

Exploratory Study of the Entrepreneurial Ecosystem in Central Region, Ghana

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Abstract

Research on entrepreneurial eco-systems is evolving with exhortations for empirical studies at regional and local levels to augment national surveys. The study, therefore, sought to explore the entrepreneurial eco-system of the Central Region, which is relatively well-endowed with natural resources but lags behind in economic advancement in Ghana. Through descriptive research design, quantitative data were collected using self-administered questionnaires from a convenience sample of 44 entrepreneurs under the presidential business support programme in the Central Region of Ghana, in 2019. Data were analysed, by conducting descriptive analysis such as means (M) and percentages and by exploratory factor analysis, with the IBM SPSS Version 25. Descriptive results of 37 valid responses showed that the respondents were satisfied, in varying degrees ($M = 4.19-5.65$), with 11 factors within the eco-system; the top three factors were demand, security and availability of raw materials. Respondents were, however, not satisfied with access to business development services, access to finance, rent charges and access to repairers of equipment and thus, pose as challenges to their entrepreneurial pursuits. Principal component analysis revealed inter-connectedness among the factors in the eco-system with strong loadings of measures of institutions and resource endowment under the two components of the solution. Based on the findings, it is concluded that the entrepreneurs surveyed were satisfied with more factors in the EES of the Central Region while they were dissatisfied with relatively few but critical factors in the EES, thereby posing as major challenges to their entrepreneurial activities. As an exploratory study, the findings suggest that the entrepreneurial eco-system of the Central Region of Ghana is, to some extent, supportive of entrepreneurial activities but has key challenges. To achieve maximum outcomes, policy interventions should collectively address, at a time, factors that interact strongly to influence entrepreneurship within the system.

Keywords: Eco-system, entrepreneurship, Ghana, institutions, resources

A. Introduction

Entrepreneurs and entrepreneurial ventures constitute fundamental catalysts of wealth creation and economic development. Entrepreneurs stimulate the cyclical flow of economic life through the process of creative destruction and creative accumulation within their entrepreneurial ventures of which micro, small and medium-sized enterprises (MSME) form a dominant and essential cohort (Adusei, 2016; Meyer & de Jongh, 2018). Globally, in developed and developing economies, majority of enterprises are MSMEs, and they make significant contributions to employment and national income. For example, Rotar, Kontošić, Pamić and Bojnec (2019) report that in the European Union, MSMEs account for more than 99 percent of all enterprises in the non-financial business economy while in general, MSMEs contribute more than 66 percent of total EU employment and 57 percent of total value addition. Similarly, in African countries, such as Nigeria and Ghana, MSMEs constitute more than 90 percent of enterprises and contribute over 70 percent of gross domestic product (Johnson & Kotey, 2018).

Nevertheless, the ability of MSMEs to drive economic development depends to a larger extent on the entrepreneurial eco-system (EES), which comprises inter-dependent actors and factors that are strategically co-ordinated to promote productive entrepreneurship (Stam, 2015). Through the lens of institutional theory and resource-based theory, major factors within the EES are government policies and public and private infrastructure and services in the legal, regulatory, financial, educational, commercial, physical and social landscapes of a given geographic area (Kline, Duffy & Clark, 2018; Stam & van de Ven, 2019). Cavallo, Ghezzi and Balocco (2018) acknowledged the numerous perspectives, elements, and concepts of the EES and expressed the need to consolidate and to step up empirical research on the subject matter. This is because an appropriate and reliable body of research is critical to policy formulation for a healthy EES while a sound EES is an imperative for entrepreneurs to engage in productive and sustainable entrepreneurship that drives economic growth and development.

Although Ghana is considered a top economic performer in Sub-Saharan Africa, its EES is far from being supportive, especially for productive entrepreneurial activities that will place the country on the pedestal of transformational growth. For instance, a report, submitted by Koltai, Mallet and Musprat (2013) to the United Kingdom's Department for International Development (DFID), shows that although Ghana appears to be in a strong position to leverage entrepreneurship, its EES is not well-developed to promote entrepreneurial activities that will produce meaningful business and job creation. In addition, related national and international surveys indicate that Ghana is a low performer in the world in terms of ease of doing business, global competitiveness and trading across borders (Erastus, Stephen & Abdullai, 2014; Liedong & Frynas, 2018). While acknowledging the importance of country-level studies, it is essential to note that such studies could unfairly mask critical regional and local disparities and, as a result, prevent the disparities from gaining the right policy attention.

The objective of this study was, therefore, to explore the entrepreneurial eco-system in the Central Region of Ghana. Relative to other regions in Ghana, the Central Region is endowed with aquatic and marine resources, cultural monuments, top educational institutions, forests, and other resources that present business opportunities in the transport, fishing, tourism, agro and food processing sectors (Agyei-Mensah & Adolf-Schandorf, 2007). The region is, however, not economically vibrant. The latest Ghana Poverty and Inequality Report (Cooke, Hague & McKay, 2016)

shows that poverty rate of the region is high (18.8%) as compared to Greater Accra Region (5.6%) while the formal industrial sector keeps dwindling with an estimated annual job loss of 606.

Moreover, it is generally claimed that the Central Region does not have effective and efficient entrepreneurial eco-system but there are virtually no studies that analyse the entrepreneurial eco-system and its elements. This paper sought to set the pace with an exploratory study guided by two major research questions: (1) To what extent are entrepreneurs satisfied with the factors within the entrepreneurial eco-system? (2) What are the challenges that entrepreneurs encounter in the entrepreneurial eco-system?

