ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 12, Issue, 04, pp.11132-11138, April, 2020

DOI: https://doi.org/10.24941/ijcr.38470.04.2020

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

A DIAGNOSIS OF BUSINESS INCUBATORS OPERATIONAL ENVIRONMENT IN GHANA- GAPS AND OPPORTUNITIES

Mary Njeri Thiong'o (PhDc) and Dr. Sunday Baba

NigeriaJomo Kenyatta University of Agriculture and Technology

ARTICLE INFO

Article History:
Received 28th January, 2020
Received in revised form
25th February, 2020
Accepted 28th March, 2020
Published online 30th April, 2020

Key Words:
Business Ecosystem,
Agribusiness, Incubators, Ghana.

**Corresponding author:*

ABSTRACT

A business ecosystem provides the assets and environment within which entrepreneurs and businesses operate. The health status of the business ecosystem influences the development, growth and sustainability of the enterprises. Agribusiness incubation being a new concept in Africa and executed using different models coupled with the sparse assets, there is a need to develop an understanding of agribusiness incubation and the operational ecosystem. An Incubator ecosystem mapping provides the baseline understanding of the resources including assets necessary for successful agribusiness incubation services to be provided. The mapping process included consultations with Agricultural, Technical, Vocational Education and Training institutes (40), recommendations from the project inception meetings, information derived from the field data collected from 24 Research /Vocational/ Technical Institutes, 90 Agribusinesses, 7 Associations, 30 Service providers, 16 Financial service providers, 11 policy related institutions, 3 Government Ministries in Accra, 4 Incubators, 30 Ministry of Food &Agriculture (MOFA) potential incubators, 50 Potential Incubators by Ministry of Business Development and 60 Business Advisory Centers (BACs). The mapping identified several institutions such as colleges of agriculture and vocational institutes with assets that could support agriculture and agribusiness incubation for in cubatees or accelerate small and medium enterprises (SMEs) to create opportunities. The diagnostic concluded that the existing assets were able to enrich the incubation ecosystem and support the growth and development of incubators. Depending on the geolocation and spatial distribution, the different assets could play a critical supporting role in enriching the incubators ecosystems and increase the probability of success of any business incubation program. In conclusion, it was established while the incubator and entrepreneurship ecosystem is improving in Ghana, there were still fundamental changes that needed to happen, especially focused on the management of viable assets, attitudes towards working together, enhanced cooperation and less competition as well as government increasing its efforts to provide affordable co-working spaces and collaborating with private business and capacity development providers. The diagnostic review recommended that there was need for diverse ecosystem actors to collaborate on initiatives aimed at building the business ecosystem. This would improve the business incubation ecosystem, the operating environment; accelerate the nurturing of innovations, which would in turn improve the growth and the success of fledgling start-ups for enhanced decent jobs and wealth generation.

Citation: ***Mary Njeri Thiong'o (PhDc) and Dr. Sunday Baba.*** **2020.** "A Diagnosis of Business Incubators Operational Environment in Ghana- Gaps and Opportunities", *International Journal of Current Research*, 12, (4), 11132-11138.

INTRODUCTION

The need for agribusiness development in Africa is undeniable, especially for its largely young and rural population. Over 63 percent of the total populations in Sub-Saharan Africa live in rural areas where agriculture remains the single largest source of employment and income (World bank, 2014). The transformation of subsistence agriculture and embarking on an agribusiness development path will drive economic growth, while providing increased employment opportunities and enhanced livelihoods for people living in poverty (Juma, 2015). In addition tostimulating economic growth, an agribusiness development path can contribute substantially to poverty reduction and improved social outcomes, forming part of a socially-inclusive development strategy (Juma, 2015). Agribusiness incubation is defined as a process which focuses on nurturing innovative early-stage enterprises that have high growth potential to become competitive agribusinesses by serving, adding value or linking to farm producers (Ozor, 2013). A business ecosystem provides the assets and environment within which entrepreneurs and businesses operate. The health status of the ecosystem influences the development, growth and sustainability of the enterprises. Similarly, an incubator ecosystem provides assets among which, humans have a level of control, the physical, human (intellectual) and financial assets.

