BUILDING STRONG ENTREPRENEURIAL ECOSYSTEMS: A MODEL FOR THRIVING ENTREPRENEURIAL GROWTH AND SUSTAINABILITY IN AFRICA

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ABSTRACT

Building a strong entrepreneurial ecosystem is critical for strong and stable entrepreneurial development, economic growth, and sustainable development. However, for decades, the focus of entrepreneurship has been centered on individual entrepreneurs and their role in creating jobs and contributing to economic growth. Little attention has been given to the role of entrepreneurial ecosystem as a major contributor to entrepreneurial success through creation of conducive environment. This paper argues that no business can survive on its own but rather is part of wide environmental factors ranging from economics, social and technological factors. The paper has examined several entrepreneurial ecosystem models and their relevant in promoting and enhancing entrepreneurial culture. The paper then proposes a model of the African countries. The proposed model though generally application in different environments is well suited for African especially due to its focus on economic growth and sustainable development as the expected outputs while at the same ensuring successful entrepreneurial businesses.

Keywords: Industrialization, Innovation, Manufacturing, Sustainability, Infrastructure.

INTRODUCTION

Today, entrepreneurship is termed as the engine of national, regional, and global economic growth and sustainability. This is done through its ability to identify and seize opportunities, innovate, revitalize market, and change competition dynamics leading to social and economic transformation (Acs, Szerb, & Autio, 2017; Dorado & Ventresca, 2013; OECD, 2024).

Recognizing the significant role played by entrepreneurship as a key driver of economic development, policy makers worldwide have directed their attention to developing policies meant to promote and devote more resources to the sector (Biru, Gilbert, & Arenius, 2020; Mason & Brown, 2014). Examples from different parts of the world show countries heavily investing in entrepreneurial sector as a source of industrial development, employment and economic growth. In 2015, for instance, China developed a national policy of Mass Entrepreneurship and Innovation with the sole purpose of revitalizing its market and promote national and regional development. As a result, the country has developed modern innovative cities among them Beijing, Hangzhou, Shenzhen and Shanghai which have become global entrepreneurship and innovation hubs. This has made China to be known as the world leader in technology and manufacturing industries (Yang, Liu, Hu, & Gao, 2022). In Europe, the European Commission (EU) sees entrepreneurship as essential tool for transforming the society in terms of financial, cultural, and socially. The Commission is therefore investing in promoting and improving entrepreneurial capacity, fostering entrepreneurial learning and positively changing entrepreneurial mindset (EU, 2024). Following the COVID-19 pandemic, the Commission together with European Investment Fund availed €8

billion to finance over 100,000 SMEs in the region (Turcato, 2020). Further, in order to boost entrepreneurial development and mitigate risks, the EU through the European Fund for Sustainable Development (EFSD) planned to invest €4.1 Billion geared towards assisting private sectors' engagement in Africa and Europe neighborhood countries (DAI, 2024). It is also notable that in 2021, Venture Capitalists invested USD 5 billion in Africa to fund entrepreneurship businesses (Adam Smith International, 2022).

In the United States of America, the government already had set aside $10 billion meant to help 100,000 small businesses in all 50 states. This is an addition to $70 billion spent in 2022 on federal contracts that were awarded to small and disadvantaged businesses (SDBs) (The Whitehouse, 2024). In Germany, on the other hand, the government proposed to spend €30 billion to support homegrown startups (Seth, 2023) while in 2023, UK government spent £320 million ($400 million) in its domestic science and technology startups in effort to attract and speedup expansions of fast-growing industries (Aldrick, 2023).

The efforts by different countries and regional bodies point to increasing interest and focus on entrepreneurship as a key pillar of development, job creation and economic growth. The results of entrepreneurial supports have seen substantial growth and transformation in the sector. Example of entrepreneurial success include TikTok (also known as Douyin) started in 2016 in Beijing but has become a household name besides being listed in the top video-housing services globally. Likewise, Nio Inc, founded in Shanghai, is the leading electric vehicle manufacturing company (Zhang, 2019).

The effort to encourage and support entrepreneurship has gained momentum in the last part of the last century and continues in the 21st century. The last sixty years, for instance, have seen significant changes in how governments planned, organized, and managed both industry and enterprise policies (Warwick, 2013). During the same period and especially in the last few years, the number of policy initiatives and degree of funding has escalated (Rodrik, 2004). The changes have led to a shift in paradigm from traditional enterprise to growth-oriented enterprise policies, which in turn has resulted in a new focus on how entrepreneurship is viewed, developed, and funded (Mason & Brown, 2014). The shift has led to new thinking away from focusing on specific enterprises to a broader system-based and holistic approach concentrating on high growth entrepreneurship.

According to Rodriguez-Pose (2013) and Warwick (2013), this holistic approach is centered on development of capacities, aligning priorities, building institutional capabilities, networks, and nurturing synergies among stakeholders. In this shift, the term "entrepreneurial ecosystems" has become synonymous with the new thinking. The term was first coined by James Moore (1993) in an article published in Harvard Business Review. Moore (1993) argued that businesses don't evolve and operate in vacuum but must interact with key constituencies among them suppliers, customers, financiers and more recently government institutions. Through these interactions, businesses, especially new ones can thrive faster, create employment, and boost their revenues (Rosted, 2012). Rosted (2012) observes that vibrant ecosystems encourage and promote establishment of new businesses compared to environment where such system does not exist.
Entrepreneurial ecosystems are central to industrial and economic development of a country, region and even globally. The ecosystem environment allows for interaction and interdependence

of factors and actors thereby creating an environment where entrepreneurship plays a role of driving social transformation and economic development (Stam and Van de Ven 2021; Wurth, Stam, & Spigel, 2022).

