Jurnal Akuntansi dan Bisnis: Jurnal Program Studi Akuntansi 8 (2) November 2022 ISSN 2443-3071 (Print) ISSN 2503-0337 (Online) DOI: <u>10.31289/jab.v8i2.7519</u>

### **JURNAL AKUNTANSI DAN BISNIS** Jurnal Program Studi Akuntansi



Available online http://ojs.uma.ac.id/index.php/jurnalakundanbisnis

### **Exploring The Influence of Environmental Complexity on Entrepreneurial Decision Making: A Conceptual Review**

#### Mercy Ejovwokeoghene Ogbari<sup>1</sup>, George Uzoma K. Chima<sup>2</sup>, Maxwell Ayodele Olokundun<sup>3</sup>, Favour, O. Olarewaju<sup>4</sup>, and Daniel E. Ufua<sup>5</sup>

Department of Business Management, Covenant University, Ota, Ogun State, Nigeria<sup>1</sup> Legacy Associated Consults Ltd Apapa, Lagos State, Nigeria<sup>2</sup> Department of Business Management, Covenant University, Nigeria<sup>3</sup> Department of Economics and Development Studies, Covenant University, Nigeria<sup>4</sup> Department of Business Management, Covenant University, Ota, Ogun State, Nigeria<sup>5</sup>

Submitted: June 29, 2022; Reviewed: July 06, 2022; Accepted: October 04, 2022 \*Coresponding Email: <u>mercy.ogbari@covenantuniversity.edu.ng</u>

#### Abstrak

Practicing entrepreneurs make decisions in their business operations. These decisions are influenced by the environmental force and contextual issues that affect their operational process. This research paper focuses on exploring environmental complexities and their influence on entrepreneurial decision-making. The research applies a conceptual approach to unpack the effects of complexities, stakeholders' perspectives and contextual issues on entrepreneurial decision process. A key suggestion is the adoption of meaningful engagement approach to addressing emerging complexities between entrepreneurship practice and environmental issues. While the research finds that interactive engagement can be slow in its process, it highlights the key advantages that could be useful to entrepreneurial practices.

**Keywords**: Environmental Complexity; decisions making; Entrepreneurship decision; Meaningful engagement; Stakeholders' perspectives

**How to Cite**: Ogbari, M. E. Chima, G. U. K. Olokundun, M. A. Olarewaju, F. O. Ufua, D. E. (2022). Exploring The Influence of Environmental Complexity on Entrepreneurial Decision Making: A Conceptual Review. *Jurnal Akuntansi dan Bisnis: Jurnal Program Studi Akuntansi*. 8 (2): 78-86

#### **INTRODUCTION**

Entrepreneurship is the capacity and willingness to develop, organize and manage a business venture, along with any of its risks in order to make a profit. Entrepreneurship is characterized by innovation and risk-taking. Whilst extant studies have noted that entrepreneurship can be likened to a marathon, precisely an ultramarathon, which requires a lot of time, learning, preparation and effective decisions making, the business environment where they operate influence their operational decision making (Shepherd, Williams & Patzelt, 2015; Groen, 2019). These include risky and complex nature of the environment, arising from numerous uncertainties, which influence decision making process in entrepreneurial practices.

It is important to note that entrepreneurship can occur within a new or existing company through identifying possible demands and creating fresh supplies to satisfy such exigency. Hence, it incorporates an entrepreneur taking risky initiative and gaining profit from it, although creating value is the most important entrepreneurial goal to not just become, but remain a sustainable venture (Groen, 2019). The act of making decisions remains a critical part of entrepreneurial practice. It aligns with basic objective of this paper which focused on exploring the effects of environmental complexities on entrepreneurial practice.

