), Isiaka (2022) and Lateef and Keikhosrokiani (2022) agree that a focus on ECs is crucial to support business development to help realize TE and socioeconomic development within SSA and developing economies.

This study uses Schoar's (2010), which states that TE creates ethical, systemic and sustainable businesses and the real drivers of socioeconomic development. The implication is that MSMEs development can support TE to create sustainable employment, wealth and long-term benefits for society and help support national and regional socioeconomic development. However, there is a limited focus on small business characteristics and their impact on business competencies in supporting their systemic development. Consequently, the aim is to determine whether similar benefits can be realized by examining characteristics of small businesses and ECs in developing economies. This is because poverty and unemployment levels remain in double digits (Egere, Maas, and Jones 2022; Eniola 2014; Oduntan 2014; Onyeje, Court, and Agbaeze 2020). The focus is that small businesses should be able to shape the market with innovative products and services that can drive systemic business development and address limited national growth (Schoar 2010; Sousa 2019). The Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) reported that MSMEs have insufficient resources to transform into significant, sustainable ventures and lack the innovativeness to achieve transformation (Maas, Jones, and Lockyer 2019; Marmer 2012; Schoar 2010; Yoruk et al. 2022). Although policymakers argue there is progress in entrepreneurship activities, evidence suggests that their underdevelopment is concerning across developing countries (Igwe et al. 2018; James-Unam et al. 2015).

The objective is to examine how small businesses could realize transformation within sub-SSA economies and other developing economies with similar economic conditions. However, there is a limited focus and lack of clarity in understanding the relationship between small businesses and their competencies. Therefore, it was essential to survey Nigerian small business owners to provide a realistic estimate and complete analysis and understanding of their correlation in facilitating systemic development towards realizing TE (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019) to help developing economies address these challenges (Ratten and Jones 2018; Volkmann et al. 2021; Yoruk et al. 2022). The literature recognized the criticality of ECs (Inyang and Enuoh 2009; Isiaka 2022) for business sustainability (Igwe et al. 2018; James-Unam et al. 2015; Lateef and Keikhosrokiani 2022) in achieving socioeconomic transformation (Maas, Jones, and Lockyer 2019; Ratten 2020; Schoar 2010) and assist developing countries (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022) create sustainable employment and wealth to support regional and national development (Agyapong and Boohene 2020; Godwin and Simon 2021; Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Oyeku et al. 2014, and Hashim, Raza, and Minai 2018) reported that ECs were the critical ingredient required by MSMEs within SSA and other developing economies to be sustainable.

Adequate business knowledge is an essential tool in facilitating MSMEs' business scalability, which is crucial in realizing TE and achieving socioeconomic transformational (Agyapong and Boohene 2020; Jones and Maas 2019; Maas, Jones, and Lockyer 2019; Ratten and Jones 2018; Schoar 2010; Yoruk et al. 2022). Within developing economies, there is a deficit of MSMEs development (Agyapong and Boohene 2020; Maas et al., 2016; Sousa 2019) particularly in Nigeria (Egere, Maas, and Jones 2022; Igwe et al. 2018; Onyeje, Court, and Agbaeze 2020). Several critical resources necessary to support the MSMEs in Nigeria, such as infrastructures, are insufficient or unavailable (Amalu and Ajake 2019; Egere, Maas, and Jones 2022; Njoku, Ihugba, and Odii 2014). Moreover, EC development through apprenticeship training and entrepreneurial curriculum/training framework is

not providing positive outcomes (George et al. 2016; Haddoud et al. 2022; Igwe, Lock, and Rugara 2022; Njoku, Ihugba, and Odii 2014).

From the above introductory discussions, we argue and answer the question that MSMEs characteristics and ECs are essential for realizing TE through an in-depth quantitative study of five hundred and seventy-six Nigerian MSMEs. We further argue and answer the question that the MSMEs acquire the proper ECs (business ethics, managerial competence, business strategy, financial management, marketing, and opportunity identification) to develop resilience to support national and regional development. In doing so, the study develops, contributes and extends the existing conceptualizations of financial resources and ecosystem factors support for TE by focusing on ECs (Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019). Therefore, to address the shortage of TE and sustainable socioeconomic development in Nigeria, a developing regional economy in Africa. This study aims to evaluate the role of ECs in supporting MSMEs to be TE and socioeconomic transformation actors. The study is structured as follows. Firstly, the extant literature is critically reviewed, explicitly focusing on MSMEs and developing economies, the main theoretical pillars of ECs and TE. Secondly, the research model, hypothesis, and the study's methodological approach are discussed. Thirdly, data is examined, contribution, the implications for practice, and recommendations are discussed.

2. Theoretical background

2.1. MSMEs in developing economy context

Nigeria's history of small businesses traces back to the pre-colonial era when villagers made more products than they could consume, prompting the exchange of goods with their neighbours within their communities (James-Unam et al. 2015). After independence in 1960, the government recognized the need to support indigenous entrepreneurs to keep sight of the mutual inter-relationship between economic growth, entrepreneurship development, and industrialization (Onakoya, Fasanya, and Abdulrahman 2013; Onyeje, Court, and Agbaeze 2020). Nigerian MSMEs play several roles in socioeconomic growth (Igwe et al. 2020). For example, they create employment to provide income for the entrepreneur and their family member. They help in small-scale manufacturing of basic products and food production, repair of essential goods, restaurants, clothes making, transportation, and contribute to GDP and economic growth. To support MSMEs, the government established agencies such as SMEDAN and the Federal Ministry of Industry, Trade, and Investment to provide training and technical and financial support. However, inefficiency, poor policy implementation, corruption and bureaucracy have undermined the effectiveness of the MSMEs (Amalu and Ajake 2019; Igwe et al. 2020). Despite some success, Nigerian MSMEs face ongoing challenges such as inadequate infrastructure, policy implementation gaps, and limited skills and finance to develop (Egere, Maas, and Jones 2022; Godwin and Simon 2021).

There is a need for further action to develop MSMEs and entrepreneurship sustainability in developing economies (Agyapong and Boohene 2020; Godwin and Simon 2021; James-Unam et al. 2015; Osotimehin et al. 2012) towards producing transformational entrepreneurship (TE) outcomes (Ratten and Jones 2018; Schoar 2010; Yoruk et al. 2022). TE is required to create sustainable employment and businesses to address social inequalities, limited growth and underdevelopment, which is particularly prevalent in developing countries (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019). The emphasis is to improve entrepreneurship activities to support MSMEs' productivity (Bichler et al. 2022; Onakoya, Fasanya, and Abdulrahman 2013; Volkmann et al. 2021) for them to become competitive, produce innovative products and services, assist national productivity, and contribute to national and regional socioeconomic development (James-Unam et al. 2015; Onyeje, Court, and Agbaeze 2020). Thus, EC requires attention to support MSMEs' role in socioeconomic transformation (Igwe et al. 2020; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022). The BRIC nations (Brazil, China, India, Russia, and

Malaysia) experienced improved productivity and global competitiveness from the 1970s to the present decade by supporting MSMEs with essential ECs (Godwin and Simon 2021; James-Unam et al. 2015). Furthermore, this study recognized assisting MSMEs acquire essential ECs would drive their systemic development towards achieving TE (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Miller and Collier 2010), which is essential in supporting national and regional socioeconomic development (Bichler et al. 2022; Godwin and Simon 2021; Onakoya, Fasanya, and Abdulrahman 2013; Volkmann et al. 2021).

2.2. ECs and socioeconomic development

ECs are the cluster of skills, including ability, knowledge, and behaviour required to succeed in business. EC is connected with new venture creation and MSMEs development because they are essential skills driving innovation, competitiveness, productivity and sustainability (Bacigalupo et al. 2016; Igwe, Lock, and Rugara 2022; Oyeku et al. 2014; RezaeiZadeh et al. 2017). Moreover, ECs are fundamental in facilitating MSMEs' systemic development (Bacigalupo et al. 2016; Inyang and Enuoh 2009) is critical for sustainable job creation, wealth creation and poverty reduction (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019). This can assist developing economies such as Nigeria in mitigating socio-cultural challenges and limited national development (Agyapong and Boohene 2020; Godwin and Simon 2021; James-Unam et al. 2015; Osotimehin et al. 2012). Thus, policymakers and stakeholders in both advanced and developing economies have acknowledged the dynamic contribution of MSMEs to sustainable socioeconomic development.