Emphasizing the importance of entrepreneurship ecosystem to a business, especially startups, Spigel (2020) has concluded that entrepreneurship is a team sport. In this team, entrepreneurial ecosystems benefit entrepreneurs in two ways. First, they gain from resources such as financial support, skilled and competent workforce, and overall entrepreneurial knowledge. Secondly, entrepreneurs also gain from accessibility of resources.
Mason and Brown (2014) synthesized numerous definitions from literature and eventually defined an entrepreneurial ecosystem as:

> … a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of 'blockbuster entrepreneurship', number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment (p.5).

From this definition, it is evident that entrepreneurial ecosystem encompasses all required activities, processes and policies that facilitate effective development of entrepreneurship in a country or region. This is further summarized by Stam and Spigel (2018) definition which sees entrepreneurial ecosystem as "… a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory" (p. 407). Other scholars have added that the success of entrepreneurship is embedded on strong supportive culture, public policies, cohesive social and economic system, all totaling to a strong entrepreneurial ecosystem (Mack & Mayer, 2016; Spigel, 2017). In line with these definitions, the entrepreneurial ecosystems in the developed world have put these factors into consideration resulting in highly evolved to entrepreneurial sector thereby making the entrepreneurship to become prime determinant of economic transformation and growth of industries, social and economic wellbeing of the countries.

Literature review

The concept of *ecosystem* is attributed to Tansley (1935). However, *ecosystem* only gained value after an evolutionary theory of economic change was developed by Nelson and Winter (1982). Since then, Jafarov and Judit Szakos (2022) noted that the concept has being used in different areas such as knowledge ecosystems (Owen-Smith & Powel, 2004), innovation ecosystems (Adner 2006; Autio and Thomas 2014), entrepreneurial ecosystems (Cohen 2006; Isenberg 2010; Feld 2012; Stam 2015), digital ecosystems (Boley & Chang, 2007; Weil & Woerner, 2015), platform ecosystems (Gawer & Cusumano, 2008; Rysman, 2009) and Organizational ecosystems (Mars, Bronstein, & Lusch, 2012). However, Malecki (2018) points out that the term *ecosystem* was further popularized by Moore (1993). Moore (1993) was of the view that firms or businesses should not be considered as single entities operating in a single industry. Rather, such businesses should be seen as part of a business ecosystem. In recent years, the work of Feld (2012) and Isenberg (2010) have triggered even more interest in entrepreneurial ecosystems. This has led to

wide research and different resources published in the area. Some very recently resources include: Spigel (2020), Feld (2020), Feld and Hathaway (2020). Nkontwana and Stam (2023) have observed that the idea of entrepreneurial ecosystems has been adopted by national governments, non-governmental organizations, foundations, earning institutions, and financial institutions. Key among these organizations are the United Nations (UNCTAD, 2010), the OECD (Mason & Brown, 2014), the European Commission (European Commission 2014) and the World Bank (Mulas, Minges & Applebaum, 2015), Howard University, MIT and policy makers.

Entrepreneurial ecosystems Models

Entrepreneurial Ecosystem Models

The operationalization and effectiveness of entrepreneurial ecosystems as a foundation for entrepreneurial growth is dependent on models put in place. To this end, several models have been developed (Isenberg, 2010; Koltai, 2016; Spigel, 2017; Stam & Van de Ven, 2021), all which have contributed to the new thinking and approach to entrepreneurship and associated ecosystems. Some of the leading models are those developed by Valdez (1988), Gnyawali and Fogel (1994), Isenberg (2011), Spigel (2017) and Cantner et al (2021).

Given the popularity and recognition of entrepreneurial ecosystems as instrumental to development and growth, it is therefore important to examine the foundational models and applications. This paper specifically aims to examine the existing models of entrepreneurial ecosystems, their key emphasis and application. The paper, then, assesses the role of entrepreneurial ecosystems as instrumental to the African regional development, existing challenges, the future expectations and then give recommendations on models application.

The Entrepreneurial Personality Model (1988)

The Entrepreneurial Personality Model is attributed to Jude Valdez (1988) who saw entrepreneurial ecosystem as a significant contributor to formation of new businesses. Valdez (1988) argued that start-ups can only be defined in relation to the entrepreneur's personality, surrounding environment, and market conditions.