Lichtenstein & Mendenhall (2006) identifies characteristics of an 'emergent organization', which includes resources, exchange, intentions and boundaries (Mckelvey, 1982). Entrepreneurship combines products, markets, processes and organization. Environmentally, an entrepreneur is surrounded by institutions which influences both himself and the company. Again, the networking aspect cannot be overlooked (Aldrich & Zimmer, 1986). This entails a complex process of conscious learning and adaptation to complex environment which interacts with the organization, in the strive to achieve set objectives and goals (Jackson, 2003; Olokundun, Ogbari, Obi & Ufua, 2019). This depends on the entrepreneur's ability to recognize and exploit opportunities. There's also the issue of knowing how to utilize available resources. All of these require decision making based on the understanding of the surrounding environmental structure, which is mostly complex in nature (Vaghely & Julien, 2010; Ufua et al., 2018). This research addresses the use of innovation, creativity, and general entrepreneurial skills in the process of making decisions and actions in line with the strive for entrepreneurial success while recognizing environmental complexity that may influence entrepreneurship (Leonard et al., 2010). All of these result in unforeseen circumstances and uncertainties faced by the entrepreneur, requiring skills to effectively address in entrepreneurial practice (Groen, 2019). These also support effective learning and improvement among partners in an entrepreneurial practice (Olokundun, Ogbari, OBI, & Ufua., 2019).

#### **RESEARCH METHOD**

#### Towards Entrepreneurial Complexity and Environmental influence

Complexity characterizes the behavior of a system or model whose components interact in multiple ways and follows local rules, hence there is no reasonable higher instruction to define the various possible interactions (Israel, 2005; Berger & Kuckertz, 2016a; Snihur & Tarzijan, 2018). Business complexity is the condition of having several interdependent and interconnected stakeholders, information technology systems and organizational structures. Stakeholders include employees, customers, partners, suppliers, regulators, investors, media and competitors, organization structures include divisions, subsidiaries and joint ventures. According to Azmat & Samaratunge (2009), this basically depends on contextual factors that might affect entrepreneurial activities, ranging from the

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business environment (rule of law, quality regulations, institutions and corruption); domestic and international pressures, cultural traditions (value system, attitudes, religious beliefs, and informal rules); and socio-economic conditions (degree of knowledge, awareness and development) (Barnett et al., 2018). Other complex influences on entrepreneurial practice include politics, technology and social responsibility (SR). Schindehutte and Morris (2009) contend that complexity provides better justifications for five major areas of strategic entrepreneurship (dynamism, micro-macro relations, freshness, opportunities and exploitation/exploration).

Furthermore, Complexity seems obvious at the heart of entrepreneurship. Etemad (2018) gave schematic representation of four interactive layers of concerned actors: the entrepreneur, the firm, the market and the international environment. Similarly, McKelvey (2004) pinpoints the importance of adaptive tension as a key driver in the face of new order. This happens when different energy springs up and causes disequilibrium, hence, creating fresh order from the present status. Lichtenstein (2000) notes that on occasions, entrepreneurial business goes through tensions, probably from pecuniary issues. At such critical phase, the understanding of the non-linear environmental behaviors can emerge, which could require skillful management approach to effectively address, via the making of the right decisions as well as taking the actions. Environmental challenges include issues such as ecological degradation, pollution urban planning, climate changes, green evolutions and waste to wealth projects among others.

Entrepreneurs find ways to deal with producing commodities with least possible negative impacts or externalities. However, externalities can result to environmental damages that could attract government fines and other constraints (e.g., global warming, felling of trees, bush burning, etc.) (Sloman, 2008). Similarly, the cultural beliefs, values, principles and ethical standards that are peculiar to a particular to a host community, influence entrepreneurial ventures. All these equally affect the economic climate under which an entrepreneurial venture is operated. Critical factors such as the demand pattern, competitor behaviors etc. are essential economic indicators to entrepreneurship practice (Hummel et al., 2018; Ray et al., 2018). Among other contextual issues, complexities require the attention of the practicing entrepreneur to effectively address (Ufua, 2019).

#### **Entrepreneurial Complexity, Connectivity, Innovation and Technology**

Innovativeness depicts capability and inclination on entrepreneurs to think outside the box and come up with unique practical ideologies of maximizing recognized chances, optimizing available resources and solving certain problems (Gupta et al., 2004; Rae, 2007; Chen, 2007). The business environments exhibit different effects which affect entrepreneurial business practice. Therefore, the entrepreneur explores the environment to identify areas of needs that fits with the values he creates (Audretsch et al., 2018; Palalić et al., 2018).