MSMEs constitute the most crucial sector of ventures in advanced and developing countries (Igwe et al. 2018; Jegede, Egbetokun, and Siyanbola 2012). For example, over 90% of enterprises in the developed economies belong to the MSMEs sub-sector, which accounts for over 55% of the gross domestic product (GDP) within these countries (Adeosun and Gbadamosi 2021; James-Unam et al. 2015). Similarly, within developing economies, 70% of Ghana businesses, 90% of South African registered businesses, and 90% in Nigeria are MSMEs and contribute over 50% to GDP (Adeosun and Gbadamosi 2021; James-Unam et al. 2015). Moreover, the future of socioeconomic growth and development depends on the MSMEs subsector because of their significance in the distribution, production, and consumption of goods and services (Agyapong and Boohene 2020; Igwe et al. 2018). MSMEs help recycle and repair essential goods that might otherwise become waste; they provide restaurants, clothes making, and transportation for low-income people to contribute to the domestic economy. MSMEs' contribution varies significantly between countries and environments. Nonetheless, they play a vital part in contributing to GDP and national development (Adeosun and Gbadamosi 2021; James-Unam et al. 2015).

Within developing economies, most MSMEs operate within the informal sector and represent 60% of the GDP. The informal sector mainly consists of businesses such as traders of merchandise, producing and selling essential goods and services, small-scale manufacturing, and food processing. Notwithstanding these GDP figures, developing nations still have significant unemployment figures. Market failures, ineffective policies, and regulations within developing countries undermine the MSMEs' realizing their potential and contributing positively to socioeconomic development (Godwin and Simon 2021; James-Unam et al. 2015).

2.3. The EC framework

EC applies to all spheres of business life, facilitating individuals to nurture their aspirations and develop their business ambitions (Bacigalupo et al. 2016). It enables people with the skills to build start-ups or scale-up businesses to effectively contribute to socioeconomic development (Bacigalupo et al. 2016; Igwe, Lock, and Rugara 2022; Jones et al. 2018; Oyeku et al. 2014; RezaeiZadeh et al. 2017). Moreover, starting a new venture requires the requisite skills and

knowledge (Hashim, Raza, and Minai 2018; Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009). These skills and knowledge, particularly in Nigeria, are underdeveloped, and critical business skill support resources are limited (Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Ratten 2020; Yoruk et al. 2022). ECs constitute various unique features and skills necessary for exceptional conduct and behaviour. For example, specific knowledge and understanding, leadership qualities, risk-taking, and skills such as management and marketing can lead to business success. Furthermore, ECs are recognized as a cluster of advanced features, including attributes, ability, and expertise businesses require to support innovation, productivity and sustainability (Hashim, Raza, and Minai 2018; Inyang and Enuoh 2009; Obschonka et al. 2017; Oyeku et al. 2014).

Although there is a shortage of literature regarding the relationship between MSMEs characteristics and ECs, ECs have been reported to positively impact MSMEs development (Hashim, Raza, and Minai 2018; Inyang and Enuoh 2009; Solesvik 2012). Thus, it is accepted that ECs influence MSMEs' systemic development (Igwe et al. 2020; Inyang and Enuoh 2009; James-Unam et al. 2015). In considering TE, the expectation is that EC would provide critical knowledge to realize such behaviours and outcomes. In defining the EC framework to support TE in Nigeria, this study focused on necessary and essential skills such as identifying opportunities and taking initiatives (Inyang and Enuoh 2009; Smith and Chimucheka 2014), managerial skills to run a business (Adisa, Abdulraheem, and Mordi 2014; Smith and Chimucheka 2014), business ethics to provide moral standards and principles (Marmer 2012; Schoar 2010), financial skill to anticipate the financial needs for the enterprise, funds acquisition and allocation of funds (Adisa, Abdulraheem, and Mordi 2014; Nwachukwu 2012), marketing skill to develop and manage customers and new markets (Adisa, Abdulraheem, and Mordi 2014; Agwu and Emeti 2014), business strategy skill to establish a short-term and long-term strategic plan for the business (Inyang and Enuoh 2009; Onakoya, Fasanya, and Abdulrahman 2013).

2.4. TE, new socioeconomic era and wealth creation

Deepening income inequality, unemployment, and socioeconomic challenges highlight the developing economy's situation (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Godwin and Simon 2021; Igwe et al. 2018; Maas, Jones, and Lockyer 2019). Although entrepreneurs are socially productive, they struggle to address significant challenges such as social inequality and unemployment, which are the two essential factors in addressing poverty, such as in Nigeria (Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Smith and Chimucheka 2014; Sousa 2019). TE creates ethical and innovative enterprises (Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Schoar 2010), which go beyond sustainable employment to supporting long-term societal benefits, helping socioeconomic challenges, and national development and growth (Maas, Jones, and Lockyer 2019). As a result, extensive changes that will positively influence socioeconomic development and national growth would be made possible by applying TE in developing economies (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Yoruk et al. 2022).

It is accepted that moving to the new socioeconomic era of TE is informed by information technology (Marmer 2012). MSMEs should be competent in understanding the global challenges that entail evaluating and integrating the ethical tenet of social, technological and traditional entrepreneurship (Egere, Maas, and Jones 2022; Marmer 2012; Schoar 2010). For instance, systemic entrepreneurship within this context signifies supporting entrepreneurship and harmonizing the individual and other sub-systems, such as society and institutions within the business space, interrelating and cooperating to produce a positive framework for opportunities (Agyapong and Boohene 2020; Maas, Jones, and Lockyer 2019; Miller and Collier 2010; Ratten and Jones 2018; Schoar 2010; Yoruk et al. 2022). For the evolution of the new socioeconomic value system to succeed, the focus is to address developing economies' social inequalities and underdevelopment (Agyapong and Boohene 2020; Maas, Jones, and Lockyer 2019). TE would accomplish this by utilizing the ethical tenets of social, technology scalability, and traditional/economic entrepreneurship. In this context,

TE should draw on Schumpeter's (1934) innovation ideology in the current socioeconomic value system because innovation is the central focus of supporting development at enterprise and national levels. Thus, MSMEs should be innovative to achieve the new socioeconomic value system. In addition, the MSMEs should have the essential ECs and creativity that would help combine technology with the social and traditional entrepreneurship value system (Agyapong and Boohene 2020; Maas, Jones, and Lockyer 2019; Yoruk et al. 2022).

Two distinctive groups of entrepreneurs were identified (Schoar 2010), namely, subsistence and transformational. Subsistence entrepreneurs generate income for survival, while transformational entrepreneurs focus on creating innovative ventures to provide sustainable employment and support national development. Moreover, TE is the real driver of economic development. It builds enterprises that expand and achieve growth to create sustainable employment opportunities (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022). In addition, TE offers innovative inventions that are sustainable, systematic, ethical and scalable. Although there are various research focuses on TE (Maas, Jones, and Lockyer 2019; Marmer 2012; Ratten and Jones 2018; Schoar 2010), only a limited effort and attention were dedicated to the study of the attributes of TE and the fundamental elements of this transformation and the diverse qualities and EC of these individuals.

TE entrepreneurs perceive entrepreneurship from the co-creation perspective and the divine creator (Miller and Collier 2010). The co-creation provides several contiguous ends, for which the creation of wealth is among them (Egere, Maas, and Jones 2022; Onakoya, Fasanya, and Abdulrahman 2013; Ratten and Jones 2018; Sousa 2019). Within this context, co-creation comprises understanding shared trust and selflessness, concern for mutual good and solidarity. It offers eventual personal fulfilment and sustainability more than subsistence entrepreneurship (Marmer 2012; Schoar 2010). The focus is on developing long-term economic benefits and sustainability (Marmer 2012; Yoruk et al. 2022). Indeed, to attain a modern economy within developing economies such as Nigeria is realizable through TE. However, the shift to a more advanced level of development from the traditional low-income economy requires substantial modifications to the production methodology, a process in which MSMEs should play fundamental roles by building new innovative businesses external to the subsistence/traditional enterprises (Maas, Jones, and Lockyer 2019; Marmer 2012; Miller and Collier 2010; Ratten and Jones 2018; Yoruk et al. 2022).