The paper makes two key contributions to literature. The first is a conceptual framework of the EES and the second consists of preliminary insights into the EES of the Central Region of Ghana. The study also buttresses the need for regional and local surveys in addition to national surveys. The remaining sections of the paper are dedicated to literature review, methodology, presentation of results and discussions, conclusions, limitations, and directions for future research.

B. Literature Review

The literature review is made up of two parts. The first part is dedicated to the meaning of the concept of entrepreneurial eco-system and how it compares and contrasts with similar concepts such as the business eco-system and entrepreneurial climate. The second part of the review focuses on the conceptual framework of the EES.

C. The entrepreneurial eco-system

The EES refers to inter-dependent actors and factors that enable or constrain productive entrepreneurship (Stam, 2015). The actors, including policy makers, suppliers of resources and entrepreneurs, create, enable and use the factors to drive entrepreneurship with the ultimate expectation of achieving positive entrepreneurial outcomes such as establishment of diverse growth-oriented firms, enhanced firm productivity, profitability and growth and, eventually, economic growth and development (Cohen, 2006; Spilling, 1996). The factors have been broadly categorised by Stam and van de Ven (2019) to consist of institutions and resource endowments. From the perspective of institutional theory by North (1990, 2016), institutions are the rules of the game in a society, and they could be formal, for example written policies, laws and regulations, or informal in the form of codes of conduct, norms and conventions.

Resources, on the other hand, are tangible and intangible assets such as human capital, organisational capital, financial capital, physical capital and relationship capital that are leveraged by individuals and entities to create value and special advantages (Kellermanns, Walter, Crook, Kemmerer & Narayanan, 2016). The resource-based theory by Barney (1991) illustrates that resources that are strategic, in other words are valuable, rare, inimitable and non-substitutable, offer opportunities for the creation of sustained competitive advantages. The two overarching components of the EES, that is actors and factors, have underpinned the evolution of the EES concept.

Emergence of the concept of EES is often traced to the pioneering works of authors such as van de Ven (1993) on the development of infrastructure for entrepreneurship, Moore's (1993) business eco-system and the entrepreneurial

system by Spilling (1996). Both van de Ven (1993) and Moore (1993) demonstrated that innovation, which is at the core of entrepreneurship, is the outcome of co-operative and competitive complex interactions among actors, factors and functions within a particular jurisdiction. However, van de Ven (1993) set his discussions within the broader scope of development of industrial infrastructure that could positively or negatively influence entrepreneurship while Moore's business eco-system (1993) focused more on the nuances of corporate entrepreneurship and associated events across industries.

Conversely, Spilling (1996) provided a relatively extensive description and importance of the entrepreneurial system to economic development. According to Spilling (1996), the entrepreneurial system connotes the entrepreneurial capacity of a locality or region. It is made up of various elements, actors and the roles they play, as well as various institutions and environmental factors. Spilling (1996) noted further that the entrepreneurial system is critical to driving multitude of entrepreneurial actions that are needed to contribute to the dynamism, performance and long-term transformation of regional economies. Similarly, drawing upon insights from earlier scholars, Cohen (2006) defined the EES as diverse set of inter-dependent actors within a geographic region that influence the formation and eventual trajectory of entire group of actors and, potentially, the economy as a whole.

Comparison with the concept of entrepreneurial climate (Adomako, Danso & Ampadu, 2014) indicates that just like the EES, the former comprises elements, such as economic, political and socio-cultural factors, that shape the growth and performance of small businesses in a territory. However, the EEs can be distinguished from the entrepreneurial climate on the grounds that the latter is a component of the EES, as explained by Spilling (1996). The EES can also be likened to the entrepreneurial framework conditions, by the global entrepreneurship monitor (GEM), which are said to enhance or hinder new business creation (Beynon, Jones & Pickernell, 2017). Nevertheless, the EES is broader and complex in nature as it embraces actors, in addition to factors, that co-operate and or compete to influence entrepreneurial activities and eventual impact on the growth of a given territory.

Even though the EES also shares some commonalities, such as institutions and infrastructure, with concepts like the business eco-system, industrial districts, clusters and innovation systems, Nicotra, Romano, Del Giudice and Schillaci (2018) noted that the ESS is distinguished by its focus on entrepreneurs and start-ups as unique organisational entities with different capabilities and resources and on the role of economic and social contexts surrounding entrepreneurial processes. Song (2019) further explained that unlike industrial districts, the EES moves away from industry-specific analysis and assumes broader perspectives that cut across related industries and the elements that enable entrepreneurship including intrapreneurship, which underpin continuous business development.

Some major factors within the EES, presented by Kline, Duffy and Clark (2018), are government policies and support and accessibility and quality of public and private infrastructure and support services within the legal, regulatory, financial, educational, commercial, physical and social landscapes of a given geographic area. In addition, Hechavarría

and Ingram's (2018) outline of the EES includes internal market dynamics, that is speed of market change, and internal market burdens, in terms of ease of entry into a market, as extra distinct EES elements.

Furthermore, Nicotra et al. (2018), in an empirical study, classified the elements of the EES into four major forms of capital, namely financial capital, knowledge capital, institutional capital and social capital. In the midst of the various classifications, Stam and van de Ven (2019) summarised and provided two broad categories of the elements of the EES, namely institutional arrangements and resource endowments. Institutional arrangements are synonymous to Nicotra et al.'s (2018) elements of institutional capital and social capital while the other elements such as physical infrastructure, talent and demand constitute resource endowments.