Essential an entrepreneur assumes the task of identifying and navigating through complexities. and this takes place through the ability of the entrepreneur to innovate, carry out proper and extensive market research and the ability for the entrepreneur to develop a flexible working organizational system. The business environment is fast changing which compels the development of new ideas and approaches needed to address complicating issues and in uncertainties (Midgley & Rajagopalan, 2019). However, to deal with all possible intricacies of entrepreneurship requires making use of technological innovations, which serve as the link and possible solution to complex entrepreneurial issues (Schneider, 2017; Xie et al., 2018). The entrepreneur is consistently saddled with the task of combining these critical factors in the management of entrepreneurial process to achieve set objectives. This

also compels the engagement with the right partners in the strive to address emerging complexities that would require multiple approach, innovation and joint effort in entrepreneurial practice (Hall et al., 2019).Whilst the use of technology supports effective entrepreneurial practice, the entrepreneurial skills tends to be insurmountable as the entrepreneur assumes the position of combining these factors to achieve set entrepreneurial objectives (Lamine et al., 2018).

Furthermore, it is already known the core of modern-day entrepreneurship is finding solutions to arising problems in the society. Systems thinkers begin with the assumption that any has connection with something else (Midgley & Rajagopalan, 2019). Connectivity in the context of this research paper covers the entrepreneurial ability to match environmental needs with values, while managing the complex challenges that may be emergent in the process (Almahry et al., 2018). The whole essence of connectivity is therefore focused on the development of service or product while still creating economic value. Due to the consistent rise of new problems, from societal scale to a global scale, complex challenges, as there is no one single proffered solution to these problems, hence what works in one society might not work in another, although the problems are similar or on the surface the same (Midgley, 2000; Grint, 2005; Ufua & Adebayo, 2019). This is where the ideology of entrepreneurship comes into play, as an entrepreneur or one with an entrepreneurial mindset is charged to study, analyze and proffer a solution to these problems solely and to the specifications of that particular society, country etc.

At the surface the problem is similar given that there is a heat wave and a suitable clothing is to be provided, but given cultural, socio-economic and environmental differences, amongst other things contribute to the complexities, creating what would be recognized and accepted as suitable for these two separate creativity (Fredmund, 2010; Damle, 2018). Whilst the task of innovation requires skills and effort from the innovator, it is speculated that not to innovate is the single largest reason for the decline of existing organizations, not to know how to manage is the single largest reason for the failure of new venture (Drucker, 2008). Therefore, in the bid to tackle such complex challenges, entrepreneurs develop multiple dynamic ways and processes, which are interrelated forming a complex system with individual objectives channeled or targeted to meet an ultimate or an overall goal set by the entrepreneur (Chima, 2016).

Innovation precedes the birth of new ideas, productivity, and approaches (Low & MacMillan,1988; Dorado & Ventresca, 2013; Ogbari et al, 2018). For instance, a new item in the market, it is usually difficult to balance quality and cost. In product development, innovative ideas produce effectiveness that can result to other valuable benefits to the entrepreneur and the environment.

#### **RESULT & DISCUSSION**

## Theoretical Analysis and Approach to Addressing Complex challenges in Entrepreneurship

There are four basic features of complex systems: non-proportionality, interdependencies, irreducible elements, and dynamics (Prigogine & Stengers, 1984; Nicolis & Prigogine, 1989; McKelvey, 1999; Fuller et al, 2008). General traits of complex systems include hierarchy, constant evolvement, near-decomposability (in-depth frequent interactions) and lastly, emanating from the first three, is easier description and

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understanding (Stacey, 2003; Houchin & MacLean, 2005; Burnes, 2005; Berger & Kuckertz, 2016a).

