ENTREPRENEURSHIP DEVELOPMENT: THE CASE OF GHANA.

Michael Yeboah PhD. UNIVERSITY OF PECS

LECTURER- Department of Accountancy- Kumasi Technical University- Ghana
yebomich@gmail.com

Abstract
The study assessed the entrepreneurial performance of Ghana with the aim of developing policy recommendations to enhance its development for sustained growth in Ghana. The study used GEDI 2017 tool containing data for 2011-2015 for 93 countries. However, Ghana had data for 2012 and 2013. To appreciate the entrepreneurial performance of Ghana, the study selected two sister countries, Nigeria and Burkina Faso to which comparison was done. The cost of doing business in Ghana is high, and the economy is predominantly composed of Small and Medium Scale Enterprises. The study found that entrepreneurship and development in Ghana are strongly correlated, making entrepreneurship a key ingredient in Ghana's socio-economic development drive. However, entrepreneurship is faced with bottlenecks. Key priorities for entrepreneurship development in Ghana were found to include product innovation and human capital as top priorities; risk capital, internationalization, and technology absorption as medium priorities and process innovation as a low priority. Ghana can learn from Nigeria on how to improve her human capital and from both Nigeria and Burkina Faso on how to improve her technology absorption.

Keywords: Entrepreneurship Development; Global Entrepreneurship; Development Index; Ghana; and Nigeria.

Introduction
Within the West African Sub-region, Ghana is considered one of the most politically stable countries after its transition to a multi-party democratic system of government in 1992 (Boafo-Arthur, 2008). Ghana became independent from Great Britain on 6th March 1957 under the leadership of Dr. Kwame Nkrumah and became the first country in sub-Saharan Africa to upset the manacles of colonialism. Ghana's present economy is the 2nd largest in West Africa and the 9th biggest in Africa, with a population of 27 million (BBC, 2017). On June 30, 2015, Ghana's unemployment rate was 11% as compared to 5.7% in the fourth quarter of 2013 was ranked at 86th country globally (Anarfo and Kpakpa, 2013). This suggests that Ghana needs a policy like entrepreneurship development policy to help create more jobs and reduce the unemployment rate. The importance of entrepreneurship (small business) to socioeconomic development is recognized by successive governments in Ghana. Therefore, successive governments in Ghana have been trying to put in place a regulatory framework to enhance entrepreneurship development. The 1950s and 1960s saw massive regulatory frameworks such as the Industrial Relation Acts of 1958, the Company Code and 1963 Capital Investment Act. In the 1970s, then governments passed Ghana Business Act to protect the indigenous business against foreign entry into a certain line of business and Ghanaian Enterprises Development Decree, 197 (NCD 330) (Ninsin and Hansen 1989). However, government efforts towards entrepreneurship were counterproductive due to massive corruption and rent-seeking interest of then governments and their officials (Oquaye 1979).

In the 1980s, Ghana Investment Promotion Centre (GIPC) Act was passed with the purpose of facilitating private investment opportunities in Ghana for both local people and foreigners. Arthur (2006) noted that government's priority in the 2000s was on trade liberalization, investment and industrial policies. This was to put in place entrepreneurship for job creation and national development. The state in pursuance of this conviction adopted policies such as public-private partnership, popularly called the President's Special Initiative (PSI). This inventiveness was to identify and to promote business opportunities for Ghana's sustainable growth and development.

Accordingly, entrepreneurial activities determine the country's economic progress based on employment, innovation, and productivity. Hisrich (2005) maintained that the economic evolution of a nation is meaningfully developed by hardheaded individuals who are innovative with entrepreneurial skills, talents and willing to exploit opportunities irrespective of the risk. Subsequently, the private sector was considered as an engine of growth. This declaration resulted in the establishment of certain key state institutions such as Students in Free Enterprise Programme (SIFE), Skills Training and Entrepreneurship Programme, Ghana Youth Employment and Entrepreneurial Development Agency (GYEEDA) and the Microfinance and Small Loans Centre (MASLOC) to support entrepreneurship development. However, these policies and institutions are often based on a narrower understanding of what entrepreneurship involves and how entrepreneurship generates growth and development, leading to little success and growth in Ghana (Ackah, Aryeetey, Ayee and Clottey 2010).

Entrepreneurship has shifted from an agrarian to a service-driven economy. The service sector contributed over half of Ghana's GDP, with industry sector recording 26.6% in 2015 and agriculture at around 20% (GSS). Ghana's GDP estimation for 2016 indicated a growth rate of 3.5 percent compared to 3.8 percent in 2015. The Services sector recorded the highest growth rate of 5.7 percent, followed by Agriculture (3.0%) and the Industry (-1.4%) sectors respectively. The services sector is still the largest. Its share of GDP increased from 54.6% in 2015 to 56.5% in 2016. However, the sector's growth rate decreased from 6.3% in 2015 and to 5.7% in 2016.

Ghana's most recent industrialization strategy (2011) was adopted in order to create a contemporary productive economy underpinned by value-addition, expansion of employment, and technology. The government priority is tantamount to transform the agricultural sector into a competitive agro-based industry and also to promote spatial distribution to solve poverty and income inequality problem. Implementation of the industrial policy was articulated through the Industrial Sector Support Programme (ISSP, 2011-2015). The policy failed to address sector-specific areas and competitive niches that could have channeled the allocation of resources to education, research, and infrastructure as well as the acquisition of skills and technology.