D. Conceptual framework of the entrepreneurial eco-system

Informed by the preceding review, the EES is conceptualised and defined in this paper as constituting inter-related actors and factors and their influence on the evolution and development of entrepreneurial activities and the eventual impact on economic growth and development of a given territory. Although concepts like the digital EES, as used by Sussan and Acs (2017), may defy the location-specific description often ascribed to the EES, this paper embraces the location-related definition of the EES due to the fact that it focuses on entrepreneurs within a particular geographical location. Therefore, from the tenets of institutional theory and resource-based theory, Figure 1 shows that the EES thrives when all the elements that are required to sustain productive entrepreneurship in a given territory are present and in good state while the contrary holds when the system is in a bad state (Stam & van de Ven, 2019).

The major components of the EES, as depicted in Figure 1, include actors, factors, effects and outcomes. In agreement with Spilling (1996), the elements comprise existing actors, their competence and support for entrepreneurial action, and the character of prevailing environmental factors in the geographic locality. Figure 1 shows three principal actors in the EES – policy makers, resource suppliers and entrepreneurs. Policy makers represent all persons, groups and organisations who enact, implement and sanction laws, regulations and policies within the EES. Suppliers of resources constitute individuals, groups and organisations that provide resources at a price or for free.

Suppliers could operate from all sectors within and outside the EES and may consist of entities such as the government, development partners, labour market, universities and creditors (Cavallo et al., 2018; Hechavarría & Ingram, 2019). Consumers form part of resource providers as they support the development of the EES through their purchasing power and consumption choices (Nicotra et al., 2018). Entrepreneurs have the distinct role of tapping into entrepreneurial opportunities created by the institutional conditions and resource endowments and, on the basis of that, carry out innovation and continuous entrepreneurial development which can be productive or unproductive (Baumol, 1996)

Insert figure 1

The actors, as illustrated in Figure 1, have the responsibility of co-operating and collaborating, amidst competition, to promote conducive and sustainable entrepreneurial climate that support productive innovation and consumption (Cohen, 2006; Nicotra et al., 2018). For example, policy makers are expected to co-operate with entrepreneurs and suppliers of resources by soliciting their inputs in the development and implementation of relevant policies (Cunningham, Menter & Wirsching, 2019). Policy makers and resource providers, such as universities and research institutions, are also required to collaborate to promote research and human resource development that will drive entrepreneurship in the EES (Cunningham et al., 2019; Ratten, 2020). In executing their roles, the actors may also engage in multiple roles, thereby accentuating the complexity of the EES. For instance, entrepreneurs may engage in intra-group competition to secure resources for the pursuit of entrepreneurial opportunities; this phenomenon may extend to inter-actor competition when, for example, some resource providers and policy makers may be entrepreneurs or may be engaged in entrepreneurship and vice versa and compete for resources.

The activities and interactions of the actors define and or influence the institutional environment and resource endowments which operate together to create entrepreneurial opportunities (Figure 1). Therefore, the effectiveness and efficiency of the EES, as a whole, depends on the state, scope and application of institutional arrangements and resource endowments and their ability to continuously drive productive entrepreneurship, particularly innovation (Figure 1). The scope of application of institutions in the EES is broad as the body of institutions spans from the various actors to resource endowments and even to the outcomes within the EES. Institutions can support or can be inimical to entrepreneurship.