Within the business ecosystem however, there are elements which humans have limited or no control of. These range from political, economic, society, technological, environmental, and legal, to culture & spirituality (PESTELCs). The foundation within which the incubator ecosystem operates is the entrepreneurial ecosystem (Subash, Srinivas, Samuel & Kalpana, 2016). There is no single "right way" to perform agribusiness incubation. Rather the work of agribusiness incubation depends on the state of development of the agribusiness ecosystem and changes over time as that ecosystem matures and develops. In its earliest phases, incubators demonstrate the viability of new business models and look to create and capture additional value from primary agricultural products (Samuel, Murali & Anisrani, 2018). In underdeveloped agricultural economies, incubators help by strengthening and facilitating linkages between enterprises and new commercial opportunities. They open new windows on technologies appropriate to agribusiness enterprises and help agricultural enterprises discover new, potentially more competitive ways of doing business. In subsequent phases of development, incubators operate as network facilitators: they link specialized service providers to agribusinesses andlink separate agribusinesses to one another. Finally, in a more advanced state of business development, incubators operate as conduits for the exchange of technology, products, inputs and management methods across national and international borders (Hjortsø, Alexander & Chea, 2017).

Agribusiness incubators identify, assemble and mobilize this small cohorts of emerging entrepreneurs who are open to innovative technology, forming new forms of partnerships along value chains and creating measures to manage carbon foot prints with the aim of making agriculture more sustainable and eco-friendly (Samuel, Ninan & Ravishankar, 2017). Incubators therefore mustbe actively involved early in generating interest in new business formation and encouraging entrepreneurs to be tested. They also must solve the product/service distribution challenge or even be prepared to develop their own retail distribution systems. Africa as a region is witnessing significant innovation and development of a start-up ecosystem in food and agriculture sector. According to the World Bank, there has been about 100 good quality start-ups working in the Agriculture Technology space across Africa (Baumüller, 2016). They are working on various aspects of agriculture throughout the value chain. Youths are active in the following key areas: Fintech for farmers, mobile-based advisory and extension services, data-driven decision support systems for agriculture, input access transaction platforms, digital platforms for market access for farmers and buyers, e-commerce, Internet of Things (IOT) and Artificial Intelligence (AI) for farmers (including sensors for soil and water) and applications for shared economy including Uberizing some key agricultural services (eg., TroTro Tractor). Kenya, Nigeria, and Ghana have the highest intensity of innovation and start-ups in Africa and account for over 60% of active start-ups in the sector (Baumüller, 2016). The agricultural sector continues to hold the promise for the economic and social transformation of Ghana. The need for accelerated development of the sector to realize its potential through agriculture and agribusiness incubation can neither be compromised nor overemphasized. Significant improvement is required in agricultural commodity value chains development, productivity of all factors of production, particularly in the areas of stable value chains development, especially in value addition and processing where most options for employment and jobs are located (Brooks, Zorya, Gautam & Goyal, 2013). Persistent weak links have prevented African agricultural value chains from realizing its full potential for generating jobs and wealth. The Forum for Agriculture Research in Africa (FARAs) UniBRAIN agribusiness incubation model demonstrated that the weak links could be strengthened to break that impasse by establishing agribusiness incubators that enable young women and men to turn the weak links, anywhere in the value chain from input supplies to commodity processing, into businesses opportunities. To achieve such success however requires vibrant ecosystems that provide opportunities and solutions for fledgling startup businesses. Ghana has the necessary policy and regulatory framework that provides the ecosystem to promote youth employment amidst several initiatives, incubation models and programmes by government, development partners and private sector with registered success stories on job and employment creation. However, there is a high inconsistency and lack of common drive within government, outside government and private sector to implement these policies and programmes. Where there is implementation, there are limited monitoring tools and policy review provisions, reporting and consolidated data about youth in agriculture and agribusiness which is fundamental in determining the existing resource base. The incubation ecosystem mapping was able to capture some of these salient features and provide a window to the state of agriculture and agribusiness incubation in Ghana.

LITERATURE REVIEW

Theoretical Framework: The entrepreneurial success depends on the value networking of entrepreneurship (Leyden, Link, & Siegel, 2014). The idea of this value networks materializes an ecosystem that set the networks of a group of individuals, companies, organizations and institutes to create value through knowledge, skills and capital sharing. Researchers have built the consensus that ecosystems in businesses provide information and resources to entrepreneurial firms for their survival and growth in a constantly changing competitive environment (Zahra & Nambisan, 2012). In 1993, James Moore presented the term business ecosystem to claim that businesses do not establish and grow independently without interacting with an embedded nature of networks with all stakeholders (Moore, 1993).Apart from the biological ecosystem, entrepreneurial ecosystem is based on large and flexible network of entities such as entrepreneurial firms, organizations, universities and government(Clarysse et al., 2014; Heikkilä & Kuivaniemi, 2012). Moreover, the performance of each object is based on the overall Economics, Business and Management performance of all objects collectively.