There seems to ambiguity in the definition of entrepreneurship and this can be attributed to two factors. First, there is no consent on an acceptable definition of entrepreneurship (UNCTAD Note, 2015). Also, there is a concern about the lack of data to really determine the effect of entrepreneurship on growth and development. This paper followed the definition by Commission of the European Communities (2003) as the mindset and the process of creating and developing economic activity by blending risk-taking, creativity, and or innovation with sound management, within a new or an existing organization. This definition consists of two key features, namely creating and managing a business venture and risk-taking to make a profit and these are consistent

with definitions given by Gartner (1990) and Gartner (1989). Gartner (1990) noted that entrepreneurship is the ability to create new ventures while Gartner (1989) defined it as the willingness to take a risk in pursuance of profit. These qualities of entrepreneurs are noteworthy in entrepreneurship development in Ghana. For example, the risk-taking quality means that every entrepreneur should be willing to bear the risk of doing business. Developing counties such as Ghana are characterized by high risks and uncertainty, hence doing business in developing countries is riskier than developed countries (Kanbur, 1979). Knowing this, there is should be deliberate policies designed to reduce the risks of doing business to increase entrepreneurship to achieve the targeted economic growth in Ghana. Policy makers and business leaders all over the world have noted entrepreneurship as a driver of economic prosperity and wealth creation. Acs et al. (2017) have also established that the gross domestic product of a country is positively correlated with entrepreneurship development; hence entrepreneurship development is imperative in economic growth.

In this paper, Ghana's entrepreneurship development is analyzed using the Global Entrepreneurship Index (GEI).

GLOBAL ENTREPRENEURSHIP INDEX (GEI) METHODOLOGY

GEI methodology has been developed and used widely to assess entrepreneurship development of a country (Acs et al. 2015). Acs and Szerb (2011, 2012) and Acs, Autio, and Szerb (2013) developed GEI to measure entrepreneurship ecosystem at the country level. Acs, Szerb, Antio, and Lloyd (2017) emphasized that entrepreneurship should be seen as an interaction between entrepreneurial attitudes, entrepreneurial ability and entrepreneurial aspirations by individuals which drives resources allocation through the creation and operation of ventures. Thus, GEI is composed of three sub-indices namely: entrepreneurial attitudes, entrepreneurial abilities, and entrepreneurial aspirations. Entrepreneurial attitudes clarify how a country's population impressions of entrepreneurship whiles entrepreneurial ability are about having the characteristics of the entrepreneur and their businesses and entrepreneurial aspiration is having the desire to build a company (Acs et al., 2017). These three indices are very relevant and without which entrepreneurship will not be materialized in a country. For example, people with a positive entrepreneurial attitude are able to recognize business opportunities, are more ready to accept the risk associated with business startup and have the skills to start a business successfully.

Moreover, these people can provide needed financial, cultural and social supports for the already existing entrepreneurs. Aside, attitude, the ability is also important since attitudes without ability will not result in entrepreneurship. People with entrepreneurial aspiration also have the desire to be their own bosses, introduce a new product or service, develop new production processes and penetrate foreign market (Acs et al., 2017). The three indices are influenced by the educational system, market structure, socio-economic infrastructure, research and development system, the financial sector, corporate sector and government policies (Acs et al., 2017). A country with favourable legal and regulatory environment, positive socio-cultural values, financial support, good entrepreneurial education, infrastructure among others have higher entrepreneurial attitude, ability, and aspiration with resultant higher entrepreneurship. Acs et al. (2017) emphasized that developed countries have better entrepreneurial ecosystem than developing countries such as Ghana. This suggests weak entrepreneurial attitudes, ability, and aspiration in developing countries, like Ghana. Thus Ghana and other developing countries have to learn from developed

countries to help develop country-specific policies to improve the entrepreneurship ecosystem for enhanced entrepreneurship. It must be noted that these three indices do not stand alone but each is influenced by others (Acs et al., 2017). Entrepreneurial attitudes, for example, influence the entrepreneurial ability and aspiration whiles entrepreneurial aspiration and ability influence entrepreneurial attitudes.

These threefold indices consist of fourteen pillars and twenty-eight variables as shown in Table 1.

Table 1: GEI Sub-indices, Pillars and Variables

Sub-indices	**Pillars**	**Variables**
Entrepreneurial Attitude	Opportunity perception	Opportunity (Individual) Freedom and property (Institutional)
	Start-up skill	Skill (Individual) Education (Institutional)
	Risk perception	Risk acceptance (individual) Country risk (institutional)
	Networking	knowing entrepreneurs (individual) connectivity (institutional)
	Cultural support	Career status (individual) corruption (institutional)
Entrepreneurial ability	Opportunity start-up	Opportunity motivation Governance (taxation and good governance)
	Technology absorption	Technology level (Individual) Technology absorption (Institutional)
	Human capital	High education (Individual) Labour Market (Institutional)
	Competition	Competition (Individual) Competiveness (Institutional)
Entrepreneurial aspiration	Product innovation	New product (Individual) Technology transfer (Institutional)
	Process innovation	New technology (Individual) Science (Institutional)
	High growth	Gazelle (Individual) Finance and strategy (Institutional)
	Internationalization	Export (Individual) Economic complexity (Institutional)
	Risk capital	Informal investors (Individual) Depth of capital market (Institutional)

Source: Szerb, Komlósi and Páger (2016).