Despite the diverse approaches, many investigators concur that non-linear, dynamic and open systems are better foundations for ordering creativity (Lichtenstein & Mendenhall, 2002). Complexity theory explains how complex systems work and it's their implications for how to create entrepreneurial organizations. This process also tends to be responsible for multiple knowledge development among practicing entrepreneurs and partners (Olokundun et al, 2019). Knowledge obtained from these fields have now been translated and applied in numerous and diverse aspects such as, management, It proposes that there are no stable equilibria, hence entrepreneurs need to use change to their advantage. (Fuller et al., 2007). Through theoretical research it has been noted that in order to navigate complex systems entrepreneurs create organizations that are capable of making both small scale adaptations and large-scale changes as change which is a major element or contributor of complexity is unpredictable. Several schools of thoughts with individual methodology and theories have been developed concerning complexities over the years, therefore leading to newly designed organizational strategies (Lichtenstein, 2000; Midgley, 2000; Jackson, 2003). Whilst Midgley proposes the use of boundaries critique to set an approach to structure and address complex operational issues, Jackson suggest suggests the use of metaphors to classify and address identified complex issues. These would in turn inform the choice and application of systems tools and methods to address them (see, Jackson & Keys, 1984; Midgley 1997. Jackson 2000; Midgley & Rajagopalan, 2019). Similarly, Berger and Kuckertz (2016b), suggest the development of emergent methodological approaches to suit identified complex issues. They note that the use of new methods could enhance the effort to towards finding appropriate solutions that reflect environmental contexts and address the peculiarities of identified complex challenges. This suggestion leaves the entrepreneurs and partners with the responsibility to develop an understanding or agreeable platform for effective management om of complexities, especially from key different perspectives. These can result in changes in that operational approach to entrepreneurship practice, compelling the need for learning, improvement or even the development of an intrapreneurship venture to suit the new status that may be envisaged (Bridge & O'Neill, 2012; Crawford & Kreiser, 2015; Lichtenstein, 2016). These could also prepare the practicing entrepreneur with the required resilience to prepare for further changes that may emerge in the future (Conner, 1993; Ramamoorti et al., 2017).

This research proposes meaningful engagement with stakeholders and partners in the process of identifying and addressing entrepreneurial complexities based on the specific environmental context (García-Sánchez et al., 2018; Midgley et al., 2018). Arguably, that the context under which an entrepreneurial practice is engaged determines the extent to which compliance and suitability of suggested approach to identified complex issues (Voss et al., 2005). The concept of environmental complexity and entrepreneurship are is a critical call on the practicing entrepreneurs, who embrace the challenge of value development earmarked on to address human and environmental challenges such as the fight for equality and injustice, climate change, and poverty (see, Brugman, 2016). It argued in this research that the application of meaningful engagement with the partners would enhance a better understanding of current environmental and potential issues and encourage the commitment of support of participants in addressing environmental complexity, in relation to entrepreneurial, practice (Jaradat, 2015).

We also argue that the viability of interaction with partners can project effectiveness in terms of results and satisfaction between the practicing entrepreneurs and partners. Given the dictates of complexity theory research, entrepreneurs learn and engage in advance thinking, life management skills and competence required to sustain a multi-dimensional focus. Whilst Ufua et al., (2018) explain that the process of meaningful engagement can slow down an operational process, it is argued in this research that it can facilitate effective structuring of complex issues, actively involving involve participating partners, and provides in-depth comprehension of available options, connects and inform the choice of the right decisions acceptable to partners. Interactive engagement with partners is therefore aimed to achieve efficiency and all-round productivity in their entrepreneurial ventures, while focusing attention on effective management of relationships in order to avoid crisis situations that could breach entrepreneurial operations (Elbert, 2018; Howden, 2011).

This aligns with Schumpeter's concept of creative destruction, that is, creating and breaking procedures and economic equilibria (Fuller et al., 2008). It draws the attention of the practicing entrepreneur to the critical aspect of entrepreneurial practice which includes engagement with relevant stakeholders, in a process of continual interactions with the business environments (Wiklund & Shepherd, 2005; Imhonopi & Urim, 2011; Ufua et al, 2018). Such interaction has the potential to also support effective collaboration among partners which can develop into positive business coalition in terms of risk sharing and joint ventures that could presents new opportunities and advancement in entrepreneurial practices without breaching partners' interests. We reckon that the practice meaningful engagement can project a platform for continuous interactions that could be useful for the development of better strategic operational approaches that accounts for different stakeholders' interest in the larger picture and provide a means to avoid conflicts that could result in crisis situation in entrepreneurial operational process.

However, the practice of meaningful engagement, as proposed in this research could have some challenges which the practicing entrepreneur would be required to effectively understand and manage in the process of interaction with partners. We note that this could help the entrepreneur to guide sensitive information that could either compromise or let out their confidential values to partners (e.g., competitors), against their wish. Researchers (Midgley, 2000; Christopher, 2016; Ufua, 2019) emphasize on setting boundaries in addressing such complexity in an operational process. They reckon that this would provide a platform for delineation and concentration of effort on structuring and addressing identified operational process challenges. It therefore points that effective management of confidential organizational information is crucial and should be embedded in the development of adopted interactive approach between an entrepreneurial outfit and the business environment.