This paper relied on business ecosystem theory to analyse business incubator environment and identify gap and opportunities. The role of business incubators can also be analysed using the business ecosystems concept. The business ecosystem concept is reputed to enhance understanding and provide creative thinking when studying business networks. Regarding a business network as an ecosystem opens up a new way of looking at the structure, interaction and exchanges among organizations. It moves the analysis to the system level in which many sectors and industries behave like a massively interconnected structure of organizations, technologies, consumers and products (Anggraeni, Den Hartigh and Zegveld, 2007).

Within this context, the focus of the analysis is on the relations, interactions and dynamics at the system level. As part of larger system, firms can play different roles to increase their performance, but since the system involves interconnected firms, those roles could be propagated throughout the system influencing the system fitness and through this again the firm fitness. This study sought to examine the business ecosystem within which business incubators operated in Ghana and identify how the interactions of these organization enriched the business incubators ability to deliver desired business solutions. A business ecosystem is a dynamic framework consisting of a set of stakeholders - startups, hubs, investors, academic institutions, public institutions, corporations - who interact and engage with each other to seize new opportunities, support innovation and strengthen the overall business environment for entities at different stages, sectors, and geographical locations (Afrilabs, 2019). This concept is well illustrated in figure 1 below.

Empirical Studies: A substantial literature on business incubators endorses their objectives summarized as 1) job creation 2) commercialization of research 3) promoting start-ups 4)economic and social development 5) strengthening university-industry linkages 6) fostering entrepreneurial culture 7) Networking (Chandra & Silva, 2012; Link & Siegel, 2005; National Business Incubation Association, 2014b; Tang, Baskaran, Pancholi, & Lu, 2013). These objectives also justify the reason why business incubators need a supportive business ecosystem to help them achieve their mandate.

"A distinctive characteristic of many ecosystems is that they form to achieve something together that lies beyond the effective scope and capabilities of any individual actor (or even group of broadly similar actors)." (*Business ecosystems come of age*, Business Trends report, 2015).

In an article done by Deloitte (*Business ecosystems come of age*, Business Trends report, 2015) it is noted that the rise of business ecosystems is fundamentally altering the key success factors for leading organizations, forcing them to think and act very differently regarding their strategies, business models, leadership, core capabilities, value creation and capture systems, and organizational models. Business incubators are no exception. For them to survive and achieve success they need to operate within the context of a vibrant business ecosystem to leverage of the complimentary services offered by the ecosystem actors. Lose, Maziriri and Madinga, (2016) found assessing the impact of incubation programme to small and medium enterprises development in the Western Cape Province of South Africa. The findings indicated that incubated SMEs considered networking as one of the critical aspects for the success of their business ventures. They opined that being linked to the business ecosystem helped their business establish the right networks that essentially boosted their business performance and growth. Alexander and Simon (2017) observe that across francophone Africa, incubators are emerging rapidly to support a new generation of young entrepreneurs. Despite their huge potential, however, incubators are just one of many players in a typical entrepreneurial ecosystem. They posit that it is increasingly important that incubators; in addition to allocating the necessary resources, services and funding to worthy start-ups should also provide them with a platform to share and transfer knowledge across the ecosystem, not only with each other but also with the investors, research centers and industry experts upon which their businesses will ultimately depend. From their assessment, connecting organizations to each other can fill knowledge and capacity gaps to cover all stages of development without every incubator feeling the need to diversify to the point of pure generalism. Hence validating the fact that incubators thrive and perform better when they tap into the complementarities provided by the business and entrepreneurial ecosystems within which they operate. Business incubation is reputed to have a high success rate in terms of guarantees of business survival. However, according to Drouillard *et al.* (2014), only 40% of the incubated start-ups are able to become fully independent after the incubation period which runs for a period agreed between the two involved parties. It is also important to note that out of the successful 40%, 8 out of 10 are technology start-ups. This is a contrast to other findings that have tended to show high success rates for incubated businesses irrespective of the sectors (Thiong'o & Baba, 2019). This success is attributed to among other things ability of the business incubators to ensure incubated firms have interactions with other business through networking. This could imply that the business ecosystem provides networking opportunities which boosts growth and survival potential of incubated business during post incubation phase.