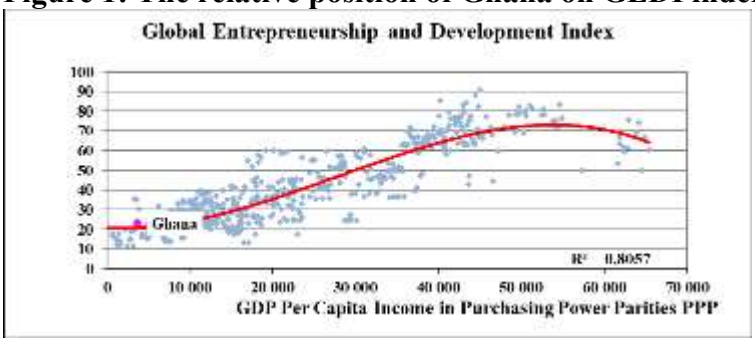
Ghana's Entrepreneurship Position: Overall GEDI score

The GEI was used to analyze the entrepreneurship position of Ghana in relation to its development and as well as Nigeria and Burkina Faso. Ghana, Nigeria and Burkina Faso have many things in

common. Both are developing countries in the same sub-region (sub-Saharan sub-region). This comparison would help to better appreciate the entrepreneurial development in Ghana. The study used the GEDI 2017 tool containing data for 2011-2015 for 93 countries. However, Ghana had data for 2012 and 2013 whilst Nigeria had data for 2011, 2012 and 2013 and Burkina Faso had data for 2014 and 2015.

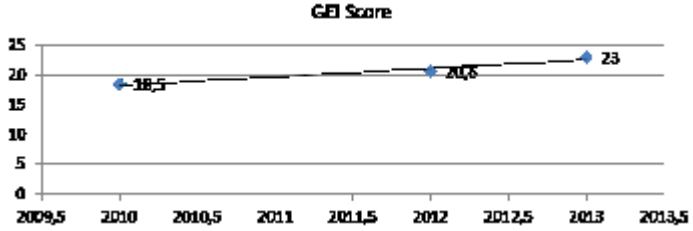
This section analyzes Ghana's overall entrepreneurship position based on the GEDI score shown in Figure 1.

Figure 1: The relative position of Ghana on GEDI index



Ghana's overall GEDI score was 24 and this is slightly above the development implied trend-line in Figure 1, suggesting that Ghana's overall entrepreneurship performance is slightly above what would be needed given its level of GDP. Figure 1 further shows that entrepreneurship is strongly correlated with development in Ghana and contributes to 80.57% (R2=0.8057) of variation in Ghana's development, implying that entrepreneurship is the key to development in Ghana. However, GEI ranking places Ghana at 68th with GEI core of 23.0 out of 93 participating countries (see Appendix 1 for GEI ranking Table). This is a clear indication that Ghana has a lot to do to improve its entrepreneurship ecosystem to facilitate entrepreneurship development. Within African countries, Ghana is behind countries such as South Africa (GEI score=33.5) and Tunisia (GEI score=38.9) but placed better than countries such as Egypt (GEI score=22.7), Nigeria (GEI score= 22.1), Angola (GEI score= 13.8) and Uganda (GEI score=13.8). GEI score for Ghana over time is shown in Figure 2.

Figure 2: Ghana's GEI Score over Time



GEI Score for Ghana has been increasing consistently over the period 2010-2013. It increased from18.5 in 2010 to 20.6 in 2012. It further increased to 23.0 in 2013. This is a clear indication

that Ghana is making good progress in terms of entrepreneurship. Ghana's entrepreneurship efforts when increased and sustained could lead to an increase in the country's Gross Domestic Product (GDP) because there is a strong positive correlation between entrepreneurship and GDP (Acs et al., 2017).

Ghana's Entrepreneurship Position: Three Sub-indices

Ghana's entrepreneurial positions in terms of the three sub-indices in relation to development are shown in Figure 3A, Figure 3B, and Figure 3C.

Figure 3A: Entrepreneurial Attitudes Sub-Index of Ghana

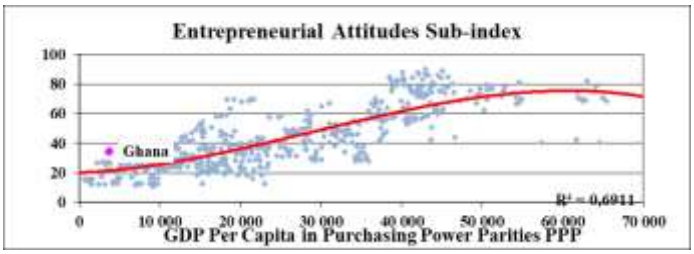


Figure 3B: Entrepreneurial Abilities Sub-index of Ghana

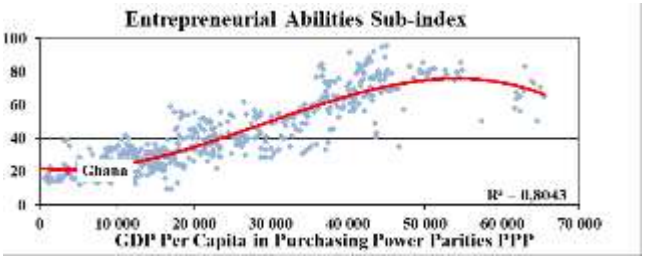
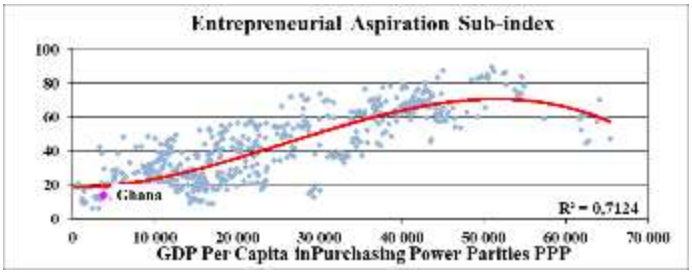


Figure 3C: Entrepreneurial Aspiration Sub-Index of Ghana



The sub-indices of entrepreneurship in Ghana exhibit different performance. The entrepreneurial attitude is above the development implied trend-line whiles entrepreneurial aspiration is below the development implied trend-line. These indicate that entrepreneurial attitude and entrepreneurial aspiration in Ghana are higher and lower respectively than what is expected given her level of GDP. Ghana's entrepreneurial ability falls on its development implied trend-line; hence entrepreneurial ability in Ghana is exactly what is expected given the level of development.