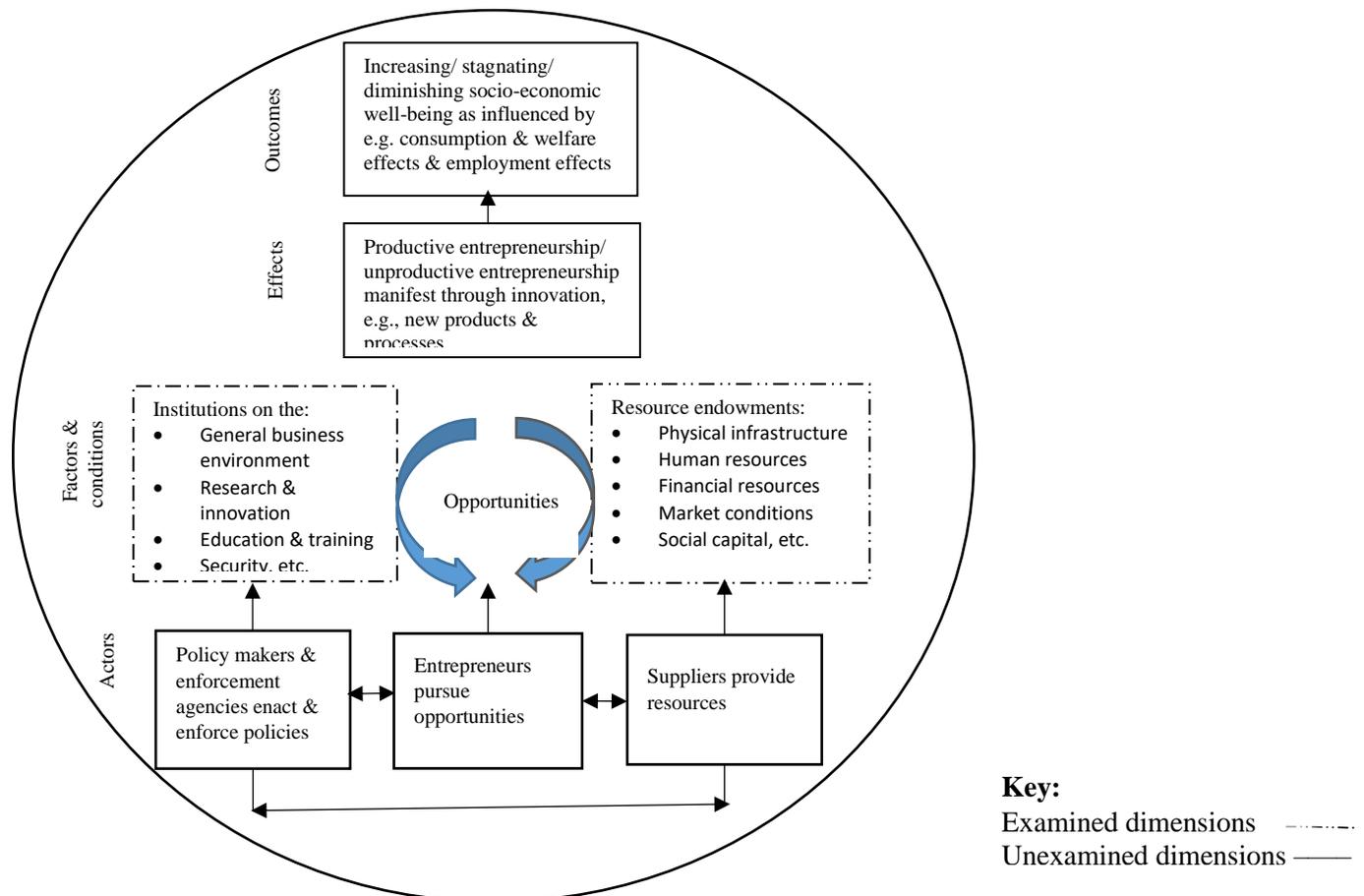


Figure 1: Conceptual framework of the entrepreneurial eco-system

Source: Authors' construct

In that regard, studies, by Adomako et al. (2014) in Ghana, and Williams and Forley (2015) in Bulgaria, showed that formal institutions drive entrepreneurship and although informal institutions may foster entrepreneurship in the informal economy, they serve to hamper productive entrepreneurship. In addition, a related study by Eesley, Eberhart, Skousen and Cheng (2018) showed that national and regional differences in entrepreneurial activities in terms of entry, survival and growth can be better explained by the interactive influence of formal and informal institutions with informal institutions having more persistent effects when the two are misaligned. In terms of the causes of informality, research by Kamasa, Adu and Oteng-Abayie (2019) and the World Bank's (2019) doing business report showed that regulatory burdens and high cost of utilities, for example, drive up costs of operation and often promote informality and tax evasion in Ghana.

Business development services (BDS), that is non-financial services such as advisory services, training and capacity building, are also an important aspect of institutions since they constitute 'rules of the game'. BDS are known to help enterprises improve upon their performance, job creation, labour productivity and investment (Ovadje, 2010; Piza et al., 2016). For example, in Ghana, research by Ntiamoah, Li and Kwamega (2016) revealed positive effects of BDS provided by government and other institutions on the performance of enterprises. Resource endowments constitute the second set of elements in the entrepreneurial climate of the EES, as depicted in Figure 1.

Resources are tangible and intangible assets such as human capital, organisational capital, financial capital, physical capital and relationship capital that are leveraged by individuals and entities to create value and special advantages in a sustainable manner (Barney, 1991; Kellermans et al., 2016). The extent to which special advantages can be realised is dependent upon the ability of individuals, in this case entrepreneurs, to leverage the strategic resources to tap into opportunities that create the advantages (Kellermans et al., 2016). Focusing on the EES for start-ups in Brazil, Arruda, Nogueira and Costa (2013) analysed the determinants of entrepreneurship in Brazil. Major findings were that access to finance, availability of basic skills for entrepreneurship development and market conditions in terms of market size and purchasing power were important to entrepreneurship.

Examination of Ghana's EES by Koltai et al. (2013) also revealed limited actors that deliver on their mandate, fragmented eco-system activities, finance gap and lack of "government-based champion of entrepreneurship". A related study by Baidoo and Awuakye-Odum (2016) in Cape Coast, Ghana, showed that respondents were dissatisfied with services by equipment repairers in terms of service quality, absence of working standards and availability of requisite component parts. Mensah, Fobih and Adom (2019) also examined the prospects and

challenges of entrepreneurship development in Ghana and found major challenges such as limited funding availability and accessibility, and inadequate skilled labour, technology innovation and customer loyalty.

The upper portion of Figure 1 shows the interactive effects of the factors and conditions of the EES, manifest by booming/productive entrepreneurship and or unproductive entrepreneurship which could drive or retard the growth and development of the territory in question. Evidence of the desired ultimate outcomes encompass, for example, sustained increment in income, consumption, employment and general welfare. Examination of the quality of the entrepreneurial eco-system in the Netherlands by Stam and van de Ven (2019) showed that the prevalence of high-growth firms in a region is strongly related to the quality of its entrepreneurial eco-system.

The reality is that planned and adequate investment into the development of the EES produces positive and lasting outcomes, with spillover effects, while the lack of it makes the EES deficient and ineffective. For instance, Spilling (1996), through a case study of the 1994 Winter Olympics in Lillehammer, Norway, established that conscious development of the entrepreneurial system in Lillehammer nurtured and led to the growth of entrepreneurship which eventually brought about economic transformation of the host town and positive effects on the surrounding regions. On the contrary, a related study by Oluotase, Brijlal, Yan and Ologundudu (2018) on the effects of the EES on the entrepreneurial orientation and intention of university graduates in Nigeria showed a significant context-dependent variation in entrepreneurial orientation and intention. The authors raised the need to create a conducive EES to complement entrepreneurship education.