3. Theoretical framework model

There is a shortage of a theoretical framework for examining MSMEs characteristics and ECs in supporting TE outcomes. However, the literature suggests that ECs (e.g. business ethics, business management, business strategy, financial management, marketing management, and opportunity identification) can assist MSME's systemic development (Agyapong and Boohene 2020; Godwin and Simon 2021; Igwe, Lock, and Rugara 2022; Maas, Jones, and Lockyer 2019; Onyeje, Court, and Agbaeze 2020; Ratten and Jones 2018; Yoruk et al. 2022). Similarly, research highlights owners/manager's characteristics (e.g. gender, education, previous experience, and recent experience in business) can impact MSMEs development (Adisa, Abdulraheem, and Mordi 2014; Bird 1995; Mersha and Sriram 2018; Oyeku et al. 2014; Roxas, Ashill, and Chadee 2017). Previous studies suggest that MSMEs characteristics and ECs levels are essential in achieving TE (Egere, Maas, and Jones 2022; Marmer 2012; Ratten and Jones 2018; Schoar 2010; Yoruk et al. 2022). TE will create sustainable jobs, build wealth, and support growth and socioeconomic development in developing economies (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Onyeje, Court, and Agbaeze 2020; Yoruk et al. 2022). This study's theoretical framework suggests that the positive correlation between MSMEs owners/manager's characteristics and critical ECs can support sustainable business to achieve TE outcomes (Egere, Maas, and Jones 2022; Godwin and Simon 2021; Ratten and Jones 2018; Yoruk et al. 2022). The research theoretical framework is presented in Figure 1 below. The theoretical framework implies that TE is achievable if there is a positive relationship between Owners/Managers and ECs levels.
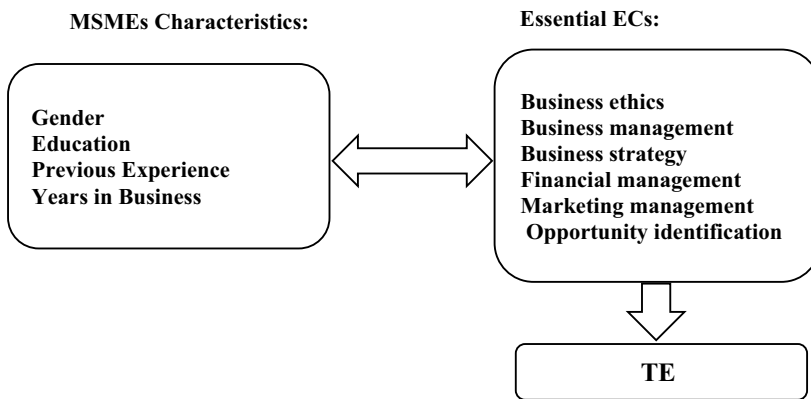
Figure 1. Theoretical framework model for the study.

3.1. Dependent variables: owners/managers EC

MSMEs with proper ECs could positively impact business development (Igwe et al. 2020; Inyang and Enuoh 2009; Isiaka 2022). The literature suggests that ECs are essential for MSMEs to improve business development (Inyang and Enuoh 2009; Isiaka 2022). Business ethics are necessary to ensure ethical business decision-making to support growth and success (Inyang and Enuoh 2009; Schoar 2010). Business management skills are a requisite in managing a venture successfully and a vital skill requirement for Nigerian MSMEs (Inyang and Enuoh 2009; James-Unam et al. 2015; Njoku, Ihugba, and Odii 2014; Smith and Chimucheka 2014). MSMEs with management skills can make appropriate decisions and stimulate the business's smooth running (Inyang and Enuoh 2009; James-Unam et al. 2015). Business strategy is recognized as a critical skill for business development in Nigeria (Inyang and Enuoh 2009; Onakoya, Fasanya, and Abdulrahman 2013). These skills include identifying long-term strategic plans/goals for the business. Financial management is critical for MSMEs' development because such knowledge helps anticipate business needs, including acquiring and allocating funds to produce optimum results (Adisa, Abdulraheem, and Mordi 2014; Inyang and Enuoh 2009; Nwachukwu 2012). Marketing knowledge is a core skill requirement that can facilitate innovation, growth, and sustainability over the long-term (Adisa, Abdulraheem, and Mordi 2014; Agwu and Emeti 2014; Inyang and Enuoh 2009). Opportunity identification skills would drive/support MSMEs to explore market opportunities, develop new markets and be competitive in existing markets (Adisa, Abdulraheem, and Mordi 2014; Agwu and Emeti 2014; Lateef and Keikhosrokiani 2022).

3.2. Independent variables: owners/managers characteristics

Owners/Manager's characteristics have been reported to impact MSME's development (Adeosun-Familoni 2015) and MSMEs' innovativeness (Roxas, Ashill, and Chadee 2017), including the external environment and cultural values (Adeosun-Familoni 2015; Isenberg 2011). Owners/Managers' gender relationship to business is uncertain because gender-based entrepreneurship research (Schneider 2017) in Africa is limited (Mersha and Sriram 2018). However, previous research recognized that male owners/managers were more confident in their ability to succeed, while females displayed a greater fear of success due to economic disfranchising (Mersha and Sriram 2018). The following hypothesis is considered:

H1: MSMEs' Owner's/Manager's gender significantly impacts their business competency to facilitate MSMEs' development to achieve transformational entrepreneurship.

Adisa, Abdulraheem, and Mordi (2014) and Agwu and Emeti (2014) suggest that the educational levels of owners/managers can impact business performance. With proper education, owners/managers have an improved influence on the business (Adisa, Abdulraheem, and Mordi 2014). Thus, it potentially explains the relationship between owner/manager education level and EC levels. The following hypothesis is considered:

H2: MSMEs Owner's/Manager's education level significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship.

Owner's/manager's prior experience before starting their own business is a factor that can stimulate MSMEs development (Bird 1995). Moreover, innovative entrepreneurs with previous work experience from large technology firms have been reported to pioneer, develop, and transform start-ups into significant sustainable ventures (Gompers, Lerner, and Scharfstein 2008). This indicates and validates that prior business experiences are critical in identifying opportunities and developing and transforming a business (Oyeku et al. 2014; Smith and Chimucheka 2014). Thus, the owner's/manager's EC levels can be significantly impacted by their previous experiences, which provides them with critical knowledge of developing, transforming and sustaining a business. The following hypothesis is considered:

H3: MSMEs Owners/Managers' previous experience significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship.

The owners/manager's current experience in the business constitutes an essential development factor affecting their current strategic approach and development needs (Mitchelmore and Rowley 2008; Oyeku et al. 2014). Moreover, start-ups and existing ventures face challenges due to the owner/manager's experience level (Dandaura 2014). Therefore, the owner's/manager's EC levels can be significantly impacted by their current years of experience in business, which is essential in developing, transforming and sustaining the business. The following hypothesis is considered:

H4: MSMEs Owners/Managers' experience in the business significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship.

4. Methodological approach

4.1. Research context

This correlational, quantitative study examines data gathered through a structured survey questionnaire with Nigerian MSMEs across diverse businesses. This approach facilitated the construction of the basis for investigation and offered exploration into the context and perspectives of Nigerian MSMEs. The study adopted the drop-and-pick type survey. The age of the MSMEs ranged from one to over 20-years old, and the MSMEs employed between one and over fifty employees. The MSMEs represented a variety of sectors, and the participants were the owner/manager of the business. Five hundred and seventy-six completed questionnaires were received for analysis.

4.2. Sample and participants

Measuring small business Owner's/Manager's competency levels is complex because of a shortage of universally accepted benchmarks. Moreover, no measurement exists for assessing requisite competencies and their impact on TE. To support this study, a questionnaire was developed to obtain data from Nigerian MSMEs. The list of the surveyed businesses for this study was drawn from the SMEDAN.

SMEDAN defined Micro as enterprises with 1 to 10 employees, small with 11 to 49, and medium with 50 to 199. From the SMEDAN registration of about 1,530,000 MSMEs, Yamane's (1967) formula was employed to define the sample size:

$$s = \frac{N}{[1 + N(e)]}$$

Inferred as: S = sample size, N = target population, e = marginal error (degree of freedom). With a 95% confidence level, a 2.5% margin of error applied and a population of 1,530,000. Hence:

$$s = \frac{1530000}{[1[1 + 1530000(0.025)]} s = \frac{1530000}{[1 + 1530000(0.000625)]} s = \frac{1530000}{957.25} = 1598$$

Consequently, the study surveyed 1,600 MSMEs across all industry groups in Nigeria, and 576 (36%) usable responses were obtained (See Appendix 1). MSMEs were recognized as the unit of analysis consistent with Egere, Maas, and Jones (2022), with the Owners/Managers as the primary target because they own or manage the business. The study collected data to measure the Owners/Manager's business competency levels.

4.3. Participants and questionnaire

The research aim informed the development of the questionnaire, consistent with Egere, Maas, and Jones (2022). Consequently, Descriptive Statistical Analysis (DSA) using multiple linear regression (MLR) was executed to interpret and understand the data consistent with Atiase et al. (2017). The questionnaire was a dropped-pick survey and adopted the checklists and Likert scale approach (Hair et al. 2015) for participants' understanding and simplicity. The questionnaire was structured as follows: Section A: Relates to the MSMEs Owners/Managers' gender, education level, previous experience, and recent experience in the business. Section B: Investigated the MSMEs Owners/Managers' EC levels.

5. Analysis of data

5.1. Kaiser-Meyer-Oikin (KMO) test

The KMO test examined the sampling adequacy for MSMEs ECs variables. The test reveals a KMO of 0.848 (Table 1), Bartlett Test of Sphericity: χ2 = 6901.136, df = 91, p < 0.000). The KMO values obtained were more significant than 0.6, which exceeded the recommended minimum value of 0.5 (Hair et al. 2015). Thus, substantiating the sampling adequacy to be sufficient and valid to perform factor analysis. Moreover, the Bartlett Sphericity Test demonstrates that there were good correlations (*sig = 0.000, df > 0.7*) existing among the variables (Burns and Burns 2008).