#### CONCLUSION

This research paper explored the influence of environmental complexity on entrepreneurial decision making. The research was based on extant literature, focusing on the critical effects on business environmental issue issues on entrepreneurial decisions and actions. The work concludes the suggestion for practicing entrepreneurs to embrace the use of meaningful engagement with partners/ stakeholders in the process of making critical entrepreneurial decisions that affect their operation and environment. It is thought that this could project a joint evocative thinking between the entrepreneur and the partners in order to develop suitable approaches to address identified complexities that affects affect their relationship with partners.

#### REFERENCES

Aldrich, H. Z., & Zimmer, C. (1986). Entrepreneurship through social networks. Sexton, DL y.

Almahry, F. F., Sarea, A. M., & Hamdan, A. M. (2018). A review paper on entrepreneurship education and entrepreneurs' skills. Journal of Entrepreneurship Education.

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- Audretsch, D. B., Belitski, M., & Desai, S. (2018). National business regulations and city entrepreneurship in Europe: A multilevel nested analysis. Entrepreneurship theory and practice, 1042258718774916.
- Azmat, F., & Samaratunge, R. (2009). Responsible entrepreneurship in developing countries: Understanding the realities and complexities. Journal of Business Ethics, 90(3), 437-452.
- Barnett, M. L., Henriques, I., & Husted, B. W. (2018). Governing the void between stakeholder management and sustainability. In Sustainability, Stakeholder Governance, and Corporate Social Responsibility (pp. 121-143). Emerald Publishing Limited.
- Berger, E. S., & Kuckertz, A. (2016a). Complexity in entrepreneurship, innovation and technology
- research: applications of emergent and neglected methods. Springer.
- Berger, E. S., & Kuckertz, A. (2016b). The challenge of dealing with complexity in entrepreneurship, innovation and technology research: An introduction. In Complexity in entrepreneurship, innovation and technology research (pp. 1-9). Springer, Cham.
- Bridge, S., & O'Neill, K. (2012). Understanding enterprise: Entrepreneurship and small business. Macmillan International Higher Education.
- Brugman, O. (2016). Syntegration accelerates problem solving in Complex Setting the case of Responsible Sot. Linkedin. Retrieved from: https://www.linkedin.com/pulse/syntegration-accelerates-problem-solvingcomplex-settings-brugman
- Burnes, B. (2005). Complexity theories and Organisational Change. International Journal of Management Reviews 7 (2), 73-90.
- Chen, M. H. (2007). Entrepreneurial leadership and new ventures: Creativity on entrepreneurial teams. Creativity and Innovation Management, 16(3):239-249.
- Chima, G. U. K. (2016). New Leadership Approach: Paradigm Shift (1st ed). Lagos, Nigeria: Lumen Impact Communication 2084089. ISBN: 978-978-953-790-7.
- Christopher, M. (2016). Logistics & supply chain management. Pearson UK.
- Conner, D. (1993). Managing at the speed of change: How resilient managers succeed and prosper where others fail. Random House.
- Crawford, G. C., & Kreiser, P. M. (2015). Corporate entrepreneurship strategy: Extending the integrative framework through the lens of complexity science. Small Business Economics, 45(2), 403-423.
- Damle, V. (2018). Disruptive Innovation: A Case Study of Uber. International Journal of Advanced Research and Publications, 2 (11). ISSN: 2456-9992.
- Dorado, S., & Ventresca, M. J. (2013). Crescive entrepreneurship in complex social problems: Institutional conditions for entrepreneurial engagement. Journal of Business Venturing, 28(1), 69-82.
- Elbert, M. (2018). Lean production for the small company. Productivity Press.
- Etemad, H. (2018). The essence of entrepreneurial internationalization: Managing the dynamic complexity of interactive relationship and reflective adaptations. Journal of International Entrepreneurship, 16(3), 325-337.
- Fredmund, M. (2010). Management: The Essence of the Craft, Frankfurt/New York: CampusVerlag.p.22 in pages 10-107.
- Fuller, T., Warren, L., & Argyle, P. (2008). Sustaining entrepreneurial business: A complexity perspective on processes that produce emergent practice. International Entrepreneurship and Management Journal, 4(1), 1-17.
- García-Sánchez, E., García-Morales, V. J., & Martín-Rojas, R. (2018). Analysis of the influence of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship. International Entrepreneurship and Management Journal, 14(2), 345-377.
- Giraud Voss, Z., Voss, G. B., & Moorman, C. (2005). An empirical examination of the complex relationships between entrepreneurial orientation and stakeholder support. European journal of Marketing, 39(9/10), 1132-1150.
- Grint, K. (2005). Problems, problems: The social construction of 'leadership'. Human relations, 58(11), 1467-1494.
- Groen, A. (2019). Entrepreneurship, Complexity and Uncertainty. University of Groningen, Future Learn.
- Gupta V., MacMillan, I. C. & Surie, G. (2004). Entrepreneurial leadership: Developing and measuring a cross-cultural construct. Journal of Business Venturing, 19(2):241-260. http://dx.doi.org/10.1016/S0883-9026(03)00040-5.
- Hall, J., Matos, S., & Bachor, V. (2019). From green technology development to green innovation: inducing regulatory adoption of pathogen detection technology for sustainable forestry. Small Business Economics, 52(4), 877-889.
- Howden, D. (Ed.). (2011). Institutions in crisis: European perspectives on the recession. Edward Elgar Publishing.
- Houchin, K. & MacLean, D. (2005). Complexity theory and strategic change: an empirically informed critique. British Journal of Management, 16 (2), 149-166.
- Hummel, K., Pfaff, D., & Rost, K. (2018). Does economics and business education wash away moral judgment competence? Journal of Business Ethics, 150(2), 559-577.
- Imhonopi, D.O. and Urim, U.M. (2011). Sociology, Culture and Social problems: Essays and Insights, Revised Edition, Nigeria, ICED.