The foregoing review illustrates the four major components of the EES to comprise actors, factors, effects and outcomes. It is evident that EES research is evolving with much attention on country level analysis and limited focus on regional and local studies except, for example, that by Spilling (1996). Also, there are very limited scientific EES studies on Ghana and its regions and localities. Again, the review illustrates numerous perspectives, elements and concepts which warrant empirical studies for consolidation, as put forward by Cavallo et al. (2018).

E. Methodology

The study employed a quantitative, descriptive research design to explore relevant factors and conditions in the EES of the Central Region of Ghana (Zikmund, Babin, Carr & Griffin, 2013). The study subjects were 67 entrepreneurs who participated in the business and entrepreneurial training of the presidential business support programme in the Central Region, on 26th July 2019. The programme is one of Ghana government's initiative to bolster the country's EES which was described in 2013 by Koltai et al. (2013) as fragmented and largely incapable of fostering transformational entrepreneurship. The 2019 presidential business support programme, in the Central Region, was made up of persons from the various districts in the Region who qualified for support in 2019.

Participants of the programme were targeted as a result of their quest in seeking avenues to promote, grow and develop their enterprises, which is a critical dynamic in an EES. Respondents were selected through convenience

sampling; that is, the study subjects consisted of persons who were available and willing to take part in the research. Convenience sampling was employed because the study sought to explore the EES and proffer initial insights for further research, without the aim to generalise the findings to the entire population (Etikan, Musa & Alkassim, 2016; Valerio et al., 2016). A total of 44 respondents participated in the study, representing a response rate of 66 percent.

Semi-structured questionnaire was designed for data collection. The questionnaire contained, among other things, an EES scale that was developed by the authors with insights from reviewed literature. Inclusion of items in the EES scale was guided by the principle of ensuring that an item directly related to the entrepreneurial activities within the EES so that respondents could easily identify with the issues under investigation. Table 1 shows the constructs, measures and some sources that informed the creation of the variable list in the EES scale. The scale consisted of 15 items. Three of the items encompassed institutions while the remaining 12 items focused on the resource endowments of the EES.

Table 1: Constructs and measures

Constructs (factors and conditions)	Measures and examples of sources
Institutions	<ul style="list-style-type: none"> • Availability and quality of services by regulatory agencies (van de Ven, 1993; Adomako et al., 2015) • Availability and quality of BDS/support services (Ntiamoah et al., 2016; Stam & van de Ven, 2019) • Security of people and property (Kline et al., 2018)
Resource endowments	<ul style="list-style-type: none"> • Access to labour (Kline et al., 2018; Hechavarría & Ingram, 2019) • Access to raw materials (Nicotra et al., 2018; Stam & van de Ven, 2019) • Access to finance (Hechavarría & Ingram, 2019; Stam, 2015) • Services by utility companies (Kline et al., 2018; Nicotra et al., 2018) • Rent charges (Kline et al., 2018) • Availability and quality of road network (Spilling, 1994; Stam & van de Ven, 2019) • Access to equipment (Baidoo & Awuakye-Odum, 2016; Nicotra et al., 2018) • Demand for goods and services (Arruda et al., 2013; Nicotra et al., 2018)

Source: Authors' construct (2019)

Institutions connote rules of the game; that is enforcement of policies and rules that govern entrepreneurship and as such legitimise, regulate and incentivise entrepreneurship in the EES (North, 1990; van de Ven, 1993; Stam & van de Ven, 2019). The institution-related items consisted of services by regulatory agencies such as the Ghana Revenue Authority (GRA) and the Metropolitan Assembly, BDS and security of people and property because they serve as

important means for the translation and implementation of relevant policies that affect entrepreneurship in the eco-system (Table 1).

Resource endowments included number and quality of road network, access to finance, access to labour, level of rent and demand, access to raw materials and access to experts who repair machines and equipment, as a proxy for access to equipment (Baidoo & Awuakye-Odum, 2016; Kline et al., 2018; Nicotra et al., 2018). Access to labour was measured with three items, namely availability of qualified, trustworthy and committed workers. Similarly access to raw materials was measured as the availability, quality and affordability of raw materials. The Cronbach's alpha of the EES scale was .87 which is above the acceptable threshold of .70, indicating strong internal consistency among the 15 items of the scale (Wadkar, Singh, Chakravarty & Argade, 2016).

Data collection took place in July and August 2019 at the convenience of the respondents. In all, 44 self-administered questionnaires were retrieved but seven of them were excluded from the data analysis because they were either scanty or the respondents were not specific with the location of their businesses. Descriptive analysis and exploratory factor analysis were conducted with the IBM SPSS Version 25.

F. Results and Discussions

Results and discussions are presented in this section. The presentation begins with background characteristics of the respondents of the study. This is followed by results and discussions of the entrepreneurial eco-system.

G. Background characteristics

Eight background characteristics of the respondents and their entrepreneurial activities were analysed. Total responses for all the variables were 37. The variables included the sex, age and educational level of the respondents. The remaining five characteristics comprised business status, years of operation, sector of operation, level of employment and business location. There were more males (75.70%) than females (24.30%). The mean age of the respondents was 36 years (SD = 9.07). The standard deviation shows that the age of the respondents was widely distributed about the mean with the age of most of the respondents appearing around the lower end of the distribution (skewness = 0.15). As shown in Figure 2, all the respondents had attained education with the majority (70.30%) having tertiary education while those with basic education (2.70%) and technical and vocational education (2.70%) formed the minority.