Entrepreneurial attitude increased from 33.1 in 2012 to 34.6 in 2013 (GEDI 2017 Data). Entrepreneurship ability increased with entrepreneurship attitude in the period under consideration. More university graduates entering into entrepreneurship as a result of high graduate unemployment is part of the contributing factors for the consistent increase in entrepreneurship ability. Moreover, Government of Ghana is not only interested in giving entrepreneurial education and training but also providing a fund for startups through initiatives such as Microfinance and Small Loans Centre (MASLOC) to make them more able to become involved in entrepreneurship.

Though entrepreneurial aspiration increased from 10.9 in 2012 to 13.8 in 2013 (GEDI 2017 Data), it had the least score in all years of consideration. Though firms have the desire to innovate (improve the process and product innovation) they are challenged by inadequate funding, the high cost of innovation and lack of information on appropriate technology (Tetteh and Essegbey 2014). This is an indication that little is done in terms of policy intervention to improve technology transfers to improve entrepreneurship aspirations.

Ghana's Entrepreneurial Performance Fourteen Pillars:
Figure 4 is the Spider Chart showing the relative position of Ghana at the pillar level. Ghana's pillar scores are shown in blue and they are compared to the 33rd percentile and 67th percentile out of a total of 93 countries.

Figure 5: Relative Position of Ghana to Other Countries in the Pillar, 2010-2013



Figure 4 shows that Ghana's strongest pillar relative to other counties is opportunity perception. Higher opportunity perception in Ghana relative to other countries is an indication that Ghana has business opportunities that investors seek for as compared to other countries. Ghana, for example, has business opportunities in the areas of agriculture, agro-processing, information and communication technology, tourism, services (financial, health, education, oil, and gas), energy, general infrastructure, real estate development, fisheries and waste management (Ghana Investment Promotion Centre 2017). However, Ghana's weakest pillars are competition, quality of human capital, technology absorption, opportunity startup, risk acceptance, startup skills, risk capital, internationalization, high-growth, process innovation and product innovation relative to other countries. Given, these weakest pillars, relatively higher opportunity perception may not translate into entrepreneurship since investors consider many factors aside opportunity perception before establishing a business.

Ghana's strongest and weakest pillars are shown in Figure 5A and Figure 5B respectively.

Figure 5A: Ghana's Strongest Pillar for each GEDI Sub-Index

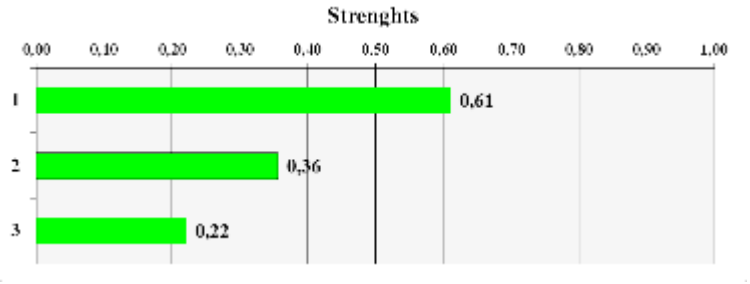


Figure 5B: Ghana's Weakness Pillar for each GEDI Sub-Index

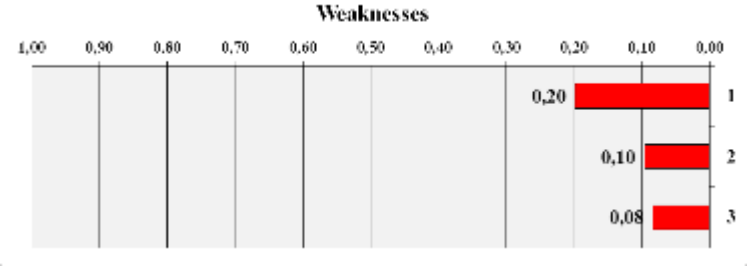
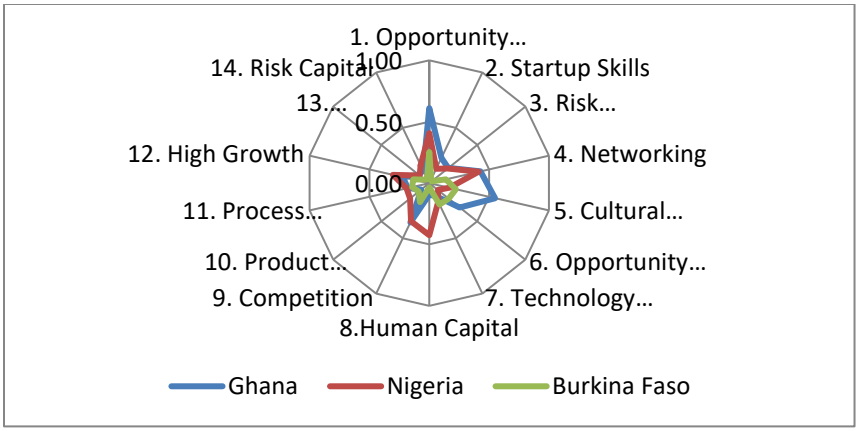


Figure 5A confirm that Ghana's strongest pillar is opportunity perception (0.61) which falls under the entrepreneurial attitude. However, the weakest pillar is risk acceptance (0.20). This suggests that Ghanaians are not certain about the prospects for entrepreneurship considering entrepreneurial action which is inclined with at the level risk. Therefore, the majority of Ghanaians may not prefer to be entrepreneurs, leading to low economic prosperity and low wealth creation in Ghana.