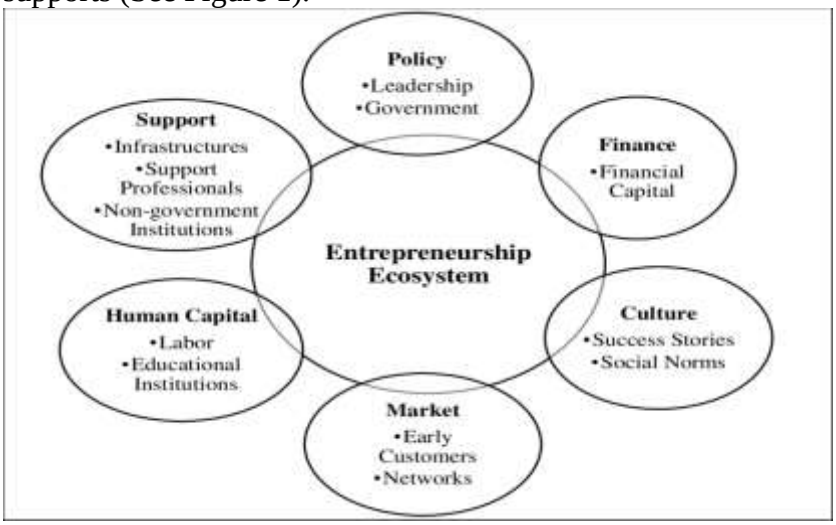
The entrepreneur's personality is critical to a start-up. This includes education background, level of risk taking, financial capability and ability to identify opportunities. Likewise, the surrounding environment determines businesses survival, attraction and decision making. Borrowing heavily from earlier work of Bruno and Tyebjee (1982), Valdez (1988) cited some of the environmental factors influencing start-ups. These include be availability of venture capital, level of entrepreneur experience, technically competency, labor force, proximity to learning institutions, suppliers, favorable government policies, infrastructural development, and conducive living conditions. Lastly, the market accessibility, product produced, level of demands and customers accessibility determine the level of consumption of the final outputs. This is also affected by the number of competitors and overall micro and macro-conditions facing the entrepreneurs and their potential businesses. Finally, the more favorable the potential entrepreneurs' personalities, immediate surrounding environment, and market conditions, the more likely to create a good thriving environment for startups.

Entrepreneurial Process Model (1994)

This model is attributed to Gnyawali and Fogel (1994) and focuses on environmental factors necessary for business development. The factors are classified into five dimensions, namely: (1) government policies and procedures, (2) socioeconomic conditions, (3) entrepreneurial and business skills, (4) financial assistance and (5) non-financial assistance. The dimensions are linked to five core elements required in the startup process. The five elements are opportunity, ability to enterprise, propensity to enterprise, likelihood to enterprise, and new venture creation. First, *entrepreneurial opportunities* need to be identified. Secondly, the process requires an entrepreneur to *recognize the opportunity* to be exploited. The need for sufficiency and self-confidence is essential to successfully manage the startup (*propensity to enterprise*). Thirdly, the startup will not thrive without the presence of essential entrepreneurial abilities. These range from economic, technological, and skill-based-knowledge to running and managing business (*ability to enterprise*). It is notable that unless the three steps are accomplished successfully, there is less likelihood to venture into business (*Likelihood to Enterprise*) or *New Venture Creation* (CBVI, 2013).

Entrepreneurship ecosystem for economic development (2011)

The "entrepreneurship ecosystem strategy for economic development" developed by Isenberg (2011) focuses cost-effective and how to stimulate economic development. Isenberg (2011) argues that the employment of entrepreneurial system as a strategy is a pre-condition for respective strategies among them innovation, systems, knowledge economy or national competitive policies and strategies. The author identified six requirements or domains for entrepreneurial systems to work, namely: culture, policies and leadership, finance, human capital, markets, and institutional supports (See Figure 1).



Source: Isenberg's Model of Entrepreneurship Ecosystem (2011, in Saifuddin, Janudin, and Salleh 2022, p.95)

In each of the domains, there are numerous interacting elements in "highly complex and idiosyncratic ways" (Mason & Brown, 2014: p. 5). However, given the level of complexity, each ecosystem should be understood under its own unique context and based on specific circumstances, situational factors and entrepreneurship activities (Khattab & Al-Magli, 2017). For instance, entrepreneurial systems by can industry specific. A good example is in China where the manufacturing industry is the biggest industry accounting for 46.8% of Gross Domestic Product (GDP), a success attributed to government investment in the sector (Worldatlas, 2024). It is notable

that a single industry can have sub-industries or unrelated industries located in different geographical regions.

Ecosystem attributes (2017)

The Ecosystem attributes model by Spigel (2017) focuses on the role played by combination of social, political, economic, and cultural elements as essential determinant of entrepreneurs to innovate, take risks, or venture in startups. The model further categorized three attributes that are critical to successful entrepreneurial ecosystem, namely, cultural, social and material attribute (Spigel, 2017).

Cultural attributes: These denotes the underlying core beliefs, values and norms and in relationship to entrepreneurship of a given geography region or location. Successful ecosystems are further influenced by the cultural attitudes and histories of entrepreneurship. For instance, where entrepreneurial ecosystem is not part of a culture, it becomes difficult to change the members mindset to adopt the entrepreneurship spirit and practice. Where the culture supports risk-taking and venturing in new ideas, the practice takes roots easily.

2. Social attributes: The attributes in this category are gained through social investment. The existing networks, mentorship, talents, and social capital investment play major role in encouraging and promoting conducive entrepreneurship ecosystem.

3. Material attributes: Unlike social attributes which are mostly invisible, material attributes are visible and tangible. These are classified into four main categories, namely, universities, support services and facilities, policy and governance, and available markets.

According to Spigel (2017), the interrelationship of the three main attributes is beneficial and results to availability of resources to entrepreneurs. Over time, the entrepreneurial system creates a healthy environment for entrepreneurial development, job creation and economic growth for a country. Such an entrepreneurial ecosystem needs to be based on the foundational core domains that ensure successful establishments of startups, scaleups and form the springboard of economic simulation and renaissance.