Agribusiness incubation has generally been conducted in the same way that general business incubation has, although the conditions for business success are substantially different. The key difference is the overall context and ecosystem within which agribusinesses operate. Agribusinesses takes place in a complex environment, involving farmers, intermediaries, government regulations and policies, financial institutions, insurance and diverse end-markets among others. Often agribusiness incubators are more successful when they engage, at all levels, with the entire agribusiness value chain actors, the supply chain as well as the larger business ecosystem to tap into services provided for holistic business posterity.

RESEARCH METHODOLOGY

The incubation ecosystemassessmentadopted a survey research design which was preceded with a desk review of a sample of various business ecosystem actors across Ghana, logistics planning and the preparation of tools for data capture and analysis. Empirical data was sourced from all the 10 regions of Ghana including; Northern, Ashanti, Greater Accra, Brong Ahafo, Western, Volta, Eastern, Central, Upper West, and Upper East. Using the snowball approach, the research teams managed to interview targeted correspondents focused on the key value chains namely shea nut, poultry, oil palm and aquaculture. The field exercise targeted business Incubatorsand accelerator, and the ecosystem actors including financial institutions, research and development institutions, capacity development providers, government agencies, development partners, and academic institutions. The field teams had the liberty to map out any value chains (besides the target value chains) that had potential to be incubated and deliver value against the assets in the field. During the incubation ecosystem mapping, the status of the assets (physical, intellectual and financial) was subjected to a score that ranged from 1 to 5 depending on the availability of the assets to support incubation programmes. When an asset was scored at 1, while available, it was not primed to effectively support the agripreneurs. When asset was scored at 5, it was primed to support incubation and was deemed able to respond to the

demands of an incubator and the incubatees. Any score less than 5 meant that some form of investment was needed to upgrade the assets to a level that would essentially support the incubation programmes.

RESULTS AND DISCUSSION

The aggregated data from the incubation ecosystem mapping (Fig 1) show a general trend where the intellectual assets are the most abundant, followed by physical assets and financial. However, this indicative data is varied from value chain to value chain and influenced by biases. The quality of the intellectual focused on incubation and enterprise was low, while people are aware of problems and the need to solve them, majority of those interviewed had limited knowledge on how to solve them or the role of incubators or incubation. Majority of those interviewed knew of initiatives that involved human capacity development and business development, but few understood the process of incubation and its role in resolving problems or addressing a need.

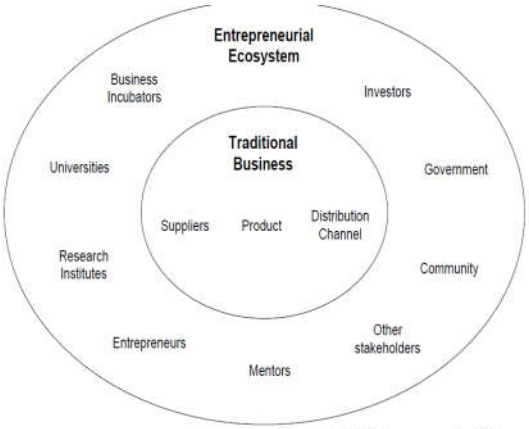
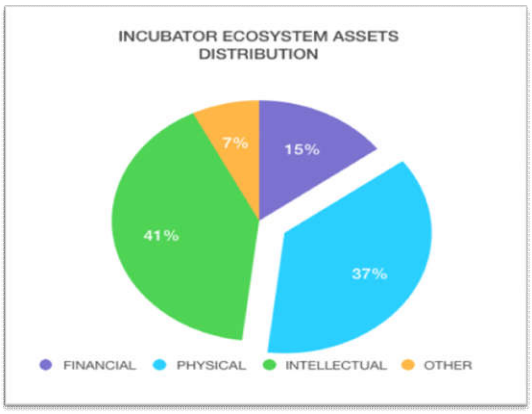


Figure 1: Entrepreneurial Ecosystem

Source: University Incubator and Entrepreneurial Ecosystems



Source: Survey Data (2019)