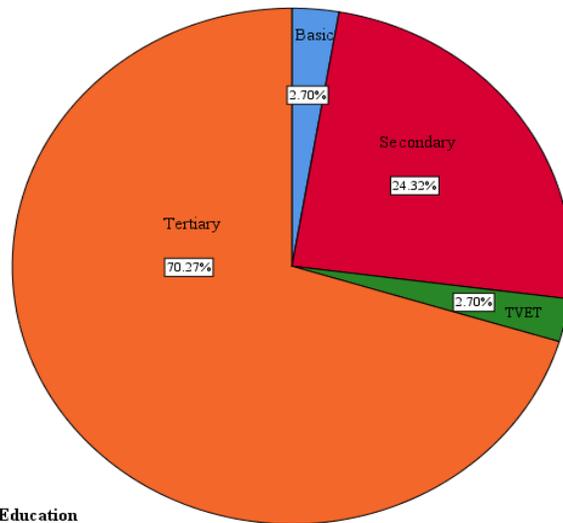


Figure 2: Highest Level of Education

Source: Fieldwork (2019)

The mean years of operation (3.94) coupled with high standard deviation (4.87), high skewness (3.03) and high kurtosis (12.35) mean that the age of the businesses were widely scattered about the mean with most of the ages below the mean age of 3.94, buttressing the fact that a greater percentage of the businesses were novice (57.58%), that is between 1 and 4 years (Figure 3). Further analysis showed that 30.30 percent of the businesses had been in existence for 5 years and above, while 12.12 percent of the businesses were nascent, that is at the start-up phase. The status of the businesses portrays inclusiveness of the president’s business support programme in terms of embracing enterprises at various stages of the enterprise life cycle, thus with the aim of promoting entry, growth, survival and productivity of enterprises in the EES (Hechavarria & Ingram, 2018).

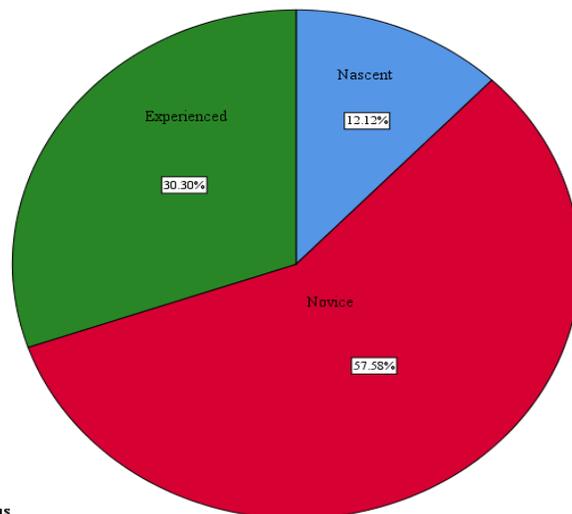


Figure 3: Business Status

Source: Fieldwork (2019)

Relatively, more respondents were from the industrial sector (40.54%) with food processing and textiles production forming the predominant business activities while construction and software development were in the minority (Figure 4). The higher focus on the industrial sector reflects the government's priority to industrialise the Ghanaian economy through policy interventions such as the one-district-one-factory policy and one-region-one-industrial hub policy (Mensah, Dauda, Boamah & Salman, 2020; Obeng-Amponsah, Zehou & Dey, 2019). Figure 4 also shows that 35.14 percent of the respondents were engaged in agriculture while 24.32 percent were involved in the service sector. Farming was the leading agricultural sector activity while trading, education and transportation were typical service sector activities.

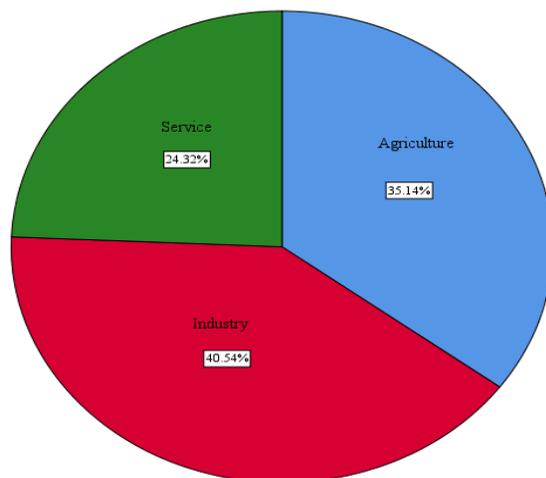


Figure 4: Sector

Source: Fieldwork (2019)

The mean employment was 4.2 workers but most of the businesses had less than 4 employees, specifically 1-2 employees as can be inferred from the skewness (3.99) and kurtosis (19.44) of the data distribution. Majority of the entrepreneurial activities (80%) were domiciled outside Cape Coast Metropolis and located in towns such as Elmina, Winneba and Kasoa, while the rest (20%) were situated within the Metropolis.