Entrepreneurial ecosystems: A dynamic lifecycle model (2021)

Despite extensive research on entrepreneurial ecosystems, Cantner, James, Cunningham, Lehmann and Menter (2021) feel that the concept is still under-theorized with little attention given to the evolution of entrepreneurial ecosystems. They specifically mentioned that the current literature fails to give a comprehensive theoretical foundation on the development and changes that have affected entrepreneurial ecosystems for decades. The failure is also notable in literature that does not address “inherent dynamics of entrepreneurial ecosystems that lead to their birth, growth, maturity, decline, and re-emergence” (2020, p. 407). The authors therefore focused their model to an entrepreneurial ecosystem that address creation of new firms and development of business ecosystem based on internal commercialization of knowledge. The model expectation is to address the internal dynamics affecting entrepreneurs and intrapreneurs as they growth their businesses through various phases of ecosystem’s lifecycle. The advantage of the model is that it “explains how entrepreneurial ecosystems arise and evolve over time, how and why they co-exist with business ecosystems, and whether or not entrepreneurial ecosystem survive or not” (p. 412). The model elaborates on different lifecycle of entrepreneur business growth and made the following propositions (pp. 413-418):

Phase I: The birth of an entrepreneurial ecosystem:
Preposition 1: The starting point of an entrepreneurial ecosystem—the birth stage—is an idea that may not be exploited within an incumbent firm, resulting in new venture creation.

Phase II: The growth of an entrepreneurial ecosystem:
Proposition 2: Following the immediate birth period, the growth stage is characterized by the emergence of an entrepreneurship culture, encouraging further individuals to start their own business.

Phase III: The maturity and stabilization of an entrepreneurial ecosystem:
Proposition 3: The maturity and stabilization phase reflects the intersection between an entrepreneurial ecosystem and a business ecosystem, as new venture creation becomes less attractive and incumbent firms increase their efforts to re-integrate entrepreneurial firms.

Phase IV: The decline of an entrepreneurial ecosystem:
Proposition 4: The decline phase characterizes the final transition from an entrepreneurial ecosystem towards a business ecosystem, as new ideas are now mainly exploited within incumbent firms.

Phase V: The re-emergence of an entrepreneurial ecosystem:
Proposition 5: Based on the already existing entrepreneurship infrastructure, the re-emergence phase opens up new opportunities for entrepreneurs to exploit uncommercialized ideas from incumbent firms, replacing the initial technological regime.

The Entrepreneurial ecosystems address a significant gap in research where the internal dynamics of entrepreneurial businesses and complexity associated with operation, management and growth are not addressed. It is a gap that scholars like Brown and Mason (2017) and Mack and Mayer (2016) had identified as critical to effective entrepreneurial ecosystems.

From all the models discussed, entrepreneurial ecosystem is dynamic and encompasses both internal and external factors. From entrepreneurial personality, leadership competencies, technical skills, appropriate policies, available of customers and relevant markets. Even with these factors being in place, the importance of identifying and recognizing entrepreneurial opportunities, acquiring essential abilities before venture creation remain critical. The role of invisible social attributes and cultural influences and their impact on businesses cannot be underrated. Finally, the importance of understanding the entrepreneurial intrapreneurial internal dynamics. The need to understand each of the five phases of entrepreneurial development is critical to businesses growth and sustainability.

Entrepreneurial Ecosystem in Africa

Africa is considered one of the worst economic performers compared to other developing economies. Across the continent, economic growth remained uneven and at very low level. For instance, the East Africa region was projected to grow at the rate of only 1.8% in 2023 while West

Africa growth was reach 3.3% during the same period (World Bank, 2023). During the same period, Asian regional growth was expected to reach 4.9%, an increase from 4.7% experienced in 2022 (ADB, 2023). In terms of localised economic performer, the Sub-Sahara region performed dismally. In the year 2023, the sub-Sahara regions was home to over 462 million people living in extreme poverty (World Bank, 2023). A recent World Bank economic report (2023) indicated that the region remained the worst performer with projected slow growth of only 2.5% in 2023 compared to 3.6% in 2022. The poor performance was attributed to rising conflicts and violence in the region, a situation expected to be worsened by climate change negative effect on the region. Further, the region faces surging debt risk with 21 of the countries identified as experiencing high-debt distress risk. However, even with poor economic performance, the African region is said to have major potential for economic transformation. With a population of 1.2 billion consumer market, rich natural resources and largest free trade areas in the world, the continent is said to have the potential to "forge a new development path, harnessing the potential of its resources and people" (World Bank, 2023). Another source of economic growth is arising investment in human capital. According to World Report (2023), the region is expected to have the fastest increase in labor force expected to reach 740 million by 2050 with about 12 million youth expected join the labor market annually. The report paints a positive picture as the economy is expected to recover and record significant growth in the future. It is also notable that many African countries are engaged in developing and implementing economic growth policies believed to have significant changes in reducing unemployment rates, reducing poverty and continental transformation in economic development (Fischer, 2000; Kukaj, 2018). The countries have also targeted entrepreneurship and similar ventures as the foundation and springboard to their economic growth and sustainability of the continent (Atiase, Mahmood, Wang, & Botchie, 2018; Quaidoo, 2018). This is supported by Abdulai1 and Hussain (2023) in a study focusing on the trend in entrepreneurship development in Africa between 2000 and 2021 period. The study findings revealed that at continental level, some countries like Egypt, Kenya, Morocco, Nigeria and South Africa exhibited high entrepreneurship culture compared to the rest of the continent. The growth in working population, especially the youth is another indicator of the need for improving the entrepreneurial business climate to encourage the young population to venture into businesses as a source of employment, job creation and economic indicator of a regional development (Marks, Swartz, Dawa & Mitra, 2022). However, growth in entrepreneurial activities is only possible with conducive and healthy entrepreneurial ecosystem.