Figure 1. Incubator Ecosystem Assets Distribution

Legal and policy frameworks are essential and necessary for the growth and development of favourable business environments. This research identified inconsistency in the existing policy frameworks in the agribusiness incubator ecosystem. This may have a negative effect on the support services offered to SMEs in agribusiness hence limiting their growth. These findings agree with a study by Nyarku and Oduro (2018) who argued that for SMEs to thrive in Ghana sound legal and regulation framework is needed. The study further found that the incubator ecosystem has no documented best practices and the business models deployed by various entities varied across the ecosystem depending on incubators ownership. These findings show that the majority of the incubators adopt trial and error models which may not be relied upon for the development of the ecosystem. Meyer, Natanya, Meyer, Daniel Francois, Kot and Sebastian (2016) posited that incubators model change from one country to another but their networking, management, mentorship and training at incubators must be agreed on by managers. Despite the presence of advanced learning institutions in Ghana, the incubator ecosystem was found to be limited and lacked sufficient tailor-made training courses and modules focused on job and employment creation within specific sectors. Similarly, there was a mismatch between skills provided by existing institutions and what was demanded by the market. Most of the courses offered were supply driven oblivious of the needs of the demand. The research further established that physical infrastructure was improving with the presence of key infrastructure such as offices, land and equipment. The incubators in Ghana struggled with access to finance which is a major impediment to the development of the ecosystem. A report by UN (2018) found that new incubation models should aim for financial sustainability. This highlights the critical role played by financial access to the entire incubator ecosystem. The Results in Table 2 show that the incubator ecosystem in Ghana has a lot of gaps spanning across various aspects such as research and development, access to markets, business support, information management and governance. In order to unlock the potential of incubators in Ghana, it is imperative for these existing gaps in the ecosystem to be addressed.

Discussion on the Incubation Ecosystem: The incubation ecosystem mapping provides the stakeholders with a baseline understanding of the status of incubators and the support system available to support the agripreneurs start and run their own enterprises along the different value chains. The exercise established the general status of the assets that can support incubation and business incubators in the 10 regions of Ghana. It also identified the various business ecosystem actors and their value proposition. It was established that the existing ecosystem was not well capacitated in the context of the required support and would therefore require different kinds of upgrades to bring them to standards that could potentially deliver the desired impact and also operate sustainably.

In addition, the urban incubator ecosystem (Accra) seemed better organized and had highly developed incubation assets. Outside the urban setting, despite there being evidence of many actors in the sector of development support, there seemed to have no substantive incubator or incubator hubs focused on the key value chains or offering strategic support services. At the same time, the SME sector and several other institutions, organizations, NGOs, or networks offer business development services (BDS) at different scales also seemed under developed. The available BDS was not well structured for impact and was mainly designed and customized by donor funded projects to meet specific needs. The majority of clients therefore received piece-meal support which was inconsistent and not guaranteed. The survey established that Ghana has numerous programs, projects and initiatives focused on providing financial solutions and these included private banks, Private investors and venture funds who were all ready to infuse capital in the promising sectors. However, despite this; there were still limited investments on the start-up scene due to the perceived risks in the agribusiness sectors.

Table 1: The ranking of assets

The score from 1 to 5 on the basis of readiness to support an incubator programme. A score of 1 meant that the asset had low capacity to effectively support agripreneurs; while a score of 5, meant that the asset had adequate capacity to essentially support incubation demands for agripreneurs					
Location Institution	ASSETS Physical Assets Rank 1-5	Intellectual Assets Rank 1-5	Financial Capital Assets Rank 1-5	Overall Status	Gap & Recommendations