With regards to entrepreneurship ability, Ghana's weakest pillar is human capital (0.10). This clearly suggests that most Ghanaians lack the prerequisite financial, managerial skills and technical know-how to put their entrepreneurial intention into the establishment of business in Ghana. This explains why most Ghanaians prefer wage employment to self-employment. Ghana's strongest and weakest pillars of entrepreneurial aspiration are high growth (0.22) and product innovation (0.08) respectively. Product innovation pillar reflects the tendency of entrepreneurial firms to be content with existing products than to create new products. This intention exposes the state of not investing in technology to improve capacity.

The entrepreneurial position of Ghana at the pillar level is compared to Nigeria and Burkina Faso and the results are shown in Figure 6.

Figure 6: A: Comparison of GEDI Variables for Ghana, Nigeria and Burkina Faso



In terms of entrepreneurial ability, Ghana scored higher on opportunity startup and competition than Nigeria and Burkina Faso whiles Nigeria scored higher on quality of human capital than Ghana. However, Ghana scored higher on human capital than Burkina Faso. Both Nigeria and Burkina Faso scored higher on technology absorption than Ghana. The human quality of entrepreneurs in Ghana is relatively low and this is consistent with the report by GRIECO (1996) and King (1999) that many owners of the business, especially new businesses have little educational attainment. Many businessmen and women in Ghana engaged in business because their parents could not afford to pay for formal education, and they had to learn a trade informally (GRIECO 1996; King 1999). It is useful to note that the quality of human capital in Ghana has improved from 0.059 in 2012 to 0.096 in 2013. This is attributable to increasing entrepreneurial education in Ghana in the recent time. Entrepreneurship is now inculcated into most tertiary programmes and most tertiary students learn some aspect of entrepreneurship before completion. There is also a greater emphasis on technical and vocational education in Ghana because it equips the youth with entrepreneurial skills to start up their own businesses (Nsiah-Gyabaah, 2009). The relatively lower human capital in Ghana raises the issue of business management skills which have been identified as one of the reasons for the ill performance of businesses in Ghana (GRIECO, 1996; King, 1999).

Ghana is placed relatively lower than Nigeria under all aspects of entrepreneurial aspiration except internationalization but higher in all aspects except product innovation than Burkina Faso. Weaker process innovation in Ghana suggests most entrepreneurs in Ghana are not innovative enough to adapt to new methods or better solutions to meet the additional requirement in the competitive business environment relative to entrepreneurs in Nigeria. Low product innovation in Ghana suggests that many entrepreneurs in Ghana invest little in innovation and this may possibly explain lower product quality in Ghana than Nigeria and Burkina Faso. Relatively lowest product innovation is an indication that entrepreneurs in Ghana are just replicating existing goods but it takes product innovation for business to be sustainable; hence businesses are less likely to be profitable and sustainable in Ghana than Nigeria and Burkina Faso.

Ghana's Overall Entrepreneurial Profile: Individual and Institutional Components

The fourteen pillars constituting GEI' three entrepreneurial sub-indices can be further grouped into twenty-eight variables show the overall entrepreneurial profile of Ghana as shown in Table 2.

Table 2: The Relative Position of Ghana at the Variable Level, 2009-2020 (normalized institutional and individual variable values)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity Perception	0.61	Freedom and Property	0.47	Opportunity Recognition	1.00
	Start-up skills	0.23	Education	0.26	Skill Perception	1.00
	Risk Acceptance	0.20	Business Risk	0.18	Risk Perception	0.97
	Networking	0.43	Connectivity	0.37	Know Entrepreneurs	0.91
	Cultural Support	0.55	Corruption	0.51	Career Status	1.00
	Entrepreneurial Attitudes	**34.6**				
Entrepreneurial Abilities	Opportunity Startup	0.32	Tax and government	0.49	Opportunity Motivation	0.53
	Technology Absorption	0.12	Tech Absorption	0.40	Technology Level	0.29
	Human Capital	0.10	Labor Market	0.55	Educational Level	0.13
	Competition	0.36	Competitiveness and Regulation	0.54	Competitors	0.50
	Entrepreneurial Abilities	**20.7**				
Entrepreneurial Aspirations	Product Innovation	0.08	Technology Transfer	0.48	New Product	0.26
	Process Innovation	0.18	Science	0.44	New Tech	0.36
	High Growth	0.22	Finance and strategy	0.46	Gazelle	0.41
	Internationalization	0.11	Economic complexity	0.21	Export	0.34
	Risk Capital	0.11	Depth of Capital Market	0.13	Informal Investment	0.37
	Entrepreneurial Aspirations	**13.8**				
	GEI	**23.0**	**Institutional**	**0.39**	**Individual**	**0.58**