According to Nkontwana and Stam (2023), that Africa like other less development economies "… need embrace entrepreneurial ecosystem narratives that suit the local context and envisioned futures of the local stakeholders" (2023, p.4) rather that duplicate what has worked elsewhere. In their study, three countries, Ghana, Kenya, and Rwanda were picked as leaders in regional economic centers, for Western and Eastern African regions. The countries have established entrepreneurial support organization (ESO) (entrepreneurial hubs) that act as magnet force to attract and drive entrepreneurial activities (Nkontwana & Stam, 2023).

The importance of entrepreneurial ecosystem in Africa as a driver to economic growth and development cannot be over emphasized. Although the continent lacks evidence of substantial economic strides in the past fifty years (Cramer et al., 2021), the growing youthful population with strong desire to transform the continent through entrepreneurial activities, such investing in startups and scaleups show the continent is headed in the right trajectory and eventual development

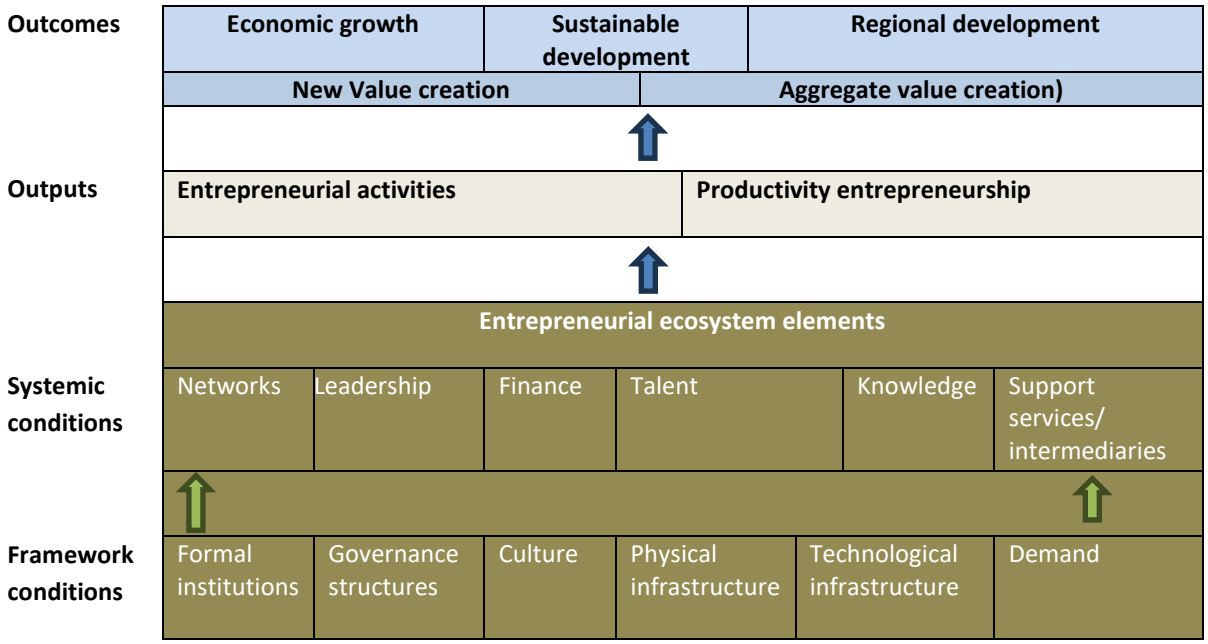
(Chigunta, 2017). To support this argument, Global Entrepreneurship Monitor Reports indicate that the youthful population has the potential to boost startup businesses and entrepreneurial activity in the continent (Marks et al., 2022).

Studies on entrepreneurial ecosystems have emphasized the need to analyze the subject within the domain of specific economic geography and applicable environmental factors (Hekkert et al., 2007; Malecki 2018). Spigel (2017) further observes that ecosystems should be highly localized. Applying entrepreneurial ecosystem without considering the local situations only leads to failure and undesired results. This implies that local entrepreneurial systems befitting the African geographical, economic, social, and cultural situations should be considered rather than using ecosystems that have worked elsewhere (Malecki, 2018).

Proposed model: Ecosystems for entrepreneurship-led Value creation, Economic growth and sustainable development

The goal of an entrepreneurial ecosystem is to facilitate economic development of a country or region, besides making positive impact in the life of entrepreneurs. Most models on this subject have concentrated mostly on environmental factors that foster successful businesses. Even in this context, scholars and researchers agree that entrepreneurial ecosystem's ultimate outcome is sustainable development. The efforts of scholars to describe the desired environment for success entrepreneurship through creation of appropriate entrepreneurship ecosystems are all geared toward a healthy economic systems and development. However, Nkontwana and Stam (2023) have indicated that there is a need for "an entrepreneurial ecosystem model that is abstract and valid enough from a scientific point of view, and comprehensive and actionable enough from a practitioner's point of view" (p.6). The authors argue that "a generic model that satisfies these criteria, has been developed in a series of academic publications" (Brown & Mason, 2017; Isenberg, 2011; Leendertse, Schrijvers & Stam, 2021; Stam, 2015; Spigel, 2017; Stam & Van de Ven, 2021; Wurth, Stam & Spigel, 2022). The model entitled, *Ecosystems for entrepreneurship-led sustainable development*, contains requirements for a productive entrepreneurship to flourish while at the same time realizing sustainable development as the final product. The model is a product of extensive global research and studies on entrepreneurship and economic development and is applicable in different levels of development and institutions, both public and private (Nkontwana & Stam, 2023). While Wurth et al (2022) indicate that sustainable development as the final output of the model, other scholars focus on immediate gains for entrepreneurs and national desires. Based on Stam (2015) work, Spigel, and Stam (2018) have structured the model to have four key levels, namely 1) Framework conditions (formal institutions, culture, physical infrastructure, and demand), 2) systemic conditions (networks, leadership, finance, talent, knowledge, support services/intermediaries), 3) Outputs (entrepreneurial activity), and 4) Outcomes (Aggregate value creation—result). While scholars supporting this model agree on the first three levels, the outcomes vary from sustainable development (Wurth et al., 2022), Aggregate value creation (Stam, 2015), Spigel, & Stam, 2018), new value creation (Stam, 2015), and Economic growth (Leendertse, Schrijvers & Stam, 2021). The proposed model for this study encompasses all four levels of entrepreneurial ecosystem as advocated by Wurth et al (2022), Spigel, and Stam 2018), Stam (2015), and Leendertse et al. (2021). The modified model spells out the gains expected for the entrepreneurs, customers, and national government (see Figure 2).