Table 2: Summary of the strategic outcomes from incubator ecosystem mapping

Element	Strength	Gaps
Policy and legal framework	Existence of policy, legal and regulation in the ecosystem to promote youth job and employment opportunities and create enabling environment is present	High Inconsistency and lack of common drive within ministries, programmes, policies, legal framework and regulations in relation to youth employment and employment creation in a country Limited monitoring tools and policy review provisions, reporting and consolidated data about youth in agriculture and agribusiness
Incubation models and initiatives	There are a number of initiatives, incubation models and programmes by government, development partners and private sector, with some documented success stories on job and employment creation in Ghana	No clear documentation of best practices and lessons of the existing models and initiatives Limited support and funding for existing models to upscale and double job creation No common understanding and measurement for job and employment creation among actors
Human and institutional capacity	There was a Presence of advanced levels of training institutions, including TVET, (Technical and Vocational Education and Training), institutions of higher learning and universities offers great potential for skills development and capacity building ecosystem support in almost all 10 regions	Limited and lack of sufficient tailor-made training courses and modules focused on job and employment creation for youth within specific sectors Mismatch between skills provided by existing institutions and what was demanded by the market Lack of a social network between demand side and supply side of training to ensure goal congruence between both parties
Physical infrastructure	There was Existence of public / government offices at district assemblies, community training centres, research organizations, agricultural colleges, research production centres, vocational and technical institutions, processing companies and agricultural farms in all the 10 regions and they offered great opportunity to leverage an agribusiness incubation program incubation program	•Limited and technical capacity in terms of space and human resources to offer relevant and standard support to start-ups and graduates •Some locations and regions did not have sufficient facilities while other had none whatsoever
Access to finance	There was noted Presence of financial services providers who provided conventional financial solutions. However, there was notably emergence of innovative finance and financial products /services with options for youth especially provided by micro finance and social impact investors within the regions. This was a good addition to the functions of enterprise/business ecosystem.	•Limited availability of financing models such as incubation fund value chain finance and seed capital for start-ups and emerging youth in agriculture and agribusiness •No deliberate small scale and youth development bank facility and grant mechanisms •There were reservations for financing agribusinesses from financial institutions due to perceived risks and absence of loan de-risking mechanisms
Research, technology and innovations development	Innovation, science and technology centres were found to be present and had essentially created an enabling environment that facilitated business development in some regions and development of new businesses especially within the ICT sector and E-commerce	•Limited research available for business development and minimalist collaboration between universities and research organizations •Limited policy options and implementation focused on direct framework creating a link between industry and research
Access to markets	There were Input and output market ecosystems composed of a number of national and regional successful models that were geared towards creating market linkages for SMEs; Ghana had taken advantage of regional cooperation and trade which was evident in their endorsement of the ECOWAS trading block	•Very limited regional and national commodity value chains development and trade •Limited value addition options and support to develop new markets as well attract good prices to support and attract start-ups •Limited market information access infrastructure especially for rural and uneducated youth as well as smallholder farmers
Business support infrastructure	Agriculture and agribusiness sector was composed of very active players along the entire value chain and the space seemed to have well-developed ICT-based tools including mobile phones and diverse systems to support business development including banking and trade	•Lack of trust and confidence among actors as well as government and private sector •Relatively high transaction cost of registering a business and a process with limited incentives for youth and start-ups •High rent and annual payment for business space and payment are made in foreign currency
Information and knowledge management	Presence of research and academic institutions as well as innovations hubs as centres of information and knowledge sharing plus the existence of working groups and innovation platforms	•Limited information, knowledge and innovation hubs at regional and districts level where information is much needed. Most of the information centres were in major urban areas such as Accra and Kumasi •Limited successful business models and hubs for information and knowledge management at community or grassroots level
Governance and management	Existence of Public Private Sector partnership model was evident and was deemed important for economic growth and development and its implementation at national, regional and district level in Ghana.	•Lack of centralized coordination and reporting structure for private sector and development partners on youth and employment creation businesses which creates systemic inefficiencies •Duplication of work and programs among government and private sector was evidenced and it appeared to be creating inefficiencies in resource deployment and impacts under high levels of "Mandate control and delivery investment to returns"

Source: Survey Data (2019)