Table 1. KMO test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.848
Bartlett's Test of Sphericity	Approx. Chi-Square	6901.136
	df	91
	Sig.	.000

5.2. Factor analysis

A principal component analysis (PCA) with varimax rotation was performed to observe the MSMEs EC structure (See Tables 2 and 3 for factor analysis and total variance results). Referring to Anderson and Gerbing (1988), the study checked the constructs of the factored structure and suggested deleting elements with loadings < 0.50 for new models (Hancock, Mueller, and Stapleton 2010). The research factored the MSMEs EC variables to observe the factor construct loading of items. The observed variables loaded appropriately if loading 0.500 or above on a factor, and the difference between the main loading and other cross-loadings of 0.300 (Howell et al. 2005). In the PCA with varimax rotation, only items with significant loadings exceeding 0.500 were used in the regression analysis.

5.3. Reliability and viability

The research achieved reliability by measuring the internal consistency of the factored variables. Statistically, reliability analysis tested the internal consistency of the constructs. Thus, the construct's reliability test was conducted consistent with Kothari (2004) and Hair et al. (2015). The study utilized Cronbach's Alpha (Cronbach's α) to test the variables' reliability and internal consistency. The Cronbach's Alpha result for MSMEs ECs variables was 0.870 (Table 4). Thus, the constructs had Cronbach's alpha greater than 0.70, indicating higher reliability (Hair et al. 2015). Parasuraman, Zeithaml, and Berry (1988) state that a construct's validity depends on how the construct items represent the measured themes. The construct used in this study was valid

Table 2. Factor analysis.

	Initial	Extraction
Communalities		
BusEthicsSkill	1.000	.799
BusMgtSkill	1.000	.848
FinancialMgtSkill	1.000	.657
MarketingMgtSkill	1.000	.778
OpportunityIdentificationSkill	1.000	.721
BusStrategySkill	1.000	.637

Extraction Method: Principal Component Analysis.

Table 3. Total variance explained.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.140	52.336	52.336	3.140	52.336	52.336
2	1.300	21.668	74.003	1.300	21.668	74.003
3	.701	11.682	85.685			
4	.561	9.355	95.040			
5	.210	3.501	98.540			
6	.088	1.460	100.000			

Extraction Method: Principal Component Analysis.

Table 4. Reliability test.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.870	.870	6

Table 5. Item-total statistics for the variables.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Item-Total Statistics					
BusEthicsSkill	12.47	8.406	.771	.826	.676
BusMgtSkill	12.38	7.883	.790	.849	.666
FinancialMgtSkill	12.95	12.043	.389	.466	.778
MarketingMgtSkill	12.74	10.289	.576	.589	.737
OpportunityIdentificationSkill	12.42	8.248	.712	.627	.693
BusStrategySkill	12.99	14.049	−.092	.107	.848

because the constructs were developed from previous work (Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022) focused on ECs in SSA economies. Table 5 shows the item-total statistics, which offer the competencies' reliability and measured constructs.

6. Findings

6.1. Biographic data

From the usable responses for the analysis (See Table 6), 413 were male (72%), and 163 were female (28%). Although the survey shows adequate gender representation, male MSMEs Owners/ Managers were predominant. However, the 28% female shows a surge of females in business because evidence from SMEDAN in 2013 reported female ownership as 23%. MSMEs Owners/ Managers with Bachelor's degrees were 372 (64%), and diploma degree holders were 120 (21%). By contrast, master's degrees were 54 (9%), and primary/secondary 32 (6%). Overall, 546 (94%) held a university degree, suggesting a surge of graduates attempting business start-ups, consistent with SMEDAN that more than 51% of MSMEs are graduate start-ups. Table 6 shows the biographic data of the MSMEs.

The previous experience was 264 (46%), representing MSMEs owners/managers without experience before starting a business. A modest 46 (8%) had less than a year of previous experience. Overall, 127 (22%) had 1–5 years of prior experience, followed by 96 (17%) with 6–10 years of previous experience, and 43 (8%) had 11–15 years of prior experience. The data demonstrates that 241 (42%) were in business for 1–5 years. Furthermore, 220 (38%) were in business for 6–10 years, whilst 107 (19%) had been in business for 11–15 years. Only 8 (1%) were in business for over 15 years. The evidence supports a growing rate of new business owners in Nigeria. See Appendix 1, which shows the MSME's experience responses.

Table 6. Biographic data.

		Frequency	Percent	Valid Percent	Cumulative Percent
MSMEsGender					
Valid	Male	413	71.7	71.7	71.7
	Female	163	28.3	28.3	100.0
	Total	576	100.0	100.0	
MSMEsEducation					
Valid	Primary/Secondary	32	5.6	5.6	5.6
	Diploma	120	20.8	20.8	26.4
	Bachelor	370	64.2	64.2	90.6
	Masters	54	9.4	9.4	100.0
	Total	576	100.0	100.0	

6.2. MSMEs owners/managers ECs level

In the analysis of MSMEs' responses (See Appendix 2) on their business ethics, overall, 62% and 2% indicate they are less competent and not competent, respectively. In summary, 63% indicate they are less competent in business management. When analysing business strategy, 76% and 5% noted they are less competent and not competent. Overall, 84% indicate they are less competent in financial management. In analysing marketing management, overall, 75% indicate they are less qualified. In summary, when analysing opportunity identification, 51% and 5% indicate they are less competent and not competent, respectively. This result reflects the high level of MSMEs' failure and under-development in Nigeria (Agwu and Emeti 2014; Anyadike, Emeh, and Ukah 2012; Inyang and Enuoh 2009).

7. Statistical analysis

7.1. Descriptive Statistics

The descriptive statistical breakdown analysis (see Appendix 3) highlights the number of MSMEs respondents and the mean, standard deviation, and variance statistics. Overall, the mean indicates the central tendency of the data set, with the standard deviation indicating the spread of the data to the mean. In summary, the data sets demonstrated a low standard deviation across the variables, which indicates that the data clustered around the mean, thus suggesting the actual values lay within the range of the mean and the data are a true reflection of the population (Burns and Burns 2008). In addition, a low variance suggests data points are close to the mean and each other, indicating consistency in the opinion of the situation (Burns and Burns 2008).

7.2. Regression analysis

To execute multiple linear regression (MLR), the study coded the data into SPSS software version 25 to test the hypotheses. The stepwise regression model was applied in analysing the model. The study performed MLR analysis consistent with Berry (1993). Referring to Poole and O'Farrell (1971) denoted as:

$$Y = a + \sum_{i=1}^{k} b_i X_i + u$$

Where Y represents the dependent variable: $X1, X2 \ldots Xi \ldots X$ is k independent variables: a & bi denotes the regression coefficients, indicating the parameters of the model regarding a given population; and u is the error term, which can be because of the effect of an unknown predictor variable (s) or even a very random component within the relationship. Subsequently, regression analysis was executed to observe the statistical significance of the predictor and dependent variables. The multiple regression results (See Appendix 4) are critical in understanding the impact of EC in driving MSMEs' systemic development to support transformational entrepreneurship. Appendix 4 shows the variance analysis (ANOVA), which presents the statistical significance between the regressed MSMEs characteristics and EC with a significant correlation at a 1% significance level ($p < 0.000$). For example, the evidence shows the independent and dependent are statistically significant at a 1% significance level ($p < 0.000$). MSMEs' gender ($p < 0.001$); years in business ($p < 0.001$), MSMEs' education level ($p < 0.001$), and MSMEs' previous experience ($p < 0.001$).

The study observed and analysed the R^2 and its adjusted *P-values* and *F-values* from the regression results. As indicated, the R^2 indicates the overall fitness of the regression model. The adjusted R^2 values between zero and one explain the variables' variances because of the predictor variables. The closer the adjusted R^2 values are to one, the higher the predictor variables' variance. Furthermore, the closer the values are to zero, the lesser the MSMEs' competency components. Within the

regression results, the R^2 values are business ethics (0.142), business management (0.176), business strategy (0.198), financial management (0.435), marketing management (0.051), and opportunity identification (0.093). The adjusted R^2 values are business ethics (0.136), business management (0.170), business strategy (0.192), financial management (0.431), marketing management (0.044), and opportunity identification (0.086). These statistics imply that the regression model can explain the MSME's characteristics on competency levels.