(Modified from: Stam 2015, 2018; Leendertse 2021; Komlosi 2022)



Discussion and recommendations

The above model borrows heavily from existing models and literature to provide a dashboard outlook for entrepreneurship and development, whether local or international. The model has however included additional framework conditions such as governance structures and technological infrastructure as essential ingredients in entrepreneurial ecosystems. The interaction of framework conditions is critical to creating an environment where entrepreneurs can thrive and growth their businesses, especially startups and scaleups. The systemic conditions are more internal, and their absence indicates entrepreneurial weaknesses. While the framework conditions can be favorable, it is the personality of the entrepreneurs, competencies, talent recognition and nurturing, networking abilities and financial acquisition and management that determine successes or failures as the businesses move through their lifecycles. The outputs of well utilized entrepreneurial ecosystem is both tangible and intangible. This includes customer loyalty, good reputation and physical goods and services leading to profitability and customer satisfaction. It is notable that customers loyalty is subject to a business ability to create value through innovations and creative thinking. The outcomes of these activities are increased revenue for the entrepreneurs while the country gains from increase taxes payment, employment and direct financing to suppliers and indirectly benefiting the society, sometimes through social corporate responsibility. The aggregate efforts of entrepreneurs lead to economic growth in the short-term and sustainability in the long run (Leendertse, 2021; Spigel, 2017).

Conclusion

The importance creating of entrepreneurial ecosystems cannot be emphasized enough. As proposed in this study, the African continent adoption of the proposed model will ensure that the continent gets tailor-made and appropriate solutions. The four level model, namely framework conditions, systemic conditions, outputs and outcomes and corresponding elements are critical to realization of expected outcomes (value creation, economic growth and sustainability).

REFERENCES

Acs, Z., L., Szerb, E., Autio, & Ainsley, L. (2017). *Global Entrepreneurship Index 2017*. London and New York: Global Entrepreneurship and Development Institute.

Adam Smith International. (2022). *Accelerating growth in Africa: Top African venture capital fund managers unite in oxford*. Retrieved from: https://www.linkedin.com/pulse/accelerating-growth-africa-top-african-venture-/

African Development Bank (ADB). (2023). *Developing Asia's 2023 Growth Outlook Upgraded to 4.9%*. Retrieved from: https://www.adb.org/news/developing-asia-2023-growth-outlook-upgraded-4-9-percent#:~:text=The%20regional%20economy%20is%20expected,year%20is%20maintained%20at%204.8%25.

Aldrick, P. (2023). *UK Government Plans to Invest £320 Million in Startups and Spin-Outs." Bloomberg*. Retrieved from: https://www.bloomberg.com/news/articles/2023-11-21/uk-government-plans-to-invest-320m-in-startups-and-spin-outs

Adner, R. (2006). Match your innovation strategy to your innovation ecosystem. *Harvard Business Review*. Retrieved from https://hbr.org/2006/04/match-yourinnovation-strategy-toyour- innovation-ecosystem.

Asian Development Outlook (ADO) (2023). *Asian Development Outlook (ADO) Economic forecasts.* Retrieved from: ttps://www.adb.org/outlook/editions/december-2023

Aldrick, P. (2023). *UK Government Plans to Invest £320 Million in Startups and Spin-Outs.* Retrieved from: https://www.bloomberg.com/news/articles/2023-11-21/uk-government-plans-to-invest-320m-in-startups-and-spin-outs

DAI. (20240. *EU funds totaling €4.1 billion aim to boost investment, private sector engagement in Africa and European neighborhood countries.* Retrieved from: https://dai-global-developments.com/articles/eu-launches-26-billion-fund-to-attract-investment-in-the-european-neighbourhood-and-africas-fragile-states/

Delle, S. (2022). *Why it is time to invest in African entrepreneurs.* Retrieved from: https://oecd-development-matters.org/2022/06/17/why-it-is-time-to-invest-in-african-entrepreneurs/

Fischer, F. (2000). Citizens, experts, and the environment. In *Citizens, experts, and the environment*. Duke University Press.

Isenberg, D. J. (2011). The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurships. The Babsos Entrepreneurship Ecosystem Project, 1(781), 1–13.

European Commission (EU). (2024a). *Internal market, industry, entrepreneurship and SMES: Supporting entrepreneurship.* Retrieved from: https://single-market-economy.ec.europa.eu/smes/supporting-entrepreneurship_en#:~:text=We%20improve%20the%20entrepreneurial%20capacity,Entrepreneurship%20Competence%20Framework%20(EntreComp).