- Israel, G. (2005). The science of complexity: epistemological problems and perspectives. Science in Context, 18(3), 479-509.
- Jackson, M. C., & Keys, P. (1984). Towards a system of systems methodologies. Journal of the operational research society, 35(6), 473-486.
- Jackson, M.C. (2000). System approaches to Management. New York .Kluwer academic/plenum Pub.
- Jackson, M.C. (2003). System thinking creative holism for Managers. United Kingdom, John Wiley & sons Ltd.
- Jaradat, R. M. (2015). Complex system governance requires systems thinking-how to find systems thinkers. International Journal of System of Systems Engineering, 6(1-2), 53-70.
- Lamine, W., Mian, S., Fayolle, A., Wright, M., Klofsten, M., & Etzkowitz, H. (2018). Technology business incubation mechanisms and sustainable regional development. The Journal of Technology Transfer, 43(5), 1121-1141.
- Leonard, A., Set, P. C., Wilby, J., Buckle, P., & Secretary, V. P. (2010). GENERAL SYSTEMS BULLETIN VOLUME XXXIX,.
- Lichtenstein, B. (2000). The Matrix of Complexity; A Multi-Disciplinary Approach for Studying
- Emergence in Coevolution, in Lichtenstein, B.B., Carter, N.M., Dooley, K.J. & Gartner, W.B. (2007). Complexity Dynamics of Nascent Entrepreneurship. Journal of Business Venturing, 22, 236-261.
- Lichtenstein, B.M.B. & Mendenhall, M. (2002). Non-linearity and response-ability: Emergent order in 21st- century careers. Human Relations 55, 5-32.
- Lichtenstein, B. (2016). Emergence and emergents in entrepreneurship: Complexity science insights into new venture creation. Entrepreneurship Research Journal, 6(1), 43-52.
- Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. Journal of management, 14(2), 139-161.
- McKelvey, B. (1999). Complexity Theory in Organization Science: Seizing the Promise or Becoming a Fad? Emergence 1, 5-32.
- Midgley, G. (1997). Mixing methods: Developing Systemic Intervention. In, Multi-methodology: The theory and Practice of combining management science. Minger, J. and Gill, A. (eds). Wiley, Chichester.
- Midgley, G. (2000). Systemic intervention: philosophy, methodology and practice. London. Kluwer academic/Plenum publishers.
- Midgley, G., Johnson, M. P., & Chichirau, G. (2018). What is community operational research? European Journal of Operational Research, 268(3), 771-783.
- Midgley, G., & Rajagopalan, R. (2019). Critical Systems Thinking, Systemic Intervention and Beyond. The Handbook of Systems Science. New York: Springer.
- Nicolis, G. & Prigogine, I. (1989). Exploring Complexity: An Introduction. New York: Freeman.
- Ogbari, M. E., Ibidunni, O. S., Ogunnaike, O. O., Olokundun, A. M., & Amaihian, A. B. (2018). A comparative analysis of small business strategic orientation: Implications for performance. Academy of Strategic Management Journal, 17(1), 1-15.
- Olokundun, A. M., Ogbari, M. E., OBI, J. N., & Ufua, D. E. (2019). Business incubation and student idea validation: a focus on Nigerian universities. Journal of Entrepreneurship Education, 22(1), 1-6.
- Palalić, R., Dana, L. P., & Ramadani, V. (Eds.). (2018). Entrepreneurship in former Yugoslavia: Diversity, institutional constraints and prospects. Springer.
- Prigogine, I. & Stengers, I. (1984). Order Out of Chaos: Mans New Dialogue with Nature. New York: Bantam.
- Rae, D. (2007). Connecting enterprise and graduate employability: Challenges to the higher education culture and curriculum? Education + Training, 49(8/9):605-619. doi:10.1108/00400910710834049.
- Ramamoorti, S., Baskin Jr, D. L., Epstein, B. J., & Wanserski, J. (2017). Managing Risk at the Speed of Change: A New Risk Vocabulary and a Call to the Profession. The CPA Journal, 87(6), 6-9.
- Schumpeter, J.A. (1934). The Theory of Economic Development: An inquiry into Profits, Capital, Credit, Interest and the Business Cycle. Cambridge, Mass: Harvard University Press.
- Schindehutte, M. & Morris, M. H. (2009). Advancing strategic entrepreneurship research: The role of complexity science in shifting the paradigm. Entrepreneurship: Theory and Practice, 33 (1), 241–276.
- Shepherd, D. A., Williams, T. A., & Patzelt, H. (2015). Thinking about entrepreneurial decision making: Review and research agenda. Journal of management, 41(1), 11-46.
- Sloman, J. (2008). Economics and the business environment. 2nd edn. England. Pearson education Ltd.
- Snihur, Y., & Tarzijan, J. (2018). Managing complexity in a multi-business-model organization. Long Range Planning, 51(1), 50-63.
- Stacey, R.D. (2003). Strategic Management and Organisational Dynamics, the Challenge of Complexity. London: FT Prentice Hall.
- Ufua, D. E., Olujobi, O. J., Tahir, H., Al-Faryan, M. A. S., Matthew, O. A., & Osabuohien, E. (2022). Lean Entrepreneurship and SME Practice in a Post COVID-19 Pandemic Era: A Conceptual Discourse from Nigeria. Global Journal of Flexible Systems Management, 1-14.