H. The entrepreneurial eco-system

The conceptual framework of the study (Figure 1) portrays the entrepreneurial climate of an EES to constitute factors and conditions, broadly categorised into institutions and resource endowments. The satisfaction of the respondents with institutions and resource endowment that directly relate to their entrepreneurial activities within the EES, were analysed to address the first research question of the study. The normality of the distribution of the EES data was within acceptable limits of ± 2 skewness and below ± 7 kurtosis (Kim, 2013), paving way for the mean to be reported as the measure of central tendency (Table 2). Descriptive statistics showed mean scores varying from 3.22 to 5.65, on a scale of 1, signifying least satisfaction, to 7, signifying highest satisfaction. Eleven factors had mean scores above the theoretical mean ($M = 4$), which is indicative of the fact that the respondents were satisfied,

in various degrees, with those factors within the EES. As presented in Table 2, the factors, in descending order, begins with demand (M = 5.65) for the respondents' products and ends with services by regulatory agencies (M = 4.19) such as the Ghana Revenue Authority and the Metropolitan Assembly that enforce policies and laws on taxation and other related issues.

Table 2: Measures of the factors and conditions in the entrepreneurial eco-system

	N	Mean	Std.		Kurtosis		
			Deviation	Skewness	Statistic	Std. Error	
Demand	34	5.65	1.515	-1.409	.403	1.919	.788
Security	37	4.76	1.770	-.625	.388	-.193	.759
Availability of Raw Materials	36	4.75	2.005	-.581	.393	-.794	.768
Utilities	35	4.74	1.738	-.399	.398	-.579	.778
Quality of Raw Materials	37	4.62	2.215	-.560	.388	-1.203	.759
Qualified Workers	37	4.51	1.693	-.006	.388	-1.075	.759
Committed Workers	36	4.50	1.828	-.178	.393	-.992	.768
Affordability of Raw Materials	37	4.41	2.047	-.359	.388	-1.121	.759
Trustworthy Workers	37	4.38	1.846	-.146	.388	-.834	.759
Road Network	37	4.24	1.754	-.165	.388	-.956	.759
Regulatory Agencies	36	4.19	1.802	-.122	.393	-.767	.768
Access to Repairers of Equipment	35	3.83	1.992	.014	.398	-1.105	.778
Rent Charges	34	3.50	1.863	.463	.403	-.530	.788
Finance	35	3.26	1.651	.436	.398	-.085	.778
BDS	36	3.22	1.726	.589	.393	-.070	.768
Valid N (listwise)	25						

Source: Fieldwork (2019)

The satisfaction of the respondents with the eleven factors within the EES signifies that the respondents have good impressions or experiences with demand for their products, security of people and property, access to raw materials, utilities and labour, and road network, which is the primary means of transportation in the EES, as well as services by the regulatory agencies. The findings corroborate the exhortation by Erastus et al. (2014) on the need to augment national EES surveys with regional and local surveys as there could be critical points of departure. For instance, contrary to the findings of this study, a related research by Mensah et al. (2019) at the national level, found access to skilled labour and regulatory framework among major challenges facing small and medium-sized enterprises in Ghana. The disparity could be attributed to the fact that the Central Region, as an educational hub in Ghana, has an ample pool of a versatile labour force that meets the current needs of its entrepreneurs.

Nevertheless, the fact that most of the mean scores tilted closely towards the theoretical mean (Table 2) points to the fact that there is more room for improvement in all the eleven variables. Regulatory burdens and high cost of utilities, for example, drive up costs of operation and often promote informality and tax evasion as established by Kamasa et al. (2019), and as reported by the World Bank (2019) in its 2018 doing business report. A brighter side to

the findings is that although Ghana's business environment is generally considered far from being supportive of entrepreneurship (Adomako et al., 2014, Kamasa et al., 2019), the findings show that the EEs of the Central Region appears relatively attractive as it abounds in untapped business opportunities, and given the requisite purchasing power as evidenced by satisfaction with demand for products, the economic fortunes of the Region could be boosted through entrepreneurship development.

On the other hand, it is evident from Table 2 that four factors had mean scores below the theoretical mean suggesting that the respondents were not satisfied with them and, as a result, they pose as challenges to their entrepreneurial pursuits, in fulfilment of the second research question of the study. Thus, the respondents were not satisfied with the provision of BDS, access to finance, rent charges and access to repairers of equipment. The BDS market in Ghana is still evolving with government institutions, such as the National Board for Small Scale Industries and related Ministries such as the Ministry for Food and Agriculture, playing the dual roles of facilitation and service provision. BDS is generally known to help SMEs improve upon their performance, job creation, labour productivity and investment (Piza et al., 2016). In this regard, research by Ntiamoah et al. (2016) on the impact of support services, by government and other institutions, on firm performance revealed positive effects of BDS usage on the performance of the SMEs surveyed. It is, therefore, a step in the right direction that the respondents saw the need to access the BDS offered by the president's business support programme.

In addition to limited access to BDS, the other challenges are consistent with previous studies that established restricted access to finance (Koltai et al., 2013; Mensah et al., 2019), high rent charges (Akaabre, Poku-Boansi & Adarkwa, 2019) and limited access to requisite equipment and technology (Baidoo & Awuakye-Odum, 2016) as major challenges in Ghana's EES, particularly for MSMEs. Enterprises also have to grapple with high interest rates often within the range of 50 percent to 60 percent (Erastus et al., 2014). Finance and equipment and technology play critical roles in enterprise development. For example, finance serves as the primary medium of exchange in securing other requisite resources such as raw materials, rented premises, equipment and technology that are needed to operate an enterprise. These resources are, in turn, used in producing and or providing goods and or services that offer value to customers and competitive advantage to the enterprise. Thus, juxtaposing the important role that BDS, finance, rented premises and equipment and technology repairers play in enterprise development to their limited accessibility in the EES, implies that they are key challenges to the enterprises surveyed.