European Commission (EU). (2024). *Financing programmes for SMEs: How it works*. Retrieved from: https://commission.europa.eu/business-economy-euro/banking-and-finance/financing-investment/financing-programmes-smes_en

Atiase, V. Y, S. Mahmood, Y. Wang, & Botchie, D. (2018). 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

Autio, E., & Thomas, L. D. W. (2014). Innovation ecosystem. In *The Oxford Handbook of Innovation Management.* Oxford, UK: Oxford University Press.

Biru, A. G., D. Gilbert, & Arenius, P. M. (2017). The Viability of Small Businesses in Ethiopia: An Institutional Perspective." *Academy of Management Proceedings* (1), 15111. Briarcliff Manor, NY 10510: Academy of Management. doi:10.5465/AMBPP.2017.15111abstract

Bruno, A. V. & Tyebjee, T. T. (1982). The environment for entrepreneurship. In C. A. Kent, D. L. Sexton, and K. H. Vesper (Eds.). *Encyclopedia of entrepreneurship*, pp. 288-307. Englewood Cliffs, NJ; Prentice Hall.

Boley, H. & Chang, E. (2007). Digital ecosystems: Principles and semantics, In *Inaugural IEEE International Conference on Digital Ecosystems and Technologies*. Cairns Australia.

Cantner, U., J.A. Cunningham, E.E. Lehmann, & Menter, M. (2021). Entrepreneurial ecosystems: a dynamic lifecycle model. *Small Business Economics*, 57 (1), 407–423

Chigunta, F. (2017). Entrepreneurship as a possible solution to youth unemployment in Africa. *Laboring and learning*, 10, 433-451.

Cohen, B. (2006). Sustainable valley entrepreneurial ecosystems, *Business Strategy and the Environment* 15(1),1–14

Cross Border Virtual Incubator (CBVI), (2013). *Multi-country report of practices and experiences second pilot series: Versatile field coaching of new entrepreneurs." University Of Miskolc*. Retrieved from: https://eadtu.eu/documents/Publications/CVBI/CBVI_Multi-country_report_of_practices_and_experiences.pdf

DAI (2024). *EU funds totaling €4.1 billion aim to boost investment, private sector engagement in Africa and European Neighbourhood countries.* Retrieved from: https://dai-global-developments.com/articles/eu-launches-26-billion-fund-to-attract-investment-in-the-european-neighbourhood-and-africas-fragile-states/

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. Retrieved from: https://doi.org/10.1016/j.jbusvent.2012.02.002.

European Commission (EU). 2024. *Internal Market, Industry, Entrepreneurship and SMEs.* Retrieved from: https://single-market-economy.ec.europa.eu/smes/supporting-entrepreneurship_en

Feld, B. 2012. *Startup communities: Building an entrepreneurial ecosystem in your city,* Hoboken, NJ: Wiley

Feld, B. & Hathaway, I. (2020). *The startup community way: Evolving an entrepreneurial ecosystem.* Hoboken, NJ: Wiley

Fischer, F. (2000). *Citizens, experts, and the environment. In Citizens, experts, and the environment*. Duke University Press.

Gawer, A. & Cusumano, M. A. (2008). How companies become platform leaders", *MIT Sloan Management Review, Cambridge*, 49(2), 28–35

Gnyawali, D. & Fogel, D. (1994). Environments for entrepreneurship development: Key dimensions and research implications. *Entrepreneurship: Theory & Practice*, 18(4), 43-62.

Hekkert, M. M. P., R. A. A., Suurs, S. O., Negro, S., Kuhlmann, & Smits, R. E. H. M. (2000). Functions of innovation systems: A new approach for analysing technological change. *Technological Forecasting and Social Change* 74(4), 413–432.

Isenberg, D. (2010). The big idea: How to start an entrepreneurial revolution, *Harvard Business Review*, June 1

Jafarov, N. & *Szakos*, J. (*2022*. Review of entrepreneurial ecosystem models. ASERC *Journal of Socio-Economic Studies*, 5(1), 3-16.

Isenberg, D. (2011). When big companies fall, entrepreneurship rises. *Harvard Business Review*, Retrieved from: http://blogs.hbr.org/2013/03/when-Big companies-fall-entrep/

Leendertse, J., M. Schrijvers, & Stam, E. (2021). Measure Twice, Cut Once: Entrepreneurial Ecosystem Metrics. *Research Policy* 51

Liguori, E., J. Bendickson, Solomon, S. & McDowell, W. C. (2019). Development of a multi-dimensional measure for assessing entrepreneurial ecosystems." *Entrepreneurship and Regional Development*, 31(1–2), 7–21.

Khattab, I. & Al-Magli, O.O. (2017). Towards an integrated model of entrepreneurship ecosystem. *Journal of Business & Economic Policy*, 4(4), 80-92

Koltai, S. R. (2016). *2Peace through entrepreneurship: Investing in a startup culture for security and development*. Brookings Institution Press.

Kukaj, D. (2018). Impact of unemployment on economic growth: Evidence from Western Balkans. *European Journal of Marketing and Economics*, 1(1), 10–18.