The *F-value* further observed whether the independent variables are statistically significant with the dependent variables. To evaluate the model's overall fitness, the study observed the ANOVA *F-values* of the regression model. The *F-values* are business ethics (23.649), business management (30.404), business strategy (35.225), financial management (109.743), marketing management (7.659), and opportunity identification (14.566), which are all significant at 1% level ($p < 0.000$), determined by the *p-values* of the *F-statistic*. Similarly, a relationship is statistically significant if the *p-value* is less than 0.05 or 0.01. See Appendix 4 for the multiple regression model summary, from which the researchers discussed the R^2 and its adjusted values, *P-values*, and *F-values*. The regression tables report the statistical correlation between the independent variables (Owners/Managers characteristics) and the dependent variables (ECs levels).

7.3. Hypotheses testing

MLR analyses were conducted to test *H1, H2, H3* and *H4*. Six critical ECs were examined to assess MSMEs. The regression analysis reveals a positive correlation between the regressed factors (MSMEs characteristics and ECs levels) (see Appendix 4 for results) with a p-value of ($p = 0.000$). The regression supports H1 at a 1% significance level ($p = 0.000$). Thus, H1 is supported. *H1: MSMEs' Owner's/Manager's gender significantly impacts their business competency to facilitate MSMEs' development to achieve transformational entrepreneurship*. It implies that the gender of the *Owner/Manager* can affect their EC development, which is critical in producing TE behaviour.

The regression supports H2 at a 1% significance level ($p = 0.000$). Thus, H2 is supported. *H2: MSMEs Owner's/Manager's education level significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship*. The implication is that the education level is essential to EC development, which is critical in helping TE.

The regression supports H3 at a 1% significance level ($p = 0.000$). Thus, H3 is supported. *H3: MSMEs Owners/Managers' previous experience significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship*. The assumption is that the previous experience affects EC development and is critical in supporting TE.

The regression supports H4 at a 1% significance level ($p = 0.000$). Thus, H4 is supported. *H4: MSMEs Owners/Managers' experience in business significantly impacts their business competency to facilitate MSMEs development to achieve transformational entrepreneurship*. The implication is that recent experience influences EC development in producing TE behaviour and outcomes.

8. Discussion

The extant literature on TE predominantly has examined financial resources (Schoar 2010), market regulations (Maas, Jones, and Lockyer 2019; Schoar 2010), infrastructure (Egere, Maas, and Jones 2022; Yoruk et al. 2022) and technology (Marmer 2012) as a way in which MSMEs and stakeholders could develop responses in realizing TE (Egere, Maas, and Jones 2022; Ratten and Jones 2018) to help the limited socioeconomic development within developing economies (Agyapong and Boohene 2020; Igwe, Lock, and Rugara 2022; Isiaka 2022; Lateef and Keikhosrokiani 2022). In this study, we demonstrated the need for understanding the criticality of ECs, not solely in the context of MSMEs development, but in advancing TE realization across developing economies. Our findings suggest that owners/managers levels of ECs form a resilience capability to improve MSMEs outcomes within the extreme situations of developing economies with limited national and regional development to

support sustainable employment and curb rising inequalities among its citizens (Godwin and Simon 2021; Igwe et al. 2018; Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022).

Existing literature has emphasized the critical importance of ECs within the MSMEs to support systemic business development (Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022). MSME's development from the owners/managers level has underlined the importance of proper ECs involving cognitive skill sets across business ethics, managerial competence, business strategy, financial management, marketing, and opportunity identification, which owners/managers can use to improve the business outcomes towards TE. However, Nigerian MSMEs face the challenge of obtaining the relevant ECs (Godwin and Simon 2021; Igwe et al. 2018; Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022). It is essential to highlight that the educational level of MSMEs owners/managers might be a contributory factor towards EC development and TE outcomes (Agyapong and Boohene 2020; Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022; Yoruk et al. 2022). The findings further the understanding of this theory, which previous empirical research on developing economies has not considered (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Inyang and Enuoh 2009). The evidence offers added support that the owner's/manager's characteristics could assist in understanding ECs impact on business development from an individual-level perspective. Moreover, existing literature underscores MSMEs in most developing nations with similar economic conditions to Nigeria have limited access to EC development programs and, where available, are insufficient, ineffective or poorly designed (Igwe, Lock, and Rugara 2022; Inyang and Enuoh 2009; Isiaka 2022; Lateef and Keikhosrokiani 2022; Onakoya, Fasanya, and Abdulrahman 2013).

The findings suggest a limited ethical understanding of the principles that guide the business venture and facilitate the enterprises to develop and maintain a healthier interaction with investors. Nigerian MSMEs lack ethical practices, such as the moral standards and principles that act as guidelines for conducting business. Business ethics are critical for MSMEs' systemic development (Inyang and Enuoh 2009; Marmer 2012; Schoar 2010). Ethics is the understanding of the principles that guide a business and facilitate the enterprises to develop and maintain a healthier interaction with stakeholders. Business ethics is a critical MSME EC, which could help enterprises realize TE because it can impact business development and sustainability (Inyang and Enuoh 2009; Maas, Jones, and Lockyer 2019; Ratten and Jones 2018).

Our findings reveal that Nigerian MSMEs lacked business management expertise and engaged managers or less competent family members in crucial decision-making, irrespective of their management skills. Business management is a critical requirement for MSMEs in managing a venture successfully. Moreover, business management is vital for sound decisions to drive growth and development (Agyapong and Boohene 2020; James-Unam et al. 2015; Njoku, Ihugba, and Odii 2014; Smith and Chimucheka 2014). Indeed, business management is critical for MSMEs EC, which can positively impact sustainability (Agyapong and Boohene 2020; Ratten 2020). Among Nigerian MSMEs, there is a failure to implement critical long-term strategic plans and goals for the business, affecting the long-term development needs of the business. This is because the MSMEs focus immediate financial gains against the long-term sustainability of the business.

Business strategy is a vital requirement for MSMEs. For example, MSMEs' ability to identify long-term strategic plans and goals for the business to be sustainable. This implies having the EC determine the future strategic approach of the company, which could facilitate TE. Due to increasing domestic market competition and globalization, business strategy is significant in developing economies like Nigeria. The business strategy could significantly assist TE because of the positive impact on MSMEs development (Dandaura 2014; Olotu 2014; Onakoya, Fasanya, and Abdulrahman 2013).

There has been a lack of financial management skills and a poor understanding of financial management practices such as the anticipation, acquisition and proper allocation of financial resources. Furthermore, Nigerian MSMEs display and preserve values, which nurture activities and

behaviours hostile to the systematic accumulation of capital. MSMEs require knowledge of financial management to anticipate the business needs for acquiring and allocating funds to produce optimum results. The impact of financial management on MSMEs development is critical because finance is essential for MSMEs' to achieve TE (Agyapong and Boohene 2020; Ratten 2020; Ratten and Jones 2018; Schoar 2010).

Nigerian MSMEs rarely engage in innovative product marketing, relying on traditional practices. In developing economies, marketing is essential to facilitate innovation, growth, and sustainability in the long-term, and it could help MSMEs achieve TE. Moreover, the impact of marketing on MSMEs is recognized as critical for their development (Adisa, Abdulraheem, and Mordi 2014; Dandaura 2014; Onakoya, Fasanya, and Abdulrahman 2013; Smith and Chimucheka 2014). Effective marketing is critical for the success of an enterprise, which can positively support TE (Agyapong and Boohene 2020; Ratten and Jones 2018).

Nigerian MSMEs are not skilled in identifying opportunities because they rarely produce novel products to create a niche market (Inyang and Enuoh 2009). Instead, they focus on replicating and recycling products (Bula 2012; Olotu 2014). It is accepted that opportunity identification would help MSMEs to explore market opportunities and be competitive. Therefore, supporting MSMEs' expansion beyond their scope into innovative and global entities. MSMEs' growth and sustainability are driven by entrepreneurial opportunities, which involve identifying and utilizing opportunities through risk-taking and allocating resources to maximize profit. This implies that opportunity identification would positively impact TE (Agyapong and Boohene 2020; Godwin and Simon 2021; Igwe, Lock, and Rugara 2022; Maas, Jones, and Lockyer 2019). Our findings demonstrate that for MSMEs within developing economies contexts, there was a need to engage owners/managers in developing critical business ECs.

9. Conclusions

9.1. Theoretical implications and contribution of the study

This study made sufficient theoretical contributions to small business development within a national and regional economic context, and offers adequate research contribution to support further research in the field of small business, including implications for policy and practice. It develops and empirically tests a theoretical framework and demonstrates a correlation between MSMEs characteristics and EC development to support TE outcomes. Specifically, we extend the existing literature on TE (Agyapong and Boohene 2020; Egere, Maas, and Jones 2022; Maas, Jones, and Lockyer 2019; Ratten 2020; Ratten and Jones 2018; Yoruk et al. 2022) by focusing on MSMEs characteristics and EC and their usefulness in developing TE across developing economies. In this context, we transcend the traditional view that MSMEs rely solely on financial resources to achieve TE by demonstrating the critical importance of EC. Moreover, the theoretical framework presented a unique understanding of this research by recognizing ECs fundamental significance in supporting MSMEs development. We acknowledged that MSMEs should possess adequate EC to produce TE outcomes in SSA countries, such as Nigeria, and other developing economies.