Key: Blue colored cell=Ghana's score belongs to upper most 33.3% of the countries; Gray colored cell=Ghana's score belongs to the upper 33.3% of countries; Yellow colored cell= Ghana's score belongs to the middle 33.3% of countries; Red colored cell= Ghana's score belongs to the bottom 33.3% of countries

From Table 2, the institutional variables place Ghana in the bottom of the 33.3% of the 93 countries included in the GEI index. This shows that Ghana's institutional environment is weak to support productive entrepreneurial development in the country. Only three of the institutional variables scored above 0.5 and they are corruption (0.51), competitiveness and regulation (0.54) and the labour market (0.55). The remaining 11 institutional variables scored below 0.5 (see Table 2). However, individual variables place Ghana in the middle 33.3% of the 93 countries included in the GEI index. This clearly shows that individual outlook in Ghana is good for productive entrepreneurial development in the country. Seven out of fourteen individual variables scored 0.5 and above with the remaining scoring below 0.5.

Three best performing variables are opportunity recognition, skills perception, and career status and all these are individual variables under entrepreneurial attitudes. Good opportunity recognition is an indication is Ghanaians have identified good business opportunities in their localities. It must, however, be emphasized that good opportunity alone does not result in establishing a new business.

This is because the value people place on opportunity recognition depends on many factors including the size of the market. Ghanaians seem to have taste and preferences for foreign goods to the disadvantage of locally manufactured goods, leading to a smaller market size for locally produced goods and services. It is therefore not a surprise that Ghana has good opportunity recognition, yet many few Ghanaians are entrepreneurs. Moreover, other factors (product innovation, internationalization, and human capital) that will complement opportunity recognition for entrepreneurship development or establishing a new business are weak. Local business can take advantage of the global market but weak internationalization is an indication that businesses in Ghana have a lower ability to export their product, possibly because of weak product innovation as identified in the study. This clearly suggests that businesses in Ghana rely mostly on the local market for their products' demands.

GEI View on Entrepreneurship Policy

Though GEI method provides an innovative and meaningful platform for entrepreneurial ecosystem policy analysis and design, it is not free from challenges. One main challenge is that GEI uses hard data and much qualitative insight into entrepreneurship are not taken into consideration. GEI, therefore, admonishes countries to engage stakeholders to help identify how entrepreneurial ecosystem really works in a country. For this reason, Acs et al. (2017) have developed GEI Policy Stakeholder Engagement Process to extract the soft, experience-based data to give intuitions into how the entrepreneurial ecosystem really works and what particular policy actions should be made to solve bottlenecks in a country. Acs et al. (2017) emphasized the need not to use GEI method only but in combination with GEI Policy Stakeholder Engagement Process. The combined approach to design entrepreneurial ecosystem policies is very important in developing countries like Ghana where data is very difficult to find. Applying Acs et al.'s (2017) GEI Policy Stakeholder Engagement Process, Ghana should do GEI analysis to identify all the bottlenecks in the entrepreneurship ecosystem; engage stakeholders to properly examine each bottleneck and understand how they work; establish interrelations among the bottlenecks; design policies to address bottlenecks that matter most and implement specific policies to bring positive changes in the entrepreneurial ecosystem.

This study used sensitivity analysis to develop entrepreneurship policy priority for Ghana. The policy priorities for Ghana are shown in Table 3.

Table 3: Policy Priorities for Ghana's Fourteen GEDI Pillars, Its Institutional and Individual Variables

No.	Pillars	Pillar value	Institutional value	Individual value	Required increase in pillars	Percentage of total new effort	Policy Priority
1	Product innovation	0.08	0.48	**0.26**	0.12	23%	Top priority
2	Human capital	0.10	0.55	**0.13**	0.11	21%	
3	Risk capital	0.11	**0.13**	0.37	0.09	17%	Medium priority
4	Internationalization	0.11	**0.21**	0.34	0.09	17%	
5	Technology absorption	0.12	0.40	**0.29**	0.09	17%	
6	Process innovation	0.18	**0.44**	**0.36**	0.02	4%	Low priority
7	Risk acceptance	0.20	0.18	0.97	0.00	0 %	No priority
8	High growth	0.22	0.46	0.41	0.00	0%	

9	Startup skills	0.23	0.26	1.00	0.00	0%	
10	Opportunity startup	0.32	0.49	0.53	0.00	0%	
11	Competition	0.36	0.54	0.50	0.00	0%	
12	Networking	0.43	0.37	0.91	0.00	0%	
13	Cultural support	0.55	0.51	1.00	0.00	0%	
14	Opportunity perception	0.61	0.47	1.00	0.00	0%	

Key: *Individual and Institutional variables scores shown in bold indicate which one of the variable should be changed in order to improve the pillar value. If both variables are shown in bold then both should be changed in unison. Top priority variables are shown in red; medium priority variables shown in amber; low priority variables shown in yellow and no priority variables are not highlighted.*

From Table 3, top priorities are identified as the GEDI pillars that received the normalized value of at most 10%. In Ghana, two pillars (product innovation and human capital) are classified as a top priority for entrepreneurship development. The individual variables for these two pillars should be strengthened to increase the corresponding pillar as well as the overall GEDI score. Ghana's GEDI score is greatly accounted for by higher entrepreneurial attitudes such as opportunity perception, networking, and cultural support. However, entrepreneurial aspiration such as product innovation, process innovation, and risk acceptance drags down Ghana's GEDI score. Entrepreneurs also have to invest in their human development through regular training and seminars or through formal education to develop the necessary business skills and ideas to facilitate the production of innovative products for sustained profit. GEDI methodology indicates that 44% of all the new efforts should be focused on improving product innovation and human capital where product innovation accounts for 23% and human capital 21% of the overall new efforts.