Malecki, E. J. (2018). Entrepreneurship and entrepreneurial ecosystems. *Geography Compass*, 12(3), e12359

Mack, E. & Mayer, H. (2016). The evolutionary dynamics of entrepreneurial ecosystems. *Urban Studies* 53(10), pp. 2118–2133. doi: 10.1177/0042098015586547

Marks, J., E. Swartz, S. Dawa, & Mitra, J. (2022). African Entrepreneurial Ecosystems: Form, Function & Structure Special Issue." *Journal of Entrepreneurship and Innovation in Emerging Economies*, 1–3

Mars, M. M., Bronstein, J. L., and Lusch, R. F. (2012). The value of a metaphor. *Organizational Dynamics*, 41(4), 271–280.

Mason, C. & Brown. R. (2014). Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship." *Final Report to OECD, Paris 30* (1), 77–102

Malecki, E. J. (2018). Entrepreneurship and entrepreneurial ecosystems. *Geography Compass*, 12(3), e12359.

Mulas, V., M. Minges, & Applebaum, H. R. (2015). *Boosting tech innovation ecosystems in cities: a framework for growth and sustainability of urban tech innovation ecosystems*. Washington, D.C.: World Bank Group.

Moore, J. (1993). Predators and prey: A new ecology of competition. *Harvard Business Review*, May.

Nelson, R. & Winter, S. (1982). *An evolutionary theory of economic change*. Harvard University Press

OECD. (2024). *Cultivating successful entrepreneurs*. Retrieved from: https://www.oecd.org/cfe/leed/entrepreneurship.htm#:~:text=Entrepreneurship%20is%20at%20the%20heart,local%20economic%20change%20and%20competitiveness.

Quaidoo, M. (2018). *The role of entrepreneurs in economic development: Prospects and challenges of female entrepreneurs in agribusiness in Ghana*. https://hdl.handle.net/1813/57393

Rodrik, D. (2004). Industrial policy for the twenty-first century. *Centre for Economic Policy Research.* https://doi.org/10.1017/CBO9781107415324.004

Rodríguez-Pose, A. (2013). Do institutions matter for regional development? *Regional Studies,* 47(7), 1034–1047.

Rosted, J. (2012). *Understanding Business Ecosystems.* FORA Group

Rysman, M. (2009). The economics of two-sidedmarkets." *Journal of Economic Perspectives,* 23(3),125–143

Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique", *European Planning Studies,* 23(9), 1759 – 1769.

Stam, E. & Van de Ven, D. (2021). Entrepreneurial ecosystem elements. *Small Business Economics,* 56(2), 809–832. DOI: 10.1007/s11187-019-00270-6.

Owen-Smith, J. & Powell, W. W. (2004). Knowledge networks as channels and conduits: The effects of spillovers in the Boston biotechnology community. *Organization Science,* 15(1), 5-21.

Spigel, B. (2020). *Entrepreneurial ecosystems: theory, practice, futures. Edward Elgar.* https://doi.org/10.4337/9781788975933

Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice* 41, (1), 49–72. doi:10.1111/etap.12167

Seth, A. (2023). *Nearly half of Germany's €30 billion startup strategy has been implemented: German government*. Retrieved from: https://150sec.com/nearly-half-of-germanys-e30-billion-startup-strategy-has-been-implemented-german-government/18965/

Stam, E. & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics,* 56(2), 809-832.

Tansley, A.G. (1935). The use and abuse of vegetational concepts and terms. *Ecology* 16, 284–307.

Turcato, C. (2020). *Commission and European Investment Fund unlock €8 billion in finance for 100,000 SME*s Retrieved from: https://clustercollaboration.eu/news/commission-and-european-investment-fund-unlock-eu8-billion-finance-100000-smes

Valdez, J. (1988). *The entrepreneurial ecosystem: Toward a theory of new firm formation. Working Paper*.. Retrieved from: http://www.sbaer.uca.edu/research/sbida/1988/PDF/11.pdf

Warwick, K. (2013). Beyond Industrial Policy, *OECD STI Policy Paper* No. 2

Weil, P. & Woerner, S. L. (2015). Thriving in an increasingly digital ecosystem. *MIT Sloan Management Review,* 56(4), 27–34

White House. (2024). *Fact sheet: President Biden to highlight how his investing in America agenda has led to a black small business boom.* Retrieved from: https://www.whitehouse.gov/briefing-room/statements-releases/2023/12/20/fact-sheet-president-biden-to-highlight-how-his-investing-in-america-agenda-has-led-to-a-black-small-business-boom/#:~:text=The%20American%20Rescue%20Plan%20invested,assistance%20grants%20to%2032%20states.

Worldatlas. (2024). *The biggest industries in China*. Retrieved from: https://www.worldatlas.com/articles/which-are-the-biggest-industries-in-china.html#:~:text=The%20Biggest%20Industries%20In%20China%201%20Manufacturing%20Industry,China%20...%204%20Agriculture%20Industry%20In%20China%20

Wurth, E. E. Stam, & Spigel, B. (2022). Towards an entrepreneurial ecosystem research program." *Entrepreneurship Theory and Practice*, 46(3),729-778

World Bank, (2023). *The World Bank in Africa.* Retrieved from: https://www.worldbank.org/en/region/afr/overview#:~:text=The%20World%20Bank%20in%20Africa,recovery%20in%20major%20trading%20partners.

Wurth, B., E. Stam, & Spigel, B. (2022). Toward an Entrepreneurial Ecosystem Research Program. *Entrepreneurship: Theory and Practice* 46(3),729–778. DOI: 10.1177/1042258721998948

Yang, P., X. Liu, Y. Hu, & Gao, Y. (2022). Entrepreneurial ecosystem and urban economic growth-from the knowledge-based view. *Journal of Digital Economy* (1), 239–251