Furthermore, it is understood that the challenges to MSMEs' development towards TE occurred because they lacked proper ECs. Moreover, this study addresses the research gap to assist policy and practice in adopting a holistic approach towards MSMEs' systemic development to achieve TE within Nigeria and other SSA economies, which, before this study, has not been the focus of empirical research. Additionally, by developing and empirically testing a theoretical framework, the study has made a theoretical contribution to the literature on TE. Since this study focuses on Nigeria, the framework can be applied within other similar SSA countries and developing economies to provide an understanding of the role of ECs in supporting MSMEs towards TE development.

9.2. Implications for policy and practice

This study provided practical implications for small businesses, policymakers, practitioners, and agencies focusing on MSMEs development within SSA and other developing economies with similar small business environments. EC is critical for MSMEs' systemic development in producing and supporting TE outcomes in SSA and developing countries. The findings in this study would help research focusing on developing economies to investigate small businesses to provide additional qualitative layers of understanding into evidence around their shortage of sustainability, resilience and TE to inform policy and practice. The methodology should be a policy framework integrating academia, small businesses and policy. This is because MSME development requires a coherent approach and should be integrated into enterprise research and all socioeconomic development structures and policies that are focus on improving the contribution of small businesses to domestic and regional development in SSA and developing economies. Several SSA countries including Nigeria have developed and implemented a policy framework to support MSMEs. However, such efforts were often inadequate and fell short of expectations. Thus, negatively impacting MSMEs' development and the shortage of TE outcomes. The evidence in this research provides a practical framework for MSMEs, policymakers and other stakeholders to adopt EC development to improve TE outcomes, which is critical for business sustainability and socioeconomic development in SSA and developing economies.

9.3. Recommendations

ECs development should be a primary focus of policymakers in developing an intervention framework to help MSMEs achieve TE in developing economies to support national and regional development. This is because ECs are critical in realizing TE outcomes. Policymakers should prioritize ECs development when defining intervention frameworks to support MSMEs. There is a need to apply a holistic approach to address Nigeria's present unemployment, poverty, and socioeconomic challenges. This research recognized TE as a long-term strategy to address these social challenges. Thus, it is essential to develop policies and reformat existing ones to facilitate TE to build sustainable businesses with long-term benefits to society and national economies. These policies should assist MSMEs in acquiring ECs through early education, a national entrepreneurial training framework, and other critical resources such as adequate infrastructure, electricity, access roads, and transportation. In addition, there is a need to improve existing policies and regulations to facilitate the ease of doing business to support investments. The government must also review policies to reduce barriers that negatively impact MSMEs access to critical resources such as finance and market penetration.

This research found several systemic problems, such as a shortage of critical EC among MSMEs Owners/managers. These challenges require a new framework and a change in perspective, practices, approach, and mindset to support MSMEs. Where government, businesses and universities combine to define and implement TE-focused policy initiatives. This is because long-term issues cannot be addressed with short-term initiatives and flawed policies, which is the situation in most developing economies such as Nigeria. The key recommendation is to support MSMEs' sustainability to address these systemic challenges by focusing on MSME's EC development through apprenticeship training and a coherent entrepreneurial curriculum/training framework. Furthermore, the constraints on e-commerce/technology adoption among MSMEs are concerning; therefore, an adequate policy should be developed. Significant support should be available to create, regulate and educate/train MSMEs with modern business skills, such as technology adoption.

Furthermore, bureaucracy and corruption impose a disproportionate burden on MSMEs, thus negatively impacting their development. Bureaucracy and corruption manifest in excessive or overly rigid administrative procedures, unnecessary levies and licence requirements, and prolonged decision-making processes involving multiple officials constrain business activities. As a result, the government should strengthen its enforcement mechanisms. The use of technology to bypass

administrative bottlenecks, such as online access to services, should be encouraged. Policies should be developed and implemented to create efficient institutional structures to coordinate and monitor administrative bottlenecks. It is essential to involve the MSMEs in the decision-making process to ensure that reforms tackle the real problems from the Owners/Managers perspective. For example, a wide-reaching consultation between policymakers, stakeholders and MSMEs would increase the chances of successful reform.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Odafe Martin Egere ⓘD http://orcid.org/0000-0003-1796-4458
Gideon Maas ⓘD http://orcid.org/0000-0002-2489-469X
Paul Jones ⓘD http://orcid.org/0000-0003-0417-9143

Data availability statement

Due to ethical restrictions, privacy concerns, and the nature of this research, participants declined their consent to share their data publicly.

Ethical approval statement

For this study, the researcher appraised the magnitude of all sensitive information from participants and its effect on the research and the investigation. Participants' opinions and suggestions are respected, and the information collected is confidential. Thus, participants were given an informed consent form explaining the purpose of the study's researchers. Moreover, during the data collection process, the person-to-person contact offered the opportunity for more collaboration and clarification on ethical guidelines.

References

Adeosun, O. T., and I. I. Gbadamosi. 2021. "Impact of Non-Oil Sectors on GDP/Capita in Selected African Countries: Evidence from Panel Analysis." *World Journal of Science, Technology and Sustainable Development* 18 (3): 274–284. https://doi.org/10.1108/WJSTSD-03-2021-0037.

Adeosun-Familoni, O. 2015. "Entrepreneurship and the Nigerian Cultural Context." *Journal of Business & Economics* 6 (10): 1785–1790. https://doi.org/10.15341/jbe(2155-7950)/10.06.2015/013.

Adisa, T. A., I. Abdulraheem, and C. Mordi. 2014. "The Characteristics and Challenges of Small Businesses in Africa: An Exploratory Study of Nigerian Small Business Owners." *Economic insights-Trends and Challenges* 111 (4): 1–14. https://www.researchgate.net/publication/271530384.

Agwu, M. O., and C. I. Emeti. 2014. "Issues, Challenges and Prospects of Small and Medium Scale Enterprises (SMEs) in Port-Harcourt City, Nigeria." *European Journal of Sustainable Development* 3 (1): 101–114. https://doi.org/10.14207/ejsd.2014.v3n1p101.

Agyapong, D., and R. Boohene. 2020. "Transformational Entrepreneurship and SMEs: An Emerging Country Context." In *Enterprising Africa*, edited by S. By Dobson, P. Jones, D. Agyapong, and G. Maas, 3–11. England, UK: Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780429427725-2/transformational-entrepreneurship-smes-daniel-agyapong-rosemond-boohene.

Amalu, T. E., and A. O. Ajake. 2019. "Developing Natural Lakes for Socioeconomic Development: The Case of Nike Lake Enugu State, Nigeria." *Geo Journal* 84 (2): 519–531. https://doi.org/10.1007/s10708-018-9873-4.

Amornkitvikai, Y., S. Y. Tham, C. Harvie, and W. W. Buachoom. 2022. "Barriers and Factors Affecting the e-Commerce Sustainability of Thai Micro-, Small-and Medium-Sized Enterprises (MSMEs)." *'Sustainability* 14 (14): 8476.

Anderson, J. C., and D. W. Gerbing. 1988. "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach." *Psychological Bulletin* 103 (3): 411. https://doi.org/10.1037/0033-2909.103.3.411.

Anyadike, N., I. J. Emeh, and F. O. Ukah. 2012. "Entrepreneurship Development and Employment Generation in Nigeria: Problems and Prospects." *Universal Journal of Education and General Studies* 1 (4): 88–102. https://nairametrics.com/wp-content/uploads/2013/02/enterprenuership-development-in-Nigeria.pdf.

Atiase, V. Y., S. Mahmood, Y. Wang, and D. Botchie. 2017. "Developing Entrepreneurship in Africa: Investigating Critical Resource Challenges." *Journal of Small Business and Enterprise Development* 25 (4): 644–666. https://doi.org/10.1108/JSBED-03-2017-0084.

Bacigalupo, M., P. Kampylis, Y. Punie, and G. Van den Brande. 2016. "'*EntreComp: The Entrepreneurship Competence Framework*', Publication Office of the European Union." *Luxembourg: Official Journal of the European Union* 10:593884. https://core.ac.uk/download/pdf/38632642.pdf.

Berry, W. D. 1993. *Understanding Regression Assumptions*. Vol. 92. New York, USA: Sage Publications. https://doi.org/10.4135/9781412986427.

Bichler, B. F., A. Kallmuenzer, M. Peters, T. Petry, and T. Clauss. 2022. "Regional Entrepreneurial Ecosystems: How Family Firm Embeddedness Triggers Ecosystem Development." *Review of Managerial Science* 16 (1): 15–44. https://link.springer.com/article/10.1007/s11846-020-00434-9.