Medium priority is the next policy priority and is defined as the GEDI pillar that receives a normalized value from 11.0% to 12.0%. In the case of Ghana, pillars with medium priority are risk capital, internationalization, and technology absorption. To increase the pillar value of risk capital and internationalization and overall GEDI score, the institutional variables of the corresponding pillar should be increased. However, Ghana should improve discrete variables of technology absorption to increase the pillar value and GEDI score as a whole. De Clercq et al. (2005) noted that internationalization is the key determinants of entrepreneurship development and economic growth and best measured as the exportation of goods and services. Therefore, efforts should be aimed at reducing the inefficiencies associated with the exportation of goods and services in Ghana. Some inefficiency includes long waiting days before goods are cleared for export and time-consuming documentation for exports (World Bank Ease of Doing Business Report, 2015).

The ongoing expansion of Ghana's harbour and paperless transactions to facilitate exportation is much encouraged. Development of capital market supports entrepreneurship development because of its contributions to easy access to funding. Ghana' capital market is not well-developed, making financial risk one of the foremost challenges to entrepreneurship development in Ghana (Beck and Cull 2014; Kwaning et al. 2015). This calls for the need to pay urgent attention to the development of the capital market in Ghana. For Ghana to optimize entrepreneurship she must improve these three pillars (risk capital, internationalization, and technology absorption), she has to exert 17% of her new total efforts on each. Low priority group is pillars characterized by a normalized value

between 12.0% and 18.0% and in the case of Ghana, only process innovation falls within this group. The attempt by Ghana to increase the performance of process innovation will just have the moderate impact on overall GEDI score. This, however, does not suggest the total neglect of this pillar. For Ghana to have an optimal entrepreneurship performance, the current value of process innovation (0.18) needs to be maintained with 4% of her new total effort. The final category of policy priority is "no priority" characterized by a pillar with a normalized value of more than 18.0%. Risk acceptance, high growth, startup skills, opportunity startup, competition, networking, cultural support, and opportunity perception fall into this category in Ghana. No priority means that no action is needed to improve these pillars' score. Szerb, Aidis and Acs (2012) noted that allocating resources to improve the "no priority" pillars may result in imbalances and a marginal increase in entrepreneurial performance.

Ghana's GEDI score is greatly accounted for by higher entrepreneurial attitudes like networking, opportunity perception, and cultural support. However, entrepreneurial aspiration; product innovation, process innovation, and risk acceptance drags down Ghana's GEDI score.

Conclusions

This paper analyzed Ghana's entrepreneurial performance based on the result of the GEI index. Ghana is institutionally weak to support productive entrepreneurship for desired economic growth and development. Comparing the three sub-indices, Ghana had the lowest value for entrepreneurial aspiration but the highest value for entrepreneurial attitude whiles entrepreneurial ability was in-between the two. Ghana's strongest and weakest pillars of entrepreneurial attitude were opportunity perception and risk acceptance respectively. For entrepreneurial ability, Ghana's strongest and weakest pillars were competition and quality of human capital respectively whiles strongest and weakest pillars of entrepreneurial aspiration were high growth and product innovation respectively.

The most urgent priority pillar for entrepreneurial development in Ghana is product innovation followed by human capital, risk capital, internationalization, technology absorption, and process innovation. With additional resources for entrepreneurial development, Ghana has to allocate 23% to product innovation, 21% to human capital, 17% to risk capital, 17% to internationalization, 17% to technology absorption and 4% to process innovation. To ensure optimal development, the additional resources to product innovation, human capital, and technology absorption need to focus on the individual variables of the respective pillars. However, for risk acceptance and internationalization, the additional resources should focus on the institutional variables whiles both individual and institutional variables are critical for improving process innovation for enhanced entrepreneurial development in Ghana.

Ghana has a lot to learn from Nigeria, especially in the area of human capital development and from both Nigeria and Burkina Faso in the area of technology absorption. The government of Ghana should capitalize on its good international relationship with Nigeria and Burkina Faso for this good cause.

References

Ackah, C., Aryeetey, E., Ayee, J. and Clottey, E., 2010. State-business relations and economic performance in Ghana. *IPPG Manchester (IPPG Discussion paper Series, 35). Available online at http://www. ippg. org. uk/papers/dp35a. pdf, checked on*, *12*(2), p.2014.

Ács, Z.J. and Szerb, L., 2012. *Global entrepreneurship and development index 2012*. Edward Elgar Publishing.

Ács, Z.J. and Naudé, W., 2013. Entrepreneurship, stages of development, and industrialization. *Pathways to industrialization in the Twenty-First Century*, pp.373-392.

Ács, Z.J., Autio, E. and Szerb, L., 2014. National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, *43*(3), pp.476-494.

Ács, Z.J., Szerb, L. and Autio, E., 2011. *Global entrepreneurship and development index 2011* (Vol. 400). Cheltenham, UK/Northampton MA, US: Edward Elgar.

Ács, Z.J., Szerb, L. and Autio, E., 2015. National systems of Entrepreneurship. In *Global Entrepreneurship and Development Index 2014* (pp. 13-26). Springer International Publishing.