Table 5. Opportunities along the thematic sectors

Business Thematic Area	Ecosystem Actor	Ecosystem mapping Results	Opportunities
Human and institutional capacity building	Capacity development Institutions	Investing in people is established to be a foundation of any nation's economy and businesses development globally. Human capacity in understanding how to start, manage and sustain business is important for any economy. 80% of registered businesses do not witness their 4th birth day due to limited knowledge and skills on how to manage and sustain businesses.	Most of the existing institutions focus on formal education system and yet 80% of job and employment creation lies in the informal sector knowledge. There is a need for tailor- made skills, talent development and exposure are important to ensure creation of new enterprises and sustainability of existing enterprises.
Research and development	Universities Research Institutes	New knowledge and new products are important for business development. Universities and research organizations should develop innovative ways of engaging the private sector to support new product development and offer solutions to most of the challenges faced by private sector companies	New knowledge and technology development offer opportunities for new business development for agriculture value chains. These institutions could explore possibilities of creating sector bridges to increase opportunities for interaction and nurturing innovations for commercialization.
Access to finance	Financial Institutions- Banks, MFIs, Investors	There are several funding options available for start-ups and existing companies, despite limited access for MSEs and high interest challenges especially to young generation entrepreneurs. The government remains an important actor and player in creating policies/regulations and viable options for enhancing access to finance and de-risking agriculture and agribusiness sector in Ghana.	Access to finance by start-ups and SMEs remains a major challenge of agriculture and agribusiness sector. There is a need to attract investment in start-ups and increased support for seed funding for youth entrepreneurs through incubation financing among other options. There is possibility of de-risking the financial products through insurance and credit guarantee schemes Government of Ghana is in the process of establishing a credit guarantee scheme for agriculture lending the GISRAL (AFDB 2018)
Input and output markets (Deep Business Analysis for Value Chains)	Distribution Channels- Retail outlets, markets, chain stores etc.	Markets remain a key ecosystem actor since it is a driver for economic development and survival of businesses. Partnerships between private sector, NGOs and public sector have shown positive results towards business development,growth and sustainability in Ghana and other parts of the world. Better understanding of commodity value chains, actor's roles and opportunities offers better market intelligence and identifying options that lead to profilingemerging opportunities and leading to sprouting of new businesses globally.	Better understanding of commodity value chains, actor's roles and opportunities offers better market options leading to new opportunities and emerging of new businesses globally. Investment by ecosystem actors such as government, development partners and private sector to boost input and output market infrastructure is critical for job and employment creation in Ghana.
Business development services	Support systems	Ecosystem findings indicate that business support and development services play a critical role towards growth, acceleration, development and sustainability of enterprises in Ghana. Most of the support services providers include among others NGOs, incubators, private sector, accelerators, innovation hubs, mentors, business advisory centres training institutions as well as government business development centres.	Government support to SMEs and start-ups adds value to sector development despite of its challenges and limited outreach strategies and activities. Creating enabling environment for strong partnership and collaboration between private sector and public sector in provision of business development services is important for growth and survival of emerging enterprises and creation of new opportunities for jobs creation
Incubation, incubators & Accelerators	Business Incubation Hubs	A networked incubation Program provides a seamless support for start-ups growth, development and acceleration. Incubators, innovation hubs and accelerators key role and mandate in the ecosystem is capacity building, business development support service provision, creation of linkages to the broader business ecosystem, providing access to space, technologies, markets development, financing options and networking.	Accelerators, innovation hubs and incubators are becoming a corner stone of business development in Africa and Ghana is no exception. This creates a huge opportunity for growth and development of entrepreneurs leading to new job options and employment.
Partnerships on investment in agriculture and agribusiness incubation	Government Development partners other stakeholders	National and global best practices, experience and lessons from successful models should be adopted to effectively set up agribusiness incubator units and design the criteria for selection of participating youth employment initiatives, projects and investments.	Experiences and lessons from FAO, GSLDB, AAIN, REP, GEBSS, NYA, MOFA, YIAP, AGRA, IITA, incubators, universities and research organizations, were analysed and studied for possible adaptation. Private sector actors were identified in the different regions.

Source: Survey Data (2019)

The start-up scene in the capital city Accra has been able to attract diverse financing option; however, the support for start-ups to develop bankable business ideas in regions is very low. The majority of those doing business have relied on trial and error, and occasionally on support from the NGO sector, especially in value chains that have products destined for the external market.

Conclusions and Recommendation

The incubation ecosystem in Ghana is in its nascent stages along the different value chains.

The incubator ecosystem, while still developing, has seen a high level of investment in the intellectual assets, followed by the physical assets. There is a poor or limited collaboration between partners which would allow the cohesion and densification of the incubation ecosystem. One of the emerging trends from the diagnosis showed that there is a concentration of the financial assets within government agencies (public) and financial institutions (private). The public financial assets while available, there is a level of incongruence on how those assets are structured to deliver on the intended goal or objective. The private sector financial assets are widely available, but they are not accessible due to many factors

including the prohibitive interest rates. The financial assets besides being inaccessible are poorly structured to respond to the needs of existing and new enterprises. The diagnosis recommended that there is need to strengthen the linkages between diverse actors within the business ecosystem for optimal benefits of all actors. Learning institutions (universities, technical and vocational training institutes as well as colleges) were deemed to have physical and intellectual assets that could support incubators or incubator hubs. They are also well placed to access the financial assets from within the wider entrepreneurial ecosystem. The institutions have a heavy load of intellectual assets, but have a fragmented approach to enterprise support. The institutions seem to have a weak feedback loop hence out of touch societal problems and the private sector capacity gaps/needs. This means the knowledge assets are generally isolated from the needs of the society and are not accessible to private citizens. The survey therefore recommended is that there is need for the feedback loop and collaboration between industry actors and learning institutions to be strengthened to ensure the capacity development interventions are demand driven and address real needs from the demand side perspective.