Bird, B. 1995. "Towards a Theory of Entrepreneurial Competency." In *Advances on Entrepreneurship, Firm Emergence and Growth*, edited by Jerome A. Katz and Robert H. Brockhaus, 51–72. New York: JAI Press. https://doi.org/10.1108/S1074-754020190000021011.

Bula, H. O. 2012. "Evolution and Theories of Entrepreneurship: A Critical Review on the Kenyan Perspective." *International Journal of Business and Commerce* 1 (11): 81–96. https://www.ijbcnet.com/1-11/IJBC-12-11106.pdf .

Burns, R. P., and R. Burns. 2008. *Business Research Methods and Statistics Using SPSS*. New York, USA: Sage Publishers. ISBN 978-1-4129-4529-5.

Dandaura, E. S. 2014. "Cultural Entrepreneurship Development in Nigeria." A Paper Presented at World Day for Cultural Diversity for Dialogue and Development, Organized by the Nigeria Institute for Cultural Orientation, Abuja, 21st May. https://www.academia.edu/17320905/Cultural_Entrepreneurship_Development_in_Nigeria.

Egere, O. M., G. Maas, and P. Jones. 2022. "A Critical Analysis of the Nigerian Entrepreneurial Ecosystem on Transformational Entrepreneurship." *Journal of Small Business Management* 62 (3): 1187–1218. https://doi.org/10.1080/00472778.2022.212310.

Eniola, A. A. 2014. "The Role of SME Firm Performance in Nigeria." *Arabian Journal of Business and Management Review* 3 (12): 33–47. Vol. 62 No. 3, pp. 1187-1218. https://doi.org/10.1080/00472778.2022.2123109.

George, G., C. Corbishley, J. N. Khayesi, M. R. Haas, and L. Tihanyi. 2016. "Bringing Africa in: Promising Directions for Management Research." *Academy of Management Journal* 59 (2): 377–393. https://doi.org/10.5465/amj.2016.4002.

Godwin, T. G., and I. A. Simon. 2021. "Financing Entrepreneurship Development in Nigeria Through Informal Financial Institutions." *International Journal of Research Science and Management* 9 (2): 8–17. https://www.globalscientificjournal.com/researchpaper/FINANCING_ENTREPRENEURSHIP_DEVELOPMENT_THROUGH_INFORMAL_FINANCIAL_INSTITUTIONS_IN_NIGERIA.pdf.

Gompers, P. A., J. Lerner, and D. S. Scharfstein. 2008. "Entrepreneurial Spawning: Public Corporations and the Formation of New Ventures: 1986-1999." *Journal of Finance* 60 (2): 577–614. https://doi.org/10.1111/j.1540-6261.2005.00740.x.

Haddoud, M. Y., A. K. E. Onjewu, W. Nowinski, and K. Alammari. 2022. "Assessing the Role of Entrepreneurship Education in Regulating Emotions and Fostering Implementation Intention: Evidence from Nigerian Universities." *Studies in Higher Education* 47 (2): 450–468. https://doi.org/10.1080/03075079.2020.1758652.

Hair, J. F., Jr, M. Wolfinbarger, A. H. Money, P. Samouel, and M. J. Page. 2015. *Essentials of Business Research Methods*. UK: Routledge. https://books.google.je/books?id=GfnqBgAAQBAJ&printsec=frontcover#v=onepage&q&f=false.

Hancock, G. R., R. O. Mueller, and L. M. Stapleton. 2010. *The Reviewer's Guide to Quantitative Methods in the Social Sciences*. England, UK: Routledge. ISBN 9781138800137.

Hashim, N. A. B., S. Raza, and M. S. Minai. 2018. "Relationship Between Entrepreneurial Competencies and Small Firm Performance: Are Dynamic Capabilities the Missing Link?" *Academy of Strategic Management Journal* 17 (2): 1–10. https://www.abacademies.org/articles/Relationship-between-entrepreneurial-competencies-and-small-firm-1939-6104-17-2-198.pdf.

Howell, A., J. Cuzick, M. Baum, A. Buzdar, M. Dowsett, J. F. Forbes, G. Hoctin-Boes, J. Houghton, G. Y. Locker, and J. S. Tobias. 2005. "Results of the ATAC (Arimidex, Tamoxifen, Alone or in Combination) Trial After Completion of 5 Years' Adjuvant Treatment for Breast Cancer." *Lancet* 365 (9453): 60–62. https://doi.org/10.1016/S0140-6736(04)17666-6.

Igwe, P. A., D. Lock, and D. G. Rugara. 2022. "What Factors Determine the Development of Employability Skills in Nigerian Higher Education?" *Innovations in Education and Teaching International* 59 (3): 337–348. https://doi.org/10.1080/14703297.2020.1850319.

Igwe, P. A., K. Odunukan, M. Rahman, D. G. Rugara, and C. Ochinanwata. 2020. "How Entrepreneurship Ecosystem Influences the Development of Frugal Innovation and Informal Entrepreneurship." *Thunderbird International Business Review* 62 (5): 475–488. https://doi.org/10.1002/tie.22157.

Igwe, P. A., A. N. A. Ogundana, O. M. Egere, and J. A. Anigbo. 2018. "Factors Affecting the Investment Climate, SMEs Productivity and Entrepreneurship in Nigeria." *European Journal of Sustainable Development* 7 (1): 182–182. https://doi.org/10.14207/ejsd.2018.v7n1p182.

Inyang, B. J., and R. O. Enuoh. 2009. "Entrepreneurial Competencies: The Missing Links to Successful Entrepreneurship in Nigeria." *International Business Research* 2 (2): 62–70. https://doi.org/10.5539/ibr.v2n2p62.

Isenberg, D. 2011. "The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship." *Presentation at the Institute of International and European Affairs*. Dublin, Ireland. http://www.innovationamerica.us/images/stories/2011/The-entrepreneurship-ecosystem-strategy-for-economic-growth-policy-20110620183915.pdf.

Isiaka, E. M. 2022. "Entrepreneurial Skills Development as Catalyst for Poverty Alleviation and Youth Empowerment in Kogi State, Nigeria." *International Journal of Public Administration and Management Research* 8 (1): 57–72. http://journals.rcmss.com/index.php/ijpamr/article/view/658.

James-Unam, M., C. Agorzie, A. Bello, and F. James-Unam. 2015. "Enhancing Sustainable Development of Small and Medium-Scale Enterprises Through Total Quality Management: Evidence from Nigeria." *IFE Journal of Entrepreneurship and Business Management* 1 (1): 25–33. https://scholar.oauife.edu.ng/james4exploits/files/articles_9_-_monday_-_tqm_in_smes_ifeds_final_correction.pdf.

Jegede, O. O., A. A. Egbetokun, and W. O. Siyanbola. 2012. "Assessment of Technological Innovations in Selected Indigenous Oilfield Servicing Firms in Nigeria." *African Journal of Science, Technology, Innovation and Development* 4 (2): 69–91. https://hdl.handle.net/10520/EJC132170.

Jones, P., and G. Maas. 2019. "Conclusions on Transformational Entrepreneurship." In *Transformational Entrepreneurship Practices*, edited by Gideon Maas and Paul Jones, 105–113. Cham: Palgrave Pivot. https://doi.org/10.1007/978-3-030-11524-1_7.

Jones, P., G. Maas, S. Dobson, R. Newbery, D. Agyapong, and H. Matlay. 2018. "Entrepreneurship in Africa, Part 2: Entrepreneurial Education and Ecosystems." *Journal of Small Business and Enterprise Development* 25 (4): 550–553. https://doi.org/10.1108/JSBED-08-2018-400.

Joseph, T., P. Obikaonu, C. Ariolu, C. Nwolisa, and A. Aderohunmu. 2021. "Smes Intervention Programmes in Nigeria: Evaluating Challenges Facing Implementation." *Applied Journal of Economics, Management and Social Sciences* 2 (1): 16–25. https://doi.org/10.53790/ajmss.v2i1.10.

Kothari, C. R. 2004. *Research Methodology: Methods and Techniques*. 2nd ed. Delhi, India: New Age International Ltd. Publisher. ISBN: 978-81-224-2488-1.

Lateef, M., and P. Keikhosrokiani. 2022. "Predicting Critical Success Factors of Business Intelligence Implementation for Improving SMEs' Performances: A Case Study of Lagos State, Nigeria." *Journal of the Knowledge Economy* 14:1–26. https://doi.org/10.1007/s13132-022-00961-8.

Maas, G., P. Jones, and J. Lockyer. 2019. "The Journey to Transformational Entrepreneurship." In *Transformational Entrepreneurship Practices*, edited by G. Maas and P. Jones, 1–14. Cham: Palgrave Pivot. https://doi.org/10.1007/978-3-030-11524-1_1.