Ács, Z.J., Szerb, L. and Autio, E., Lloyd E., 2017. *Global entrepreneurship and development index.* Global Entrepreneurship and Development Institute, Washington, D.C, USA

Anarfi JK, Kpakpa M., 2013. Migration Urbanization (Chapter 10) in the 2010 Population and Housing Census, Ghana Statistical Service. National Analytical Report.

Arthur, P., 2006. The state, private sector development, and Ghana's "golden age of business". *African Studies Review*, *49*(1), pp.31-50.

BBC News, 2017. Ghana Country Profile.

Beck, T. and Cull, R., 2014. Small-and medium-sized enterprise finance in Africa. *Global Economy and Development Program*, *16*.

Gartner, W.B., 1989. Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship theory and practice*, *14*(1), pp.27-37.

Gartner, W.B., 1990. What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing*, *5*(1), pp.15-28.

Global entrepreneurship Index

Hisrich, R.D. (2005). Entrepreneurship: New Venture creation.5th edition .Tata Mc Graw Hill, New Delhi.

Kanbur, S.M., 1979. Of risk- taking and the personal distribution of income. *Journal of Political Economy*, *87*(4), pp.769-797.

Kwaning, C.O., Nyantakyi, K. and Kyereh, B., 2015. The challenges behind smes' access to debts financing in the Ghanaian financial market. *International, Journal of Small Business and Entrepreneurship Research*, *3*(2), pp.16-30.

Hansen, E. and Ninsin, K. (eds.) 1989. The State, Development and Politics in Ghana. London: Codesria.

Oquaye, M., 1980. *Politics in Ghana, 1972-1979*. Tornado Publications.

Szerb, L., Komlósi, É. and Páger, B., 2016. Measuring entrepreneurship and optimizing entrepreneurship policy efforts in the European Union. *CESifo DICE Report*, *14*(3), pp.8-23.

Tetteh, EK and Essegbey, GO. 2014. Firm Level Innovation: The Case Study of Ghanaian Firms. *European Journal of Business and Innovation Research*. Vol 2 (2); 1-18

World Bank, 2017. Doing Business in Ghana, Equal Opportunity for all, 14th Edition ut of the sampled countries.

Appendix 1: GEI Ranking Table

Rank	Country	GDP per capita	GEI	Rank	Country	GDP per capita	GEI	Rank	Country	GDP per capita	GEI
1	United States	50756	80.9	32	Turkey	17634	43.8	63	Trinidad & Tobago	29155	24.5
2	Sweden	43927	77.2	33	Czech Republic	28075	43.5	64	Philippines	6796	23.9
3	Canada	41846	76.5	34	Bolivia	5934	21.6	65	Argentina	17636	23.7
4	Switzerland	54387	76.3	35	Slovakia	25659	42.3	66	El Salvador	7515	23.5
5	Denmark	42428	76.2	36	Latvia	20080	41.2	67	Belize	8215	23.1
6	Australia	42103	74.5	37	Hungary	22624	40.6	68	Ghana	3668	23.0
7	United Kingdom	36806	70.5	38	Tunisia	10232	38.9	69	Egypt	9807	22.7
8	Netherlands	45733	69.7	39	Colombia	11621	38.7	70	Bulgaria	16022	22.7
9	Ireland	44234	68.6	40	Uruguay	18123	36.6	71	Algeria	12626	22.5
10	Finland	39318	67.6	41	Italy	34605	36.5	72	Vietnam	5043	22.2
11	France	37112	65.8	42	Malaysia	21930	36.5	73	Nigeria	5207	22.1
12	Belgium	40913	64.8	43	Greece	26097	35.7	74	Indonesia	9278	21.2
13	Germany	42868	63.9	44	China	10822	35.1	75	Brazil	14416	21.0
14	Austria	44308	63.5	45	Romania	17731	34.6	76	Iran	15812	20.9
15	Taiwan	38122	63.1	46	Botswana	14779	34.2	77	Jamaica	8499	20.6
16	Norway	62907	60.1	47	Barbados	15247	33.7	78	Zambia	3678	20.6
17	Chile	20687	59.1	48	South Africa	11967	33.5	79	Ecuador	10333	20.6
18	Israel	30617	59.0	49	Croatia	20033	32.2	80	Bosnia and Herzegovina	9232	20.0
19	Luxembourg	79718	58.7	50	Costa Rica	13431	31.1	81	Senegal	2198	19.7
20	Qatar	127562	57.6	51	Kazakhstan	21089	30.1	82	Guatemala	6953	17.9
21	Estonia	24852	55.2	52	Namibia	8995	29.8	83	Suriname	15556	17.8
22	Singapore	74314	52.2	53	Lebanon	16777	29.6	84	Ethiopia	1,427	17.8
23	Slovenia	28180	51.8	54	Macedonia	11519	28.9	85	Libya	23032	17.2
24	United Arab Emirates	57380	49.7	55	Peru	10719	28.5	86	Malawi	740	16.5
25	Korea	31890	49.4	56	Thailand	13495	28.1	87	Pakistan	4261	16.0
26	Japan	34872	49.2	57	Panama	16836	27.4	88	Cameroon	2810	14.7
27	Portugal	26171	46.0	58	Mexico	15958	27.0	89	Uganda	1345	13.8
28	Spain	32132	45.7	59	India	5220	25.9	90	Angola	7271	13.8
29	Poland	22390	45.1	60	Morocco	6958	25.7	91	Venezuela	16537	13.0
30	Lithuania	22713	44.2	61	Russia	22795	24.8	92	Burkina Faso	1530	11.9
31	Puerto Rico	31426	44.0	62	Georgia	6946	24.6	93	Bangladesh	2459	11.6