Factor analysis was conducted to ascertain the main EES factors that interact to explain the level of satisfaction of the respondents. With the exception of six items, the coefficients of the correlation matrix, produced through exploratory factor analysis, were within the conventional range of .3 to .7 (Pallant, 2011; Zikmund, Babin, Carr & Griffin, 2013). The six items included the three measures of access to labour and the three measures of access to raw materials which exceeded .7, signifying that each set of items measured the same construct. Consequently, as recommended in literature (Pallant, 2011), the respective items were transformed through averaging to arrive at single variables, namely, access to labour and access to raw materials. The rotated solution showed that the two

components had several strong loadings of .4 and above, with each variable loading substantially on only one component except access to repairers of equipment which loaded strongly on both components but recorded the highest loading on the second component (Table 3).

Table 3: Factor loadings of the factors and conditions of the entrepreneurial eco-system

	Components	
	1	2
Access to Labour	.852	
Utilities	.733	
Security	.643	
Road Network	.619	
Regulatory Agencies	.613	.328
Demand	.561	
BDS		.866
Finance		.805
Rent		.587
Access to Repairers of Equipment	.466	.571
Access to Raw Materials	.334	.458
Eigenvalues	3.568	2.168
Total variance explained (%)	32.432	19.707
Cumulative variance explained	32.432	52.139

Source: Fieldwork (2019)

Six variables loaded strongly on component 1 with factor loadings from .852 to .561 which is an indication that the respondents, in their entrepreneurial pursuits, considered them as the most important set of factors in relation to their level of satisfaction with the local EES. The variables, in descending order, include satisfaction with access to labour, utilities, security, road network, service delivery by government regulatory agencies and demand for the respondent's product. Five variables with factor loadings from .866 to .458, loaded strongly on component 2 explaining 19.71 percent of the total variance. The factors are access to business development services, access to finance, rent charges, access to repairers of equipment and access to raw materials.

The findings suggest that the five factors strongly connect to influence the level of satisfaction of the respondents with their EES. Cross examination of the five factors in relation to the findings on the satisfaction of the respondents with their EES shows that, except access to raw materials, respondents were not satisfied with all the factors that loaded strongly on component 2. It, therefore, implies that the entrepreneurs are more likely to appreciate improvements in support services, access to finance, access to affordable rent and access to repairers of equipment when the factors are given due attention without compromising on any one of them. A further implication is that their level of satisfaction would encourage more entrepreneurial activities. Related studies, for example by Spilling

(1996) and Stam and van de Ven (2019), showed that the prevalence of high-growth firms in a region is strongly related to the quality of its EES, buttressing the need for policy makers to consciously invest and build the EES. Apart from building high-growth firms, government policies and interventions for developing the EES have been found to be efficacious in promoting entrepreneurial activities among marginalised groups such as women (Hechavarría & Ingram, 2018).

Further inspection of the factor loadings, as presented in Table 3 showed that two measures of institutions, namely security of people and property, and services by regulatory agencies, loaded with resource endowment factors under component 1 while BDS loaded with other resource endowment variables under component 2. This is an indication of the inter-connectedness among the elements in the EES as captured in the conceptual framework in Figure 1. The findings support Stam and van de Ven's (2019) definition of the EES as consisting of inter-dependent factors and actors that enable or constrain entrepreneurial activities within a given territory. The need to promote effective and efficient institutions has been well acknowledged in literature. For example, Adomako et al. (2014) demonstrated, in a study of the institutional outlook in Ghana, that stronger antecedents of institutions lead to favourable entrepreneurial climate.

I. Conclusion

The purpose of this study was to explore the EES of the Central Region of Ghana. In line with that, the study sought to answer two research questions on the satisfaction of entrepreneurs with relevant factors in the EES and the challenges in the EES. Data collected, with a 15-item EES scale, from applicants of the 2019 president's business support programme revealed that respondents were satisfied, in various degrees, with 11 factors within the EES. The two leading factors were demand for the respondents' products and security within the EES while satisfaction with road network and services by regulatory agencies were relatively low. Respondents were not satisfied with four factors in the EES, which therefore pose as challenges to their entrepreneurial pursuits. The challenges, in order of magnitude, include access to BDS, access to finance, rent charges and access to repairers of equipment. Further analysis showed strong inter-connectedness among the factors in the EES.

On the basis of the findings, it is concluded that the entrepreneurs surveyed were satisfied with more factors in the EES of the Central Region while they were dissatisfied with relatively few factors in the EES but the factors with which they were dissatisfied, pose as major challenges to their entrepreneurial activities because they constitute resources and services that affect the survival and growth of MSMEs. As an exploratory study, the findings suggest that the entrepreneurial eco-system of the Central Region of Ghana is, to some extent, supportive of entrepreneurial activities but has major challenges. In order to achieve maximum outcomes, policy interventions should collectively address, at a time, factors that interact strongly to influence entrepreneurship within the system.

J. Limitations and Suggestions for Future Research

The study has several limitations in scope and design. Being an exploratory study, the use of the applicants of the president's business support programme permitted a test of the constructed EES scale but future large-scale surveys are required to capture the perspectives of a representative sample of entrepreneurs in the Central Region. Thus, the limited scope does not permit generalisation of the findings of the study to the entire population of entrepreneurs in the Region. Moreover, the research design addressed only a section of the proposed EES framework, specifically environmental factors/entrepreneurial climate, and involved only one of the major actors in the EES, that is entrepreneurs. These gaps imply that the EES of the Central Region has to be studied extensively and from the viewpoint of the various groups of actors. Furthermore, test of relationships among the various elements of the EES can be the focus of future research.

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