Marmer, M. 2012. "Transformational Entrepreneurship: Where Technology Meets Societal Impact." *Harvard Business Review* 90 (6): 23 April. https://hbr.org/2012/04/transforma tional-entrepreneurs.

Mersha, T., and V. Sriram. 2018. "Gender, Entrepreneurial Characteristics, and Success: Evidence from Ethiopia." *Thunderbird International Business Review* 61:157–167. https://doi.org/10.1002/tie.21984.

Miller, R. A., and E. W. Collier. 2010. "Redefining Entrepreneurship: A Virtues and Values Perspective." *Journal of Leadership, Accountability and Ethics* 8 (2): 80–89. http://www.na-businesspress.com/JLAE/MillerWeb.pdf.

Mitchelmore, S., and J. Rowley. 2008. "Entrepreneurial Competencies: A Literature Review and Development Agenda." *International Journal of Entrepreneurial Behaviour & Research* 16 (2): 92–111. https://doi.org/10.1108/13552551011026995 .

National Bureau of Statistics. 2017. *National Survey of Micro Small and Medium Enterprises (MSMEs) in Nigeria*. Abuja: Federal Government of Nigeria.

Njoku, A. C., O. A. Ihugba, and A. Odii. 2014. "Theoretical Analysis of Entrepreneurship Challenges and Prospects in Nigeria." *International Letters of Social and Humanistic Sciences* 16 (5): 21–34. https://doi.org/10.18052/www.scipress.com/ILSHS.16.21.

Nwachukwu, A. C. 2012. "The Role of Entrepreneurship in Economic Development: The Nigerian Perspective." *European Journal of Business and Management* 4 (8): 96–106. https://core.ac.uk/download/pdf/234624241.pdf.

Obschonka, M., K. Hakkarainen, K. Lonka, and K. Salmela-Aro. 2017. "Entrepreneurship as a Twenty-First Century Skill: Entrepreneurial Alertness and Intention in the Transition to Adulthood." *Small Business Economics* 48 (3): 487–501. https://doi.org/10.1007/s11187-016-9798-6.

Oduntan, K. O. 2014. "The Role of Small and Medium Enterprises in Economic Development: The Nigerian Experience." *International Conference on Arts, Economics and Management*, Dubai (UAE), March 22nd-23rd: 75–78. http://icehm.org/upload/9184ED0314038.pdf.

Olotu, A. Z. 2014. "Entrepreneurship Development and Unemployment in Nigeria." *International Journal of Management* 1 (2): 1–7. https://www.slideshare.net/ijm-apm/entrepreneurship-development-and-unemployment-in-nigeria.

Onakoya, A. B. O., I. O. Fasanya, and H. D. Abdulrahman. 2013. "Small and Medium Scale Enterprises Financing and Economic Growth in Nigeria." *European Journal of Business and Management* 5 (4): 130–136. https://www.iiste.org/Journals/index.php/EJBM/article/view/4474.

Onyeje, S. A., T. O. Court, and E. K. Agbaeze. 2020. "National Enterprise Policy Dimensions and Sustainability of Micro, Small and Medium Enterprises (MSMEs)." *Journal of African Business* 5 (1): 1–19. https://doi.org/10.1080/15228916.2020.1838838.

Osotimehin, K. O., C. A. Jegede, B. H. Akinlabi, and O. T. Olajide. 2012. "Anevaluation of the Challenges and Prospects of Micro and Small Scale Enterprises Development in Nigeria." *American International Journal of Contemporary Research* 2 (4): 175–178. file://uol.le.ac.uk/root/staff/home/o/ome2/Downloads/An_Evaluation_of_the_Challenges_and_Pros.pdf.

Otisi, U. 2015. "Globalization and Industrial Development in Nigeria." *Journal of Humanities & Social Science* 20 (1): 62–122. https://www.academia.edu/27361595/Globalization_and_Industrial_Development_in_Nigeria.

Oyeku, O. M., O. O. Oduyoye, G. N. Elemo, A. F. Akindoju, and F. A. Karimu. 2014. "Entrepreneurial Capability and Entrepreneurial Success of Small and Medium Enterprises: A Review of Conceptual and Theoretical Framework." *Research on Humanities & Social Sciences* 4 (17): 136–143. https://core.ac.uk/download/pdf/234674089.pdf.

Parasuraman, A., V. A. Zeithaml, and L. Berry. 1988. "Servqual: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality." *Journal of Retailing* 64 (1): 12–40. https://www.researchgate.net/publication/225083802.

Poole, M. A., and P. N. O'Farrell. 1971. "The Assumptions of the Linear Regression Model." *Transactions of the Institute of British Geographers* (52): 145–158. https://doi.org/10.2307/621706.

Ratten, V. 2020. "Coronavirus and International Business: An Entrepreneurial Ecosystem Perspective." *Thunderbird International Business Review* 62 (5): 629–634. https://doi.org/10.1002/tie.22161.

Ratten, V., and P. Jones. 2018. *Transformational Entrepreneurship*. UK: Routledge. ISBN 9780367504106.

Ratten, V., and P. Jones. 2021. "Covid-19 and Entrepreneurship Education: Implications for Advancing Research and Practice." *International Journal of Management Education* 9 (1): 100432. https://doi.org/10.1016/j.ijme.2020.100432. Epub 2020 Oct 20. PMCID: PMC7574783.

RezaeiZadeh, M., M. Hogan, J. O'Reilly, J. Cunningham, and E. Murphy. 2017. "Core Entrepreneurial Competencies and Their Interdependencies: Insights from a Study of Irish and Iranian Entrepreneurs, University Students and Academics." *International Entrepreneurship & Management Journal* 13 (1): 35–73. https://doi.org/10.1007/s11365-016-0390-y.

Roxas, B., N. Ashill, and D. Chadee. 2017. "Effects of Entrepreneurial and Environmental Sustainability Orientations on Firm Performance: A Study of Small Businesses in the Philippines." *Journal of Small Business Management* 55:163–178. https://doi.org/10.1111/jsbm.12259.

Sarwoko, E., A. Surachman, and A. D. Hadiwidjojo. 2013. "Entrepreneurial Characteristics and Competency as Determinants of Business Performance in SMEs." *Journal of Business and Management* 7 (3): 31–38. https://www.iosrjournals.org/iosr-jbm/papers/Vol7-issue3/E0733138.pdf?id=5282.

Schneider, K. 2017. "Entrepreneurial Competencies of Women Entrepreneurs of Micro and Small Enterprises." *Science Journal of Education* 5 (6): 252–261. https://doi.org/10.11648/j.sjedu.20170506.14.

Schoar, A. 2010. "The Divide Between Subsistence and Transformational Entrepreneurship." *Innovation Policy and the Economy* 10 (1): 57–81. https://doi.org/10.1086/605853.

Schumpeter, J. A. 1934. *The Theory of Economic Development: An Inquiry into Profits, Capital, credit, Interest, and the Business Cycle*. Vol. 55. New Jersey: Transaction Publishers. https://doi.org/10.4324/9781315135564.

Smith, W., and T. Chimucheka. 2014. "Entrepreneurship, Economic Growth and Entrepreneurship Theories." *Mediterranean Journal of Social Sciences* 5 (14): 1–9. https://uol.le.ac.uk/root/staff/home/o/ome2/Downloads/3141-Article%20Text-12362-1-10-20140702.pdf.

Solesvik, M. Z. 2012. "Entrepreneurial Competencies in Emerging Economy Context." In *Centre for Technology, Innovation and Culture*, edited by Marina Z. Solesvik. 1–17. Oslo, Norway: University of Oslo. http://pyk2.aalto.fi/ncsb2012/Solesvik.pdf.

Sousa, B. 2019. "Book Review: Transformational Entrepreneurship." *International Small Business Journal* 37 (6): 666–667. https://doi.org/10.1177/0266242619828014.

Volkmann, C., K. Fichter, M. Klofsten, and D. B. Audretsch. 2021. "Sustainable Entrepreneurial Ecosystems: An Emerging Field of Research." *Small Business Economics* 56 (3): 1047–1055. https://doi.org/10.1007/s11187-019-00253-7.

Yamane, T. 1967. *Problems to Accompany Statistics, an Introductory Analysis*. New York, USA: Harper & Row. ISBN: 9780060473211.

Yoruk, E., A. Johnston, G. Maas, and P. Jones. 2022. "Conceptualising the Transformational Power of Entrepreneurship from an Entrepreneurial Ecosystems Perspective Focusing on Environmentally and Socially Inclusive Economic Growth." *International Journal of Technological Learning, Innovation and Development* 14 (1–2): 192–220. https://doi.org/10.1504/IJTLID.2022.121476.