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- Ufua, D. E., Olujobi, O. J., Tahir, H., Okafor, V., Imhonopi, D., & Osabuohien, E. (2022). Social services provision and stakeholder engagement in the Nigerian informal sector: A systemic concept for transformation and business sustainability. Business and Society Review. 127(2), 403-421
- Ufua, D.E. (2019). Exploring the Effectiveness of Boundary Critique in an Intervention: a Case in the Niger Delta Region, Nigeria, Systemic Practice and Action Research, 33(5), 485-499.https://doi.org/10.1007/s11213-019-09493-w, pp.1-15.
- Ufua, D. E., & Adebayo, A. O. (2019). Exploring the potency of rich pictures in a systemic lean intervention process. Systemic Practice and Action Research, 32(6), 615-6271-13.
- Ufua, D.E., Papadopoulos, T. and Midgley, G. (2018). Systemic lean intervention: Enhancing lean with community operational research. European Journal of Operational Research, 268(3), pp.1134-1148.
- Vaghely, I. P., & Julien, P. A. (2010). Are opportunities recognized or constructed?: An information perspective on entrepreneurial opportunity identification. Journal of business venturing, 25(1), 73-86.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. Journal of business venturing, 20(1), 71-91.
- Xie, K., Song, Y., Zhang, W., Hao, J., Liu, Z., & Chen, Y. (2018). Technological entrepreneurship in science parks: A case study of Wuhan Donghu High-Tech Zone. Technological Forecasting and Social Change, 135, 156-168.