The private sector has invested heavily on various assets, in specific sectors which are of high value to the incubation ecosystem. They are also open to partnerships that would make their businesses become competitive. However, incubators and hubs in Ghana seem to be concentrated in the urban centers and are mainly focused on creating an entrepreneurial ecosystem, co-sharing of space and facilities. On the flip side though, a majority of these incubators and hubs have limited personnel, poor facilities, limited space, and limited access to expertise, peer networks, technologies and financial assets. They face numerous constraints that have a negative impact on the services they offer. The survey recommends that the government of Ghana should explore developing a business incubation policy with clear regulations to support standardization of services offered by incubator/accelerators and also explore the option of establishing an accreditation body to oversee adherence to quality standards. There is also need for government to establish the desired infrastructure, strengthen the business ecosystem and provide incentives for private sector to establish incubators and business hubs in the rural setting to enhance access for rural based entrepreneurs.

REFERENCES

Anggraeni, E., Den Hartigh, E., & Zegveld, M. 2007. Business ecosystem as a perspective for studying the relations between firms and their business networks. In *ECCON 2007 Annual meeting* (pp. 1-28).

Baumüller, H. 2016. Agricultural service delivery through mobile phones: local innovation and technological opportunities in Kenya. In *Technological and institutional innovations for marginalized smallholders in agricultural development* (pp. 143-162). Springer, Cham.

Brooks, K., Zorya, S., Gautam, A., & Goyal, A. 2013. *Agriculture as a sector of opportunity for young people in Africa*. The World Bank.

Hjortsø, C. N., Alexander, I. K., & Chea, R. R. H. 2017. *Experiences and lessons learned from the UniBRAIN agribusiness incubation programme* (Vol. 266). IFRO Report No.

Juma, C. 2015. *The new harvest: agricultural innovation in Africa*. Oxford University Press.

Lalkaka, R. 2003. Business incubators in developing countries: characteristics and performance. *International Journal of Entrepreneurship and Innovation Management*, *3*(2), 31-55.

Lose, T., & Tengeh, R. K. 2015. The sustainability and challenges of business incubators in the Western Cape Province, South Africa. *Sustainability*, *7*(10), 14344-14357.

Lose, T., Maziriri, E. T., & Madinga, W. 2016. Assessing the impact of incubation programme to small and medium enterprises development in the Western Cape Province of South Africa. *International Journal of Small Business and Entrepreneurship Research*, *4*(4), 16-29.

Mary N. T., & Sunday B. 2019. Assessment of incubators capacity building on agribusiness in Sudan. *Journal of Agricultural Science and Practice* 4(6), 170-178

Meyer, Natanya, Meyer, Daniel Francois, Kot, Sebastian 2016. Best Practice Principles for Business Incubators: A Comparison between South Africa and the Netherlands, Journal of Advanced Research in Law and Economics, (Volume VII, Fall), 5(19): 1110 – 1117

Nieman, G., & Nieuwenhuizen, C. 2009. *Entrepreneurship: A South african perspective*. Van Schaik.

Nyarku, K. M., & Oduro, S. 2018. Effect of legal and regulatory framework on SMEs growth in the Accra Metropolis of Ghana. The International Journal of Entrepreneurship and Innovation, 19(3), 207-217.

Ozor, N. 2013. The role of agribusiness innovation incubation for Africa's development. *African Journal of Science, Technology, Innovation and Development*, *5*(3), 242-249.

Samuel, M. P., Murali, S., & Anisrani Delfiya, D. S. 2018. Engineering tools and technologies for fish processing: A profitable venture in agri-business. ICAR-Central Institute of Fisheries Technology.

Samuel, M. P., Ninan, G., & Ravishankar, C. N. 2017. Role of ABI for entrepreneurship development in value addition sector. New India publishing agency.

Subash, S. P., Srinivas, K., Samuel, M. P., & Kalpana Sastry, R. 2016. Evolution of Agribusiness Incubation Ecosystem in NARES for promoting Agri-Entrepreneurship. *Indian Journal of Agricultural Economics*, *71*(3), 235-251.

Wulung, R. S., Takahashi, K., & Morikawa, K. 2014. An interactive multi-objective incubatee selection model incorporating incubator manager orientation. *Operational Research*, *14*(3), 409